UNIVERSITY OF WYOMING
Endowed Faculty Report
From the Office of the Provost and Executive Vice President
1 OCTOBER 2022

To the Joint Appropriations and Joint Education Interim Committees

The University of Wyoming (UW) has and continues to benefit greatly from the Excellence in Higher Education Endowment. The Excellence in Higher Education Endowment allows the university to establish state-funded endowed faculty positions to advance teaching and scholarship in the areas of distinction defined in the university's strategic plan. UW has also benefited from state appropriations targeted toward faculty positions in legislatively identified areas of priority the School of Energy Resources positions and the Sustainable Business Practices positions. Furthermore, faculty positions supported (partially or fully) by private endowment gifts through the University of Wyoming Foundation enhance UW's teaching and research programs in areas of mutual interest to the institution and its donors. This report covers all such positions. Part A includes the Excellence in Higher Education Endowment (a continuation of legislative reports prepared annually); Part B encompasses other faculty positions identified in legislative appropriations; and Part C includes privately endowed faculty positions.

Part A. Excellence in Higher Education Endowment Report
[Pursuant to W.S. 21-16-1204]

1. Background

Created in 2006, the Excellence in Higher Education Endowment was funded at $105 million, the earnings from two-thirds of which, or $70 million, was designated to the University of Wyoming. Earnings on the state-managed endowment, which are distributed by the state treasurer to the university, allow the university to establish endowed faculty positions (known as Wyoming Excellence Chairs) and to acquire instructional and scholarly materials, classroom equipment, and other resources necessary to support the work of endowed chairs. Distributions to the university are based on a spending policy for FY2021 and was 4.75% of the five (5) year average market value of the corpus. Starting in FY2022 the spending policy amount increased to 5.0%

The statute imposes some constraints on the uses of the endowment earnings. Not less than 2/3 of the amounts shall be used to expand university instruction and research in disciplines related to economic and social challenges facing Wyoming. No fewer than four (4) Wyoming Excellence chairs must be in the College of Education. The remaining earnings shall be used for recruitment and retention of faculty members with established reputations in other areas of distinction as identified in the university academic plan, including business, arts and humanities, mathematics, cultural studies, healthcare, economics, and law.

To initiate the program while the endowment corpus was filling, and pursuant to Senate Enrolled Act 54 Section 1 (c) (ii), the Legislature appropriated $2.8 million in one-time funds, subsequently reduced to $1.8 million, to be distributed to the University of Wyoming and expended exclusively for the purposes specified in W.S. 21-16-1202 (b). The one-time appropriation allowed the university to begin filling positions in fiscal years 2007 and 2008. Those initial positions were then funded permanently with earnings from the Excellence in Higher Education Endowment.

2. Summary, history, and accomplishments of authorized positions

Under W.S. 21-16-1204, the University of Wyoming must report annually on faculty positions partially or fully funded through the endowment program, including the name of each faculty member filling a Wyoming Excellence chair, their education and experience, their research and instructional activities, and the benefits of their research and instruction.

The inaugural appropriation became effective July 1, 2006. The provost developed a planning budget for the allocation of positions to be supported with these funds during the 2007-2008 biennium, while the $70M endowment account began to fill. Based on the planning budget, three (3) searches were authorized with the initial funds: two (2) in the College of Education (fulfilling one-half of the legislative mandate requiring four (4) positions in the College of Education) and one (1) in the College of Arts and Sciences Creative Writing MFA program (aligned with UW's area of distinction Cultural Assets, Arts, and Humanities).

During the second year of that biennium, as more information became available about anticipated payouts to the university from the state-managed endowment account, the provost's office authorized more searches, in two (2) phases. Seven (7) additional Wyoming Excellence endowed positions were authorized during fiscal year (FY) 2008, and five (5) more were authorized in July 2008 for a total of fifteen (15) authorized endowed faculty positions. Four (4) of these fifteen (15) positions were to be funded with earnings combined from both the state account and private endowment gifts to the university, allowing for a greater number of search authorizations and establishing a unique private-public partnership in endowing distinguished professorships.

The decision to authorize the fifteen (15) fully or partially funded positions was based on a budget for salary, benefits, and other position-related costs consistent with the projected payout estimates provided by the state treasurer's office prior to the financial market declines realized later in FY2009. Subsequent financial market events mandated the need to reevaluate the size of the budget and number of permanent positions that could be supported by the endowment earnings. Given the need for exceptional prudence in filling permanent faculty positions, and consistent with representations to the Joint Appropriations Committee, the university placed some of the previously authorized searches on hold through FY2010. At the beginning of FY2011, following careful evaluation of the anticipated earnings stream and the accumulated reserves held in the university account, the provost authorized searches to fill the on-hold positions, including some for a bridging period only in order to ensure that permanent funding commitments would remain in line with the anticipated funding stream. Then, at the beginning of FY2013 based on having received a significantly larger payout during FY2012, as well as enhanced projected payout estimates from the state, and a substantial private gift, the provost was able to complete the originally planned position allocations, and grow the program with additional allocations to Nursing, Law, the Haub School, Native American & Indigenous Studies, and Global Studies.

In FY2021, sixteen (16) and in FY2022 nineteen (19) positions were fully or partially funded by the Wyoming Excellence Endowment, and additional positions were supported with endowment funds. Although all positions are subject to available funding in any year, the ongoing annual expenses associated with the funded positions were in line with the state projections for annual earnings.

The authorized positions conform to the legislative mandate. The College of Education has four (4) positions, as prescribed by the legislation, all important to the future of K-12 education in the state: two (2) in literacy education, one (1) in science education, and one (1) mathematics education. The strategy for the allocation of the other positions was to coordinate a set of positions in areas of distinction identified in the university's strategic

plan, and professions critical to the state such as business, law, and health professions. In addition, positions were selected for allocation based on the potential to address economic and social challenges in the state.

The allocation strategy is reflected in the following table, and the accomplishments of the currently filled positions and the benefits of their research or instruction to students, businesses, industries, or other Wyoming residents are described in detail below

Allocation strategy	**Number of Permanent Positions**	**College/Academic Unit**	**Names**
Education	4	Education	Dr. Cynthia Brock, (elementary literacy education), Dr. Leigh Hall (literacy education), Dr. Richard Kitchen (mathematics education), Dr. Timothy Slater (science education)
Economic and Social Challenges facing Wyoming: Energy, Natural Resources, Wildlife Science, Earth Sciences, Health Sciences, Agriculture, Engineering	11	Law/Haub School of Environment & Natural Resources	Temple Stoellinger (law/energy)
		Haub School of Environment & Natural Resources	Dean John Koprowski (ecology, conservation, & management of biodiversity), Dr. Kevin Monteith (wildlife), Dr. L. Steven Smutko (collaborative resource management)
		Arts & Sciences/SER	Dr. Dario Grana geology/geophysics), Dr. Bryan Shuman (geology/geophysics), Dr. Cynthia Weinig (botany)
		Health Sciences	Dr. Christine Porter (community and public health)
		Agriculture & Natural Resources	Dr. Holly Ernest (disease ecology)
		Engineering & Applied Science	Dr. Mohammed Piri (petroleum engineering), Dr. Mohamed M. Ahmed (petroleum engineering)
Other Disciplines important to the state and region and its history and culture: Business, Arts & Humanities, Mathematics, Cultural Studies, Economics, Law	4	Business/Economics	Dr. David Finnoff (economics), Dr. H. Jo Albers (conservation economics)
		Law	Danielle Cover (civil legal services/law)
		Arts & Humanities	Dr. Scott Henkel (humanities)

FY 2022 Accomplishments of Wyoming Excellence Chairs

COLLEGE OF EDUCATION

The four (4) permanent positions that reside in the College of Education, focuses on literacy, science education, and mathematics education. The individuals who hold these positions are developing and leading nationally recognized programs in these fields and are expected to be magnets for attracting the best and brightest junior faculty and students into these critical areas of teaching need in Wyoming. These positions represent the four (4) Wyoming Excellence chairs that are statutorily required to be in the College of Education.

Dr. Cynthia Brock, (Ph.D. in Educational Psychology, Focus: Literacy & English Learners, Michigan State University) ***Wyoming Excellence Chair in Literacy Education***.

Across the past year, Dr. Brock worked with Dr. Dana Robertson and Dr. Amy Spiker (Executive Directors of the Literacy Research Center and Clinic) and Dr. Leigh Hall (Wyoming Excellence Chair in Adolescent Literacy Education) to develop and/or maintain collaborative research/professional literacy learning partnerships in schools in the following counties: Big Horn, Park, Teton, Sublette, Fremont, Natrona, and Albany.

Working in conjunction with Dr. Kate Welsh, Drs. Welsh and Brock successfully implemented the fifth year of the College of Education Academic Writing Fellows Initiative. Dr. Brock co-led the College of Education Mentoring Initiative now in its fifth year. In the spring of 2021, Dr. Brock also completed her three-year tenure as chair of the College of Education Tenure and Promotion Committee. As well, she completed a three-year tenure as a member of the College of Education Diversity Committee. Dr. Brock served as a member of the search committee for the LRCC Executive Director to replace Dr. Robertson, and she served on the UW 2-13 Review Committee for CLAD/College of Education. Dr. Brock's College of Education work benefits the residents of Wyoming because it provides ongoing learning and development to the educators who teach the pre- and in-service teachers in the state of Wyoming.

In addition to providing service to the UW College of Education, Dr. Brock provides service at the state and national levels. For example, Dr. Brock is in her third year serving as a member of the Board of Directors for the Literacy Research Association, which is the premier literacy research organization in the U.S. She was one of the founding members of the Bourdieu SIG at AERA and served as a member of the Executive Committee for the AERA Bourdieu SIG in 2021. In 2021, she completed her service on the Wyoming Department of Education K-3 Reading Taskforce, which was led by Joe Simpson from McREL International. She also serves as a member of the Wyoming Department of Education English Language Arts Standards Revision Committee. In 2021, Dr. Brock reviewed manuscripts for the *Journal of Literacy Research* and *The Reading Teacher.* She also serves on the Board of Directors for the *Wyoming English Language Arts Council*.

Dr. Brock was invited to give the closing plenary address at the 2021 Australia Literacy Educators' Association (ALEA) Annual Conference. The Australia Literacy Educators' Association is the major professional literacy association in the country of Australia. Thus, giving a plenary address at this conference provides international recognition for the University of Wyoming. Dr. Brock sponsored a group of UW literacy doctoral students to attend and co-present research at the 2021 Literacy Research Association (LRA) Conference. Drs. Brock and Robertson worked with this group of doctoral students for six (6) months analyzing data for the project they co-presented at LRA. Dr. Brock also co-presented with colleagues at the 2021 AERA conference.

Across 2021, Dr. Brock served as a member of the Core Project Team, for the Wyoming St. Stephen's Indian School B.I.E. multi-year grant and she is the leader of the research team for that grant. Dr. Brock and her colleagues presented their St. Stephen's research work at the 2021 Burnett Whiteplume Northern Arapaho Language Conference in Wyoming. Working collaboratively with Rob Black & Lori Pusateri-Lane (WDE), the Northern Arapaho and Eastern Shoshone Business Councils, and Kim Gustafson (UW), Dr. Brock is leading the K-3 American Indian Education for All Disciplinary Literacy Initiative. Dr. Brock co-wrote an Australia Research Council Federal Grant with four (4) international colleagues in Australia, New Zealand, and England (not funded). She co-wrote six (6) refereed journal articles [*Professional Development in Education* (Q1), *two articles in The Reading Teacher (Q1*), *Teachers and Teaching: Theory and Practice (Q1); Social Studies Research and Practice (not ranked); NZ International Research in Early Childhood Education Journal (not ranked)*], and two book chapters. Dr. Brock's state, national, and international scholarly work benefits the teacher educators and educators she serves in the state of Wyoming because her ongoing learning and development informs the nature of the work that she does with teacher educators, educators, administrators, and children in the state of Wyoming.

Dr. Leigh A. Hall, (Ph.D. Curriculum and Instruction, Michigan State University) ***Wyoming Excellence Chair in Literacy Education***.

Dr. Hall was invited to give a TEDX talk in Lander Wyoming on her research in adolescent literacy. The talk, How Reading Instruction Fails Students, can be viewed here (https://www.youtube.com/watch?v=Mww43LkV6o0&t=3s). Dr. Hall, in conjunction with Dr. Cynthia Brock and Dr. Dana Robertson, completed and submitted an edited book to Guilford press on innovative professional development practices. This book features three (3) chapters that are connected to work done in Wyoming. Dr. Hall secured a book contract with Peter Lang Publishers to write a research memoir on her work with adolescent struggling readers and has completed 50% of it. The final document is due November of 2022. Dr. Hall began analyzing data from her research project using Amazon's Alexa device to further extend professional development opportunities to teachers in Wyoming. She will begin writing a manuscript from this data in Fall 2022. Additionally, Dr. Hall completed and submitted an invited book chapter on her research with adolescent literacy and had a chapter appear in an edited handbook on best practices in adolescent literacy instruction. She presented her research at three (3) national and one (1) regional conference. Two (2) of the national conferences, as well as the regional, involved doctoral students. Dr. Hall mentored these students on how to design and give presentations. Dr. Hall continues to mentor multiple doctoral students on how to analyze, write, and present data to a variety of audiences. In addition to her research, Dr. Hall launched a podcast that features educators around the state of Wyoming. (https://feeds.acast.com/public/shows/61b66618ee53d6001d55787a) The purpose of the podcast is to talk to a variety of stakeholders in Wyoming about their experiences in education as it relates to literacy instruction.

Dr. Richard Kitchen, (Ph.D. Curriculum & Instruction Mathematics Education, University of Wisconsin-Madison) ***Wyoming Excellence Chair in Mathematics Education***.

In 2021-22, Dr. Kitchen continued in his role as the coordinator of both the Ph.D. and Ed.D. degree programs in Mathematics Education at the University of Wyoming. In Fall 2022, thirteen (13) students will be enrolled in the Ph.D. program. The vast majority of students in the Ph.D. degree program in Mathematics Education live and work in Wyoming. In the Fall of 2021, the new Ed.D. Concentration in Mathematics Education was launched. In Fall 2022, twelve (12) students will be enrolled in the Ed.D. program, three (3) of whom live and work in Wyoming. When Kitchen arrived at UW in Fall 2017, there were only three (3) students active in the mathematics education doctoral program. Now, there are twenty-five (25) (thirteen (13) Ph.D. and twelve (12) Ed.D.). Also,

during 2021-22, Dr. Kitchen was the lead author of a grant proposal that was submitted to the Institute of Education Sciences (IES) in the U.S. Department of Education (pending). In the 2021-22 academic year, Dr. Kitchen published three (3) refereed journal articles and made five (5) professional presentations that included an international presentation at the 2022 World Education Research Association Focal Meeting and a presentation at the Wyoming Native American Education Conference. Dr. Kitchen also sponsored two (2) UW Ph.D. students in mathematics education to present research they have been conducting with him at the Annual Meeting of the American Educational Research Association (AERA).

In the College of Education, Dr. Kitchen served on the COE Mentoring Program Planning Team and served as a mentor for three faculty members. Nationally, Dr. Kitchen served as an external reviewer for the National Science Foundation's Discovery Research PreK-12 (DRK-12), Directorate for Education and Human Resources. He also served as an external reviewer for four faculty members at universities located throughout the United States who were being considered for tenure and/or promotion. In March of 2022, Dr. Kitchen served as an outside observer for the elementary mathematics textbook adoption committee, Albany County School District #1, and wrote an analysis/summary of the adoption process for the district. In Spring 2022, he also supported ACSD#1 to develop high school performance standards in mathematics. In addition, Dr. Kitchen collaborated with the Los Alamos National Laboratory Math & Science Academy to offer professional learning workshops in mathematics for elementary and middle school teachers in Pojoaque, New Mexico. For the duration of the 2021-22 academic year, Dr. Kitchen led professional development for teachers at Naaba Ani Elementary School in Bloomfield, NM on the Discursive Mathematics Protocol (DMP), a problem-solving based instructional protocol in mathematics he designed specifically for use with culturally and linguistically diverse students.

Dr. Timothy Slater, (Ph.D. Geological Sciences, University of South Carolina) ***Wyoming Excellence Chair in Science Education***.

Dr. Slater is a Professor in the College of Education's School of Teacher Education and Adjunct Professor in the College of Arts & Science's Department of Physics & Astronomy. Dr. Slater is a prolific author being cited thousands of times by international scholars, having published more than one hundred (100) refereed journal articles, thirty (30) books, and presented hundreds of papers at conferences, often with his graduate students as co-authors, describing his scholarly research on understanding the underlying cognitive mechanisms related to teaching and learning in STEM courses taught to undergraduates and future teachers. An expert in enhancing agriculture, STEM, and CTE education for indigenous students in Wyoming and across the Pacific-islands, Professor Slater serves as the Editor-in-Chief for the Journal of Astronomy & Earth Sciences Education and serves as the Senior writer for the Society of College Science Teachers. Winner of numerous national awards—including being distinguished as a Sequoia Fellow of the American Indian Science and Engineering Society (AISES) – Dr. Slater is frequently an invited, keynote speaker at professional conferences worldwide on improving teaching and learning in interdisciplinary STEM. An award-winning teacher, he teaches graduate-level courses in the cognitive learning sciences and systematic research methods for the College of Education to teachers pursing graduate degrees and certificates from across Wyoming. Along with University of Wyoming graduate students, he further impacts the state by conducting numerous summer and weekend professional development workshops for K-12 teachers across Wyoming. This past year, with support from the Wyoming Department of Education and the Wyoming Space Grant Consortium, his tireless efforts crisscrossing the state are focused on creating a comprehensive statewide drone education program, featuring educator workshops and student competitions highlighting agriculture, STEM, and high-tech vocational career pathways where students and teachers learn to engineer and fly drone quadcopters and earn FAA certifications in the service of enhancing Wyoming's emerging technical workforce.

ECONOMIC AND SOCIAL CHALLENGES FACING WYOMING: ENERGY, NATURAL RESOURCES, WILDLIFE, SCIENCE, EARTH SCIENCES, HEALTH SCIENCES, AGRICULTURE, ENGINEERING

Dr. Mohamed Ahmed, (Ph.D. Civil Engineering, University of Central Florida) ***Wyoming Excellence Chair in Civil Engineering.***

Dr. Ahmed is an Associate Professor/ Williams and Person Professor in the Department of Civil and Architectural Engineering, and Construction Management, and is also the director of the Driving Simulation and Human Factors Lab for Connected and Automated Vehicles. Dr. Ahmed is an influential and prodigious road safety scholar whose interdisciplinary work on advanced road safety management is at the leading edge of the field. His research and scholarly contributions demonstrate his outstanding ability to mobilize knowledge beyond the University and significantly impact the shaping of evidence-based traffic policy and practice. Through the integration of statistical inference, complex computing techniques, and machine learning, he can extract information from huge datasets to address safety trends and patterns, estimate collision risks, assess the performance of emerging technologies, and make evidence-based safety decisions.

Dr. Ahmed's research develops models, techniques, and algorithms that can contribute to and improve the safety of human drivers and self-driving vehicles. Early on, his research on collision modeling and evaluation focused on applying Bayesian statistics to improve the predictive power and fit of existing safety models, as well as to address several key data and methodological issues. His work on speed management utilizing the Second Strategic Highway Research Program (SHRP2) Naturalistic Driving Study datasets focused on understanding driver behavior, risks and factors that influence speeding among other driver behaviors in various traffic and environmental conditions and updating Variable Speed Limit algorithms and other Intelligent Transportation Systems to increase compliance with speed limits and improve safety. Moreover, he developed novel real-time risk assessment approaches to help ease traffic congestion and reduce crash rates on high-speed facilities.

Some of the major research initiatives he has led include designing and testing Human Machine Interface (HMI) for Connected Heavy Trucks and Highway Patrol centering on empirically-driven resource allocation mechanisms, implementing a multifaceted Connected Vehicle (CV) applications to improve traffic safety and operations of high speed facilities, enhancing the depth of knowledge on risk-based highway design, and exploring the 'readiness' of existing infrastructure to partially accommodate Connected and Automated Vehicles (CAVs). He is currently collaborating with a team of engineers, meteorologists, and computer scientists on deploying and testing an interdisciplinary CV Pilot Program on a 400-mile rural freeway corridor. His research team was the inaugural recipient of one of three USDOT Federal Highway Administration competitive research grants, to help advance knowledge on how the US can lead the early adoption of CAV technologies worldwide. Recently, he was approached to rejuvenate the Wyoming Department of Transportation, Intelligent Transportation Systems program in a similar fashion to reimagine the Active Traffic Management and Advanced Traveler Information System (ATIS) program by utilizing cutting-edge computer vision and machine learning to identify adverse weather and surface conditions and disseminating timely information to road users. The diversity of his involvement in these initiatives demonstrates his dynamic leadership skills and the depth of his knowledge in the field of road safety.

Dr. Ahmed and his research group had presented/ published more than forty-five (45) papers at international conferences and prestigious peer-reviewed journals in their field in 2021/2022. Indicative of the impact and

significance of his research, almost all of Dr. Ahmed's publications are in top-tier civil and transportation engineering journals that reach broad audiences in both research and practice, often with high impact factors (Citations 4366, h-index 34, i-10 index 109). To maintain the legacy of his research on advancing transportation safety and operations, Dr. Ahmed is currently collaborating with other research institutions and consultants on multiple National Cooperative Highway Research Program (NCHRP) grants in Automated Driving Systems and Human Factors. In recognition of his research's impact, Dr. Ahmed and his graduate students were the recipients and/or the nominees of multiple awards including Best PhD Award by the National Academies of Science, Medicine, and Engineering, Transportation Research Board, Washington, DC, Colorado/ Wyoming Institute of Transportation Engineers Graduate Student Award, WTS Colorado Chapter's Helene Overly Memorial Scholarship Award, etc. In 2022, Dr. Ahmed was the recipient of the International Association of Traffic and Safety Sciences (IATSS) Best Paper Award.

Dr. Ahmed's leadership extends beyond the classroom and research lab. He views university and professional service as ways to enhance professional development and facilitate professional connections to strengthen one's scholarship and teaching activities. In the Department of Civil and Architectural Engineering, he currently serves as a member of the Academic Graduate Committee, and Curriculum Review Committee. He is also an active member of the Safety Data, Analysis, and Evaluation Committee and the Hazardous Materials Committee at the *Transportation Research Board*. He is an editorial board member at the journal of Accident Analysis and Prevention. He sits on the Traffic Safety Committee at the *Transportation Development Institute, American Society of Civil Engineers (ASCE)*. He is an advisor of the Wyoming section of the *Institute of Transportation Engineers (ITE)*. He has served as moderator, reviewer, and panelist for myriad of prestigious journals including, Transportation Safety and Security, Transportation Research Record, Transportation Research Part C: Emerging Technologies, among others.

Dr. Holly Ernest, (Doctor of Veterinary Medicine, Ohio State University; Ph.D. Ecology with focus in wildlife genetics, University of California, Davis) ***Wyoming Excellence Chair in Disease Ecology*****.**

Dr. Ernest holds certifications as Senior Ecologist by the Ecological Society of America and as Master Bird Bander Permit though the US Geological Survey. She works to improve wildlife conservation, population health, and management through collaborative research, education, and public outreach in the disciplines of genomics, landscape genetics, and disease ecology. Highlights of Dr. Ernest's accomplishments during the 2021-2022 academic year include developing and teaching a new Veterinary Sciences course, "Genomics for Animal Disease" Spring 2022. This course helped to build students' foundational knowledge in basic sciences of whole genome analysis and disease biology for pathogens (viruses, prions, bacteria, protozoa, worms, insects, etc.), hosts and genomics of their immune systems, and for epidemiology and the science of diseases that can spread to people.

With her lab members and collaborators, Dr. Ernest published eight (8) peer-reviewed papers during this time and submitted another three (3) papers and a book chapter. These publications are helping wildlife veterinarians, biologists, and natural resource managers through discoveries in topics ranging from determining the how Wyoming mule deer genetics is changing in response to exposure to chronic wasting disease (mentored PhD student); investigating associations between genetics and causes of mortality in otters (mentored MS student), documenting how blood parasites spread by biting insects are infecting hummingbirds throughout the Rocky Mountains (mentored undergraduate researcher and research scientist), to providing the scientific community with a new genomic tool (SNPs) to identify individual mountain lions (mentored postdoctoral scholar). Dr. Ernest served as the Veterinary Science Graduate Coordinator, on the National Institutes of Standards and Technology

(NIST) Wildlife Forensic Committee to develop lab protocols for forensic labs, and as an external reviewer for tenure/promotion for three (3) faculty (University of California, University of Texas, and University of Calgary, Canada. She mentored pre-veterinary undergraduate students to prepare them for their applications to veterinary colleges, mentored Masters' and PhD students, postdocs, academic research scientists, and early career professionals and tenure-track faculty – at University of Wyoming, and also nationally and internationally. Dr. Ernest and her team completed lab work, data analysis and reports for several grants that brought in extramural funds; Read more about Dr. Ernest's Wildlife Genomics and Disease Ecology Lab at www.wildlifegenetichealth.org, about her science and team.

Dr. Dario Grana, (Ph.D. Geophysics, Stanford University) ***Wyoming Excellence Chair and School of Energy Resources Associate Professor in Geology and Geophysics.***

Dr. Grana's research areas of interest include modeling, characterization, and interpretation of subsurface reservoirs for energy and natural resources using geophysical methods. Subsurface geophysical characterization aims to estimate rock and fluid properties to quantify energy and natural resources volume and productivity. Reservoir modeling methods are also used for reservoir monitoring to detect the temporal variations of geological properties and processes. Dr. Grana applies innovative modeling methods to hydrocarbon reservoir, carbon dioxide (CO2) storage, and groundwater aquifer studies to predict the rock and fluid behavior in the subsurface and optimize the exploitation of energy and natural resources. Dr. Grana's research has been applied to a CO2 sequestration project near Rock Springs and a mountain watershed study in the Laramie Range. The main contribution of Dr. Grana's research is the improvement of the accuracy of the predictions and the reduction of the uncertainty in the model predictions and associated risk analysis. Dr. Grana published sixteen (16) peer reviewed papers in the academic year 2021-22 and delivered several talks in US universities and international conferences, including three (3) keynote presentations at EAGE and SEG workshops. Dr. Grana's new book "Seismic Reservoir Modeling" with Professor Tapan Mukerji and Dr. Philippe Doyen published in 2021 has been adopted as a textbook in several institutions. Dr. Grana currently teaches four (4) classes in the Department of Geology and Geophysics and the School of Energy Resources: an undergraduate level class on the basic concepts of exploration geoscience, two (2) undergraduate classes on mathematical methods for geoscience, and a graduate seminar on diversity and inclusion in geosciences. Dr. Grana's classes at the University of Wyoming contribute to the formation of the new generation of scientists, including geologists, geophysicists, and petroleum engineers who aim to work in the sector of energy and natural resources. Dr. Grana has also been awarded the 2022 SEG Outstanding Educator Award.

Dr. John Koprowski, (Ph.D. Biology (Systematics and Ecology), University of Kansas) ***Wyoming Excellence Chair in Environment and Natural Resources***

Dean Koprowski joined the University of Wyoming as a Wyoming Excellence Chair in October 2021, moving from the University of Arizona where he had spent twenty (20) years ending as the Director of the School of Natural Resources & the Environment. His scholarship focuses on community-based conservation approaches to wildlife management that involve local people in creating sustainable solutions…an excellent match with the Haub School's mission to make a difference for our wild and working lands through interdisciplinarity and collaboration. His commitment to provide training through such approaches to UW students continues with his mentorship of five (5) new graduate students. Dr. Koprowski assisted the Haub School through the challenges of the pandemic and economic downturn by expanding connections across campus, service to the state, and partnerships around the globe. He led development of the proposed WORTH (Wyoming Outdoor Recreation, Tourism and Hospitality) initiative with the College of Business to connect the Haub School most directly to the

second leading economic driver of Wyoming. He joined with UW's office of global engagement to initiate international partnerships that will provide numerous opportunities for our students in Italy, Mongolia, and Uzbekistan and presented invited talks on the importance of conservation partnerships to rotary clubs, community organizations and universities in the USA, Italy, and Mongolia. Dean Koprowski is honored to serve as a Wyoming Excellence Chair and continues to seek expanded impact through partnership and collaboration.

Dr. Kevin Monteith, (Ph.D. Biological Sciences, Idaho State University) ***Wyoming Excellence Chair in Environment and Natural Resources.***

Monteith is Associate Professor in the Haub School of Environment and Natural Resources, with a joint appointment in the Wyoming Cooperative Fish and Wildlife Research Unit and the Department of Zoology and Physiology. Monteith joined the faculty at the University of Wyoming in 2015 and was named a Wyoming Excellence chair in 2021. Monteith's research program is focused on addressing important, timely, and often vexing questions in natural resource management to offer sound insight into strategies for wildlife conservation while simultaneously striving to advance scientific thought. His research group, the Monteith Shop (https://monteithshop.org/), works hand-in-hand with natural resource agencies to address questions that have direct links to land and population management, and maintain strong ties to non-profits and foundations within the state and beyond. Support in external funding exceeded $2 million again in 2021. Monteith's collaborative research was featured in sixteen (16) scientific publications in 2021, ranging from top ecological journals to more applied outlets. Moreover, Monteith's program works hard to communicate findings not only to the scientific community, but also to stakeholders outside of the academic community who interface with wildlife policy. And in addition, they work hard to make science accessible to the public, participate in multiple K-12 classroom visits, and continue to develop educational pieces for K-12 classrooms. Moreover, their co-produced film Deer139 (https://deer139film.org/) continues to broaden its reach and Monteith contributed to the film Vacant Space (https://www.firstlite.com/on/demandware.store/Sites-meateater-US-Site/en_US/Page-Show?cid=vacant-space) during the past year. After multiple years of strategizing, the Wyoming Wildlife Fellowship Program was initiated in 2021, which is a collaborative endeavor between the Monteith Shop in the Haub School and the Wyoming Game and Fish Department to provide immersive and experiential opportunities to undergrads in a natural resource field. The program provides fellows with direct links to field opportunities, seasonal jobs, dedicated instruction to bolster critical thinking and soft skills associated with communication, a generous stipend, and ideally, produces high-end graduates that are prepared for a career and highly competitive in the job market. During 2021, Monteith was recognized with the Lee Gladfelter Memorial Award by the Pope and Young Club, an award given out every other year in recognition of significant contributions to bowhunting and wildlife conservation. Monteith also was honored to receive the O. C. Wallmo Award from the Western Association of Fish and Wildlife Agencies, an award given out every other year in recognition of outstanding contributions to knowledge and improved management of mule and black-tailed deer. Monteith is honored to serve as a Wyoming Excellence Chair, and blessed to continue to serve the state of Wyoming.

Dr. Mohammad Piri, (Ph.D. Petroleum Engineering, Imperial College London) ***Wyoming Excellence Chair in Petroleum Engineering and Thomas and Shelley Botts Endowed Chair in Unconventional Reservoirs.***

In the 2021-2022 fiscal year, Professor Piri and members of his research group disseminated their research results through more than fifteen (15) papers published (or accepted for publication) in peer-reviewed journals and with at least seventeen (17) more manuscripts that are either submitted or in preparation. Professor Piri and his research team continued further development of the world's most advanced Center of Innovation for Flow through Porous Media (COIFPM) located in University of Wyoming's (UW) newly built High Bay Research Facility. In this

period, he established a $7.4 million research project with a major national oil company in the Middle East. This initiative is primarily focused on the development of Digital Rock Technologies that involve the creation of computational platforms capable of modeling multiphase flow through disordered rock pore space under a wide range of flow and wettability conditions. Furthermore, earlier this year, Professor Piri led an effort to establish a major partnership between the University of Wyoming, the State of Wyoming, Dow Chemical Company, and the oil and gas operators in Wyoming that is titled 'The Wyoming Gas Injection Initiative (WGI)'. In this initiative, the State of Wyoming invests $22 MM for research and development and field testing of new technologies, using greenhouse gases such as Carbon Dioxide and Methane for revitalization of mature oil fields in the State of Wyoming. This grant will fund approximately three (3) projects over a five (5) year period to support research focused on de-risking of the technology and assist oil and gas operators to implement field pilot projects to sequester vast quantities of greenhouse gasses in Wyoming geosystems. Each of the field pilot projects may require a total of $15 – 25 MM in funding to execute the project plan and perform de-risking studies at UW's COIFPM. This will be achieved in close collaboration with operators in Wyoming. Professor Piri's external research funding exceeds $24 million. His research group currently includes twenty-seven (27) Ph.D. students, thirteen (13) post-doctoral research associates, and five (5) staff members. In this period, Professor Piri recruited nine (9) high-caliber PhD students most of whom have had significant opportunities to also learn from graduating students. During July 2020 and June 2021, COIFPM held numerous preliminary exams and final thesis defense sessions for its Ph.D. students. Professor Piri graduated five (5) Ph.D. students in this period. He taught two (2) classes: 1) Flow through Porous Media and 2) Unconventional Reservoirs. Professor Piri's specialty is multiphase flow through porous media with applications in oil and gas recovery from unconventional and conventional reservoirs, pore-scale modeling of displacement processes, wettability, and CO_2 sequestration and leakage. Professor Piri's expertise and research findings have direct relevance to enhancing oil and gas recovery from the reservoirs in the State of Wyoming and elsewhere. Since joining UW in 2005, he has designed, installed, integrated, and commissioned three (3) unique research facilities that have put the University of Wyoming at the forefront of research in flow through porous media. These research facilities include Encana Three-Phase Flow and Computed Tomography Research Laboratory, Hess Digital Rock Physics Laboratory, and the Center of Innovation for Flow through Porous Media. These platforms provide UW students exceptionally rich research and educational experiences that are seldom available elsewhere. Professor Piri also used these to help attract three (3) new faculty members to the Petroleum Engineering program at UW. Furthermore, he has been diligently working on commercialization of the technologies developed in his research group at the University of Wyoming. This has been made possible by a spin-off company, Piri Technologies, LLC, in Laramie, Wyoming. UW is an equity owner of this company. This entity provides distinctive technical services in the broad area of Flow through Porous Media. Through this initiative, Professor Piri has established an avenue for diversification of the economy in the State of Wyoming as well as creating job opportunities for UW graduates and others. Since the start of its operations in September 2017, Piri Technologies has developed several projects with large national and international corporations. This indicates that its technologies are relevant globally. It currently employs seven (7) full-time and three (3) part-time, highly talented professionals with advanced degrees. Six (6) of these full-time employees are University of Wyoming graduates. Furthermore, in March 2022, and in close collaboration with UW, Professor Piri founded a new company (Digital Pore Solutions, LLC) as a subsidiary of Piri Technologies, LLC to commercialize software-based Intellectual Properties conceived in his research group. The entity is focused on digitizing porous materials and computing flow and transport in them. Professor Piri successfully developed a series of agreements with UW to formalize the initiative. The new company is focused on the computational aspects of flow through porous media taking the advantage of high-performance computing and data processing and visualization techniques, state-of-the-art multi-GPU systems, and other advanced methods and hardware. Professor Piri is currently the President of Piri Technologies and Digital Pore Solutions.

Dr. Christine M. Porter, (Ph.D. Community Nutrition, Cornell University) ***Wyoming Excellence Chair in Community & Public Health***.

Dr. Porter blends education, research, and action in public health nutrition, community food systems, and ending health disparities. Her action research is especially in collaboration with communities in Wyoming and the Wind River Indian Reservation. For example, over the past year she has collaborated with and helped secure funding for Edible Prairie Project in Gillette, Wind River Grow Our Own 307 on the reservation, and the state-wide Wyoming Food Coalition (in which she also played a co-founding and co-leadership role). Students in her Food, Health & Justice course in 2019 outlined potential solutions that UW could adopt to ensure that all UW students would have enough to eat. Their work helped to underpin the motivations and strategies for the current UW Student Food Security Taskforce, convened by ASUW. Since then, UW has founded several food sharing cabinets, a central pantry and a meal swipe sharing program at the dining hall, with the other strategies those students outlined also in planning or piloting phases. Three (3) papers, co-authored by UW students and faculty, are under review or in preparation for journal publication. Nationally, she is co-editing a special section of a journal to address this issue in universities across the country and, with UW collaborators, highlighting UW's strategies and successes. She also chairs an endowed national network of food system action-researchers and educators and helped to co-found two (2) graduate fellowship programs aiming to diversify the people and paradigms that will help ensure our grandchildren, and their grandchildren, will have enough to eat. Dr. Porter also has been co-leading developing and approval of a new online graduate certificate in community & public health that should make health education and training much more available for Wyoming health professionals.

Dr. Bryan Shuman, (Ph.D. Geological Sciences, Brown University) ***Wyoming Excellence Chair in Geology and Geophysics*.**

Dr. Shuman has taught in the Department of Geology and Geophysics at the University of Wyoming since 2007 and works with undergraduates, graduate students, and post-docs to study the geological record of past climate changes and their influence on water and ecosystems. Shuman has published over one hundred (100) peer-reviewed journal articles, including six (6) new publications in 2021. His past awards include a National Science Foundation CAREER award. Shuman currently serves as the Director for the UW-National Park Service Research Station at the AMK Ranch in Grand Teton National Park and coordinated the Crossing Divides Initiative, which aimed to identify opportunities for the research station to enhance research and educational experiences for UW students and faculty. An outcome of the initiative was a new $20 million grant from the National Science Foundation EPSCoR program, which will enable faculty and students to use the research station to link disciplines from atmospheric science to economics to help Wyoming communities anticipate and respond to ongoing climate and hydrologic changes. Shuman has been working with communities and agencies across the state to consider and plan for the future by building upon the 2021 Greater Yellowstone Climate Assessment (gyclimate.org), which he helped to lead. Shuman's research includes work placing recent temperature, drought, snowpack, and wildfire trends in the long-term context of natural environmental variations recorded by geological evidence since the last ice age. For example, in 2021, Shuman and collaborators found that recent wildfires, such as the 2020 Mullen Fire in the Medicine Bow National Forest near Laramie, far exceed the precedents of the past 2000 years. The study was published in the *Proceedings of the National Academy of Sciences*. Another ongoing project showed that Wyoming's permanent snowfields shrank significantly during past periods as warm and dry as recent years, which highlights the risk to critical water supplies in the near future. These and other projects have created opportunities for Shuman to work with Wyoming students to learn and apply cutting-edge techniques in isotope and organic geochemistry, geophysics, sedimentology, genetic tools, and paleoecology to investigate how our climate and natural resources have changed over the past >14,000 years. Shuman has conducted field-based

research about past environmental changes in the Bighorns, Beartooths, Wind River Range, and the Snowies as well as across Colorado and Montana, the Great Lakes region, and New England. The work confirms significant climate-related challenges ahead for Wyoming, its citizens, and its landscapes, and underscores the need to develop adaptation and mitigation strategies.

Dr. L. Steven Smutko, (Ph.D. Economics, Auburn University) ***Wyoming Excellence Chair and Spicer Distinguished Chair in Environment and Natural Resources***.

Dr. Smutko carries out a research, teaching and outreach program in policy development and public decision-making in natural resources management. He also serves as the Associate Dean for Academic Programs in the Haub School of Environment & Natural Resources. Dr. Smutko's outreach work focuses on engaging with local governments, state and federal agencies, and the private and nonprofit sectors to enhance participatory decision-making on complex and often contentious environmental and natural resource policy issues. Dr. Smutko's research activities focus on understanding how collaborative processes can lead to better public policy decisions. In FY 21-22 Dr. Smutko led research projects to measure the efficacy of collaborative processes in federal land use designation, and the potential for a negotiated outcome on wolf management in Colorado. His team developed a negotiation simulation model focused on approaches for managing wolf populations that will be reintroduced into the state following the passage of Colorado Proposition 114. This work resulted in the identification of potential areas of agreement on such parameters as population targets, lethal removal, depredation compensation, and funding sources among key stakeholders including ranchers, local governments, conservationists, and others. The results of this study will aid wildlife managers in integrating stakeholder values and interests into their biological decisions. For his outreach work Dr. Smutko convened the "Building Bridges Symposium" to foster cross-cultural collaboration between Tribal and non-tribal entities to improve natural resource management and conservation in Wyoming. Dr. Smutko also established the Ruckelshaus Institute Fellowship to foster the creative and impactful work of scholars and practitioners engaged in environmental and natural resources policy and management in support of the Ruckelshaus Institute mission. The graduate program was approved by the UW Board of Trustees this year. He continues to teach courses in negotiation, negotiation analysis, and decision analysis at UW. He also oversees the Collaboration Program in Natural Resources, a yearlong series of professional development workshops attended by natural resources professionals in the public, private and nonprofit sectors in Wyoming and adjacent states.

Temple Stoellinger, (J.D. with honors, University of Wyoming College of Law) ***Wyoming Excellence Chair in Law & Haub School***.

Professor Stoellinger is an Associate Professor in the Haub School of Environment and Natural Resources with a joint appointment at the College of Law where she is also the Co-Director of the Center for Law and Energy Resources in the Rockies. Professor Stoellinger also oversees the Haub School's JD/MA program, a joint master's degree offered in collaboration with the Law School, and she is also an Adjunct Faculty member with the School of Energy Resources. Professor Stoellinger's work, and engagements continue to have a direct and impactful benefit to the State of Wyoming. During the fall 2021 semester she taught the following courses: Environment and Natural Resource Law and Policy (ENR 4750/5750), and Environment and Natural Resource Problem Solving (ENR 5000). During the spring 2022 semester she taught Wildlife Law (graduate/law); as well as a seminar course for Haub School graduate students on interdisciplinary thesis writing. Professor Stoellinger's scholarship focuses on environmental and natural resource law and policy, with an emphasis on wildlife law and policy. Highlights of her scholarship this past year include the publication as a co-author (with several notable national legal and economic scholars) of an interdisciplinary article in the top ranked journal SCIENCE entitled

"Allow Nonuse Rights to Conserve Natural Resources." This article received considerable national and international press coverage. Professor Stoellinger also contributed to an interdisciplinary economic article, placed highly ranked REVIEW OF ENVIRONMENTAL ECONOMICS AND POLICY, entitled "*Ecology and Policy for Economic Analysis of Seasonal Migratory Species,"* an outgrowth of the co-author's collective work on migration conservation. Professor Stoellinger and colleagues from the University of Wyoming College of Law past and present, wrote and published an article entitled *Unbecoming Adversaries: Natural Resources Federalism in Wyoming*, that was published in the celebratory centennial issue of the WYOMING LAW REVIEW. Professor Stoellinger also co-authored a paper with UW Law Professor Tara Righetti and College of Business interim Dean Rob Godby entitled "Adapting to Coal Plant Closures: A Framework to Understand Energy Transition Resistance," which was published in the highly ranked ENVIRONMENTAL LAW JOURNAL. During the summer of 2021, professor Stoellinger received a Julian Simmons Fellowship from the Property and Environment Research Center in Bozeman, MT. As co-director of CLERR, Professor Stoellinger's organized the 2021 Landscape Discussion on Energy Law and Policy in the Rockies, which was attended by over two hundred (200) participants online and covered the following topics: Small Modular Nuclear Reactors, Hot Topics in Oil and Gas, Lowe Carbon Energy in the Rocky Mountain West. This year, Professor Stoellinger also served as the planning committee chair for the University of Wyoming 150th Anniversary of Yellowstone National Park Symposium, held in Cody, WY May 19th-20th. The historic event explored the goals, successes, and shortcomings of the park over the past one hundred fifty (150) years and looked to the future to examine key issue it now faces. This past academic year Professor Stoellinger participated in a number of workshops and invited speaking events including a keynote presentation at the Foundation for Natural Resource and Energy's Public Lands Conference.

Dr. Cynthia Weinig, (Ph.D. Ecology, Evolution, and Behavior, Indiana University) ***Wyoming Excellence Chair in Botany.***

Dr. Weinig is a Professor in the Departments of Botany and Molecular Biology, and in the Program in Ecology. Her research focuses on plant evolutionary genetics, that is, the genetic underpinnings of plant adaptation to natural or agricultural settings. She has received over $40M in extramural funding from the National Science Foundation, including an early career NSF Young Investigator's Award and collaborative interdisciplinary awards such as those from the NSF EPSCoR Track I and Plant Genome Research Programs. Dr. Weinig's research in the past year funded in part by the WY Excellence Chair has focused on the interaction between plants and microbes (microscopic organisms). When growing in agricultural or natural field settings, plants interact with complex microbial communities. As many as ten (10) billion microbial organisms are present in each gm of soil, meaning that soil in the immediate proximity of plant roots harbors abundant microbial life and is the site of continuous host plant-microbe interactions. Not only are microbes highly abundant in soil, but also their communities are exceptionally diverse, with a gram of soil including thousands to tens of thousands of microbial species. As a consequence of this taxonomic diversity and associated differences in their functions, microbes can have pronounced negative or positive effects on the growth of plants with which they interact. Her research seeks to identify both the plant traits that may attract beneficial microbes as well as the plant growth responses to the presence of microbes. Dr. Weinig's lab hosted several UG researchers in the past year and approximately one hundred (100) undergraduate students over her career, including WY Research Scholars and McNair scholars as well as dozens of graduate students and post-doctoral fellows. Dr. Weinig incorporates her interest and enthusiasm for research into undergraduate courses at the University of Wyoming, such as Genetics, and graduate courses such as Plant-Microbe Interactions.

OTHER DISCIPLINES IMPORTANT TO THE STATE AND REGION AND ITS HISTORY AND CULTURE: BUSINESS, ARTS & HUMANITIES, MATHEMATICS, CULTURAL STUDIES, ECONOMICS, LAW

Dr. H. Jo Albers, (Ph.D. Economics, University of California at Berkeley) ***Wyoming Excellence Chair in Conservation Economics***.

In the 2021-2022 academic year, Dr. Albers taught her core PhD course in Natural Resource Economics, her advanced undergraduate course in Environmental Economics, and one (1) week of Conservation Economics in the First Year Seminar "Bite-Sized Economics." In addition, she undertook logistical and syllabus development for a proposed international short-course, "Conservation through Markets and Property Rights: Costa Rica. She advised, or served on the committees for, six (6) graduate students and mentored former students as they navigate their careers. She also serves as a mentor to junior faculty on campus and worldwide. In that capacity, Albers became a mentor in UW's new program, Diverse Graduate Student Mentorship, and she continues to work with women in economics through the Environment for Development Initiative's WinEED, CSWEP, and Wyoming Women in Economics Network.

Dr. Albers maintains an internationally respected research agenda based around determining resource management strategies that integrate socio-economic, ecological, and institutional characteristics of the setting. In 2021-2022, Dr. Albers had accepted or published twelve (12) peer-reviewed or refereed articles including two (2) invited literature critiques on the economics of protected areas, with emphasis on recent conservation policies including "30X30." She gave four (4) research presentations, including a Keynote address at the BIOECON conference. She continues to contribute to economics, policy, and interdisciplinary literatures through editorial roles at the *Environmental and Resource Economics*, *Ambio: A Journal of the Human Environment*, *Conservation Biology,* and *Environment and Development Economics.* Albers continued to develop an international short course on conservation economics in Costa Rica and to develop a new research agenda on pest control and pollinator ecosystem services from aerial species. Her teaching benefits students by giving them strong decision analytic tools that empower students to make well-developed arguments for their positions, make students into better decision-makers and contributors to society, and prove important for employment success. She was able to use excellence funds to travel to Costa Rica for course development and limited fieldwork for a month during 2021-2022. Excellence funds enable Dr. Albers to conduct fieldwork that she then brings to the classroom as local and international case studies that cover a wide range of perspectives, tools, and issues, which further expands the UW students' horizons. To further foster students' educational growth, Dr. Albers used her Excellence funding to graduate students and recent graduates for various experiences including summer work, conference presentation experience, and publishing, which provides students with important learning/networking, develops marketable skills, and deepens understanding of tools and issues. The funding enriches the students' educational programs by enabling them to explore topics and develop skills differently than classroom work and by providing experience with analytical tools that employers value. Through these experiences, students become stronger contributors to Wyoming's economy and resource management debates.

Danielle R. Cover, (J.D. *Cum Laude*, Tulane University School of Law) ***Wyoming Excellence Chair in Law, Director of the Civil Legal Services Clinic.***

Professor Cover is a Professor at the College of Law where she is the Director of the Civil Legal Services Clinic. During AY 21-22 Professor Cover taught the following courses: Civil Legal Services Clinic (Fall, Spring); Professional Responsibility (Fall); and Interviewing, Counseling, & Negotiation (Spring). As Director of the Civil

Legal Services Clinic, Professor Cover continues to expand the substantive case law offerings to low-income residents of the State of Wyoming and is currently exploring opportunities to train students in bankruptcy proceedings. The CLSC is a trusted and well-respected legal service provider in the state and has a close relationship with Equal Justice Wyoming, the primary funder for legal services within the state. In addition, judges in multiple counties contact the CLSC directly to provide representation in complex litigation involving some of Wyoming's most economically vulnerable clients. In AY 21-22, the CLSC represented approximately seventy (70) people in the state in a variety of legal matters from divorce and custody to property disputes and debt collection. In addition, the CLSC continues to provide services to transgender students on campus in a joint project with the ASUW. The CLSC numbers continue to increase, even in light of lingering Covid-19 concerns. Professor Cover's scholarship focuses on the intersections between psychology and legal practice, particularly around motivational theory, adult learning theory, and clinical pedagogy. During AY 21-22, she negotiated a textbook publishing contract with Carolina Academic Press to author a text on interviewing, counseling, and negotiation skills that also addresses ethics and professional identity development.

Professor Cover's work has a direct positive impact on the State of Wyoming. The number of Wyoming residents eligible for free legal services continues to increase in the face of economic difficulties in the state and Covid-19. As one of the largest providers of pro bono legal assistance in the state, the Civil Legal Services Clinic works diligently to develop and direct the rich resources of Wyoming's College of Law toward promoting access to justice for low-income individuals. When vulnerable populations receive direct legal representation and community education, many members of those populations can overcome severe barriers to maintaining financial stability. The clinical experience promotes a practical, holistic legal education to students while re-affirming a strong commitment to public service. A semester in the CLSC also increases awareness among matriculating law students of the vast need for legal representation for people living in poverty. This in turn can influence the willingness of law students to incorporate pro bono or low bono legal assistance into their legal careers, regardless of their ultimate practice choices. Students experience first-hand how economic independence and income stability improve not only the lives of their clients but the functioning of entire communities. In-person meetings with clients and relationships with local judicial bodies, together with community outreach and education that takes the students where the clients live, work, and build their families, amplifies the benefits the CLSC program offers. Because a significant proportion of College of Law students remain in Wyoming, many returning to the small towns from which they came, they can provide access to the legal system in ways they may not have anticipated.

Dr. David Finoff, (Ph.D. Economics, University of Wyoming) ***Wyoming Excellence Chair in Economics.***
Dr. Finnoff returned to his alma mater eighteen (18) years ago, and last year was honored to be named a Wyoming Excellence Chair and McMurry Fellow. For the academic year 2021-22, Dr. Finnoff continued to work on teaching, research, service, and outreach.

Professor Finnoff taught two (2) courses for graduate students in Spring 2022, the core graduate class "Dynamic Optimization," and a new graduate elective, "Bioeconomics." Both classes introduce new tools (theory and computational) that graduate students might direct at their own research questions, where he worked to try to increase the relevance of the material to potential research areas for the students across natural resource economics, energy economics, health economics and economic growth. In Fall 2021 Dr. Finnoff taught parts of three (3) courses: a solo course of mathematical economics, 1/3 of a team taught (with Sasha Skiba and Klaas van 't Veld) computational economics, and one (1) week of the team taught FYS 1101. Mathematical economics and computational economics are dual listed at the undergraduate and graduate levels (although predominately taken by undergraduate students). In mathematical economics, he pushed to further integrate numerical analyzes

throughout all parts of the course and worked to help the students gather a theoretical and computationally comprehension in the techniques and tools. Computational economics is a team-taught class with the goal of providing our students a working basis of tools in computational data analysis. Dr. Finnoff's component of the class is a rigorous section on regional economic impact and policy analysis (using IMPLAN data and the GAMS software package) with the intent of building a computable general equilibrium model of the Wyoming economy and using it to analyze the impact of a policy (or phenomena) of the students' choice. In this, the students have recently focused their work on analyzing the impact of alternative statewide public finance schemes (such as moving away towards a different tax base portfolio) and while the development of the material was intensive, the students appear to get a tremendous amount out of the course. He also chaired or cochaired the Ph.D. committees for several PhD students, advises numerous recent graduates to help them with their research program and serves on the committees of several Ph.D. and MS candidates.

Dr.Finnoff's research program focused on developing public policies to improve social welfare, taking into account the coupling between human and natural systems. His research seeks to understand (1) how coupled human and natural systems co-evolve over time and space in the presence of uncertainty and market failure, and (2) how economics can use information about the coupling between human and natural systems to construct public policies in the face of uncertainty that can correct market failures and move society towards more sustainable outcomes. He ended up with eight (8) refereed publications for the year.

Dr. Finnoff's research was in two (2) rough areas for the year – natural resource economics (with Wyoming focused work on Greater Yellowstone Area Grizzly Bears, considering the determinants of Grizzly bear delisting and initiation of active management and the potential of Wyoming fly ash as a source of rare earth materials), and public health economics concerning policy guidance in the face of rapidly spreading infectious disease (this work resulted in Dr.Finnoff and his collaborators being involved in University and State-wide policy guidance in the face of the COVID-19 epidemic). He presented his research to diverse groups throughout Wyoming, including a National Park Service, Hank Harlow presentation in Summer 2021 in Jackson Hole, and to the pre-vet graduate students at the State Vet Lab in Laramie.

Dr. Finnoff has served on many department, college and university committees. This year, he served on the University Strategic Planning Committee, University Economic Development Committee, AGECON-ECON merger committee, and the UW University Tenure and Promotion Committee. He also has professional service commitments, having served as a Co-Editor (Environmental and Resource Economics) and Associate Editor (Frontiers in Ecology and the Environment) for prominent journals in the profession as well as serving as a regular review for numerous journals in and out of the economics discipline.

Dr. Scott Henkel, (Ph.D. English, Michigan State University) ***Wyoming Excellence Chair in the Humanities.***

Dr. Henkel carries out a research, teaching, and outreach program that spans the humanities disciplines at the University of Wyoming and in close partnership with state partners like Leadership Wyoming, the Center for a Vital Community at Sheridan College, and federal agencies such as the National Academy of Arts and Sciences and the National Endowment for the Humanities. A faculty member in the Departments of English and African American and Diaspora Studies at UW and an expert in the 19th century literatures of the Americas and the history of the Land-Grant University mission, Dr. Henkel's research activities focus on the quality of democracy, the history and future of work, and civic engagement. Henkel has published award-winning books, as well as articles and reviews, and guest editorials for the *Casper Star-Tribune* and the *Wyoming Tribune-Eagle*. A first-generation college graduate, and current mentor to first-generation students, Henkel has also served as president

of the Working-Class Studies Association. Dr. Henkel facilitates public engagement at UW and throughout the state, serving on the Wyoming Humanities Council board of directors and helping to launch the new University of Wyoming Press. He is helping to establish the curriculum for the Public Humanities concurrent major and minor, which will unite the theoretical and practical skills students need for careers in public service jobs that interact highly with the public, such as work in national parks, libraries, museums. Dr. Henkel is the PI for the Democracy Laboratory, a project of the Wyoming Institute for Humanities Research. In FY 21, Dr. Henkel led a team of Wyoming public servants and UW faculty and students to design and launch the Democracy Laboratory, which seeks to empower students, faculty, and the public using interdisciplinary methods in order to connect our communities and to strengthen the quality of our democracy. Inspired by the preamble to the constitution, "We, the people, in order to form a more perfect union," the Democracy Laboratory seeks to find ways to improve the quality of democracy at the local, state, and national levels. The Democracy Laboratory also draws inspiration and support from the National Endowment for the Humanities' "A More Perfect Union" initiative; the American Academy of Arts & Sciences Commission on the Practice of Democratic Citizenship and its report *Our Common Purpose: Reinventing American Democracy for the 21st Century*; and from UW's Grand Challenges initiative. In the best spirit of the Land-Grant University mission, the Democracy Lab is an incubator where researchers, students, and the public can gather, discuss issues, discover and experiment with new ideas, and learn from one another.

Wyoming Excellence in Higher Education Endowment Fiscal Summary

The costs associated with each position include salaries commensurate with the market for top academics, employer paid benefits, ongoing budgets to support research and instructional activities, as well as one-time start-up expenses which are especially critical to recruiting distinguished scholars with large established laboratory research programs.

The balance in the Excellence in Higher Education Endowment expenditure account held at the university as of June 30, 2021 was over $5 million. Total expenditures for the 2022 fiscal year were currently budgeted at just over $3.4 million. The planning budget was designed to maintain an adequate cash balance to cover on-going expenses for an acceptable period, in the event of diminished revenue.

The following table summarizes the uses and expenditures of the budgets for filled positions, and the total estimated cost of the program when all allocated positions are filled.

Balance July 1, 2021	$5,587,374
Advertising and Recruitment	$ 5,170
Salaries and Benefits	$3,231,153
Support	$ 149,076
Equipment/facilities	$ 14,893
Total Expenses	$3,400,292*
Income (distribution from state and interest)	$3,553,313
Balance June 30, 2022	$5,740,395

*Expenses to date (June 30, 2022). Due to UW Year-End processes, full accounting for FY2022 is not complete.

Planning for FY2023

Planning for the FY2023 budget is based on anticipated annual projected income as per State Spending Policy for FY22 (WS 9-4-719). The table below includes the estimated annual budget for the permanently funded positions.

Estimated FY23 Spending Policy Amount for UW*	$3,800,000
Income FY23 90% per W.S. 21-16-1201(c)	$3,420,000
Salaries and Benefits (for Chairs and GAs)	$2,880,327
Support for Chairs	$ 350,000
Equipment/facilities	$ 15,000
Total Expenses	$3,245,327

** The FY 2023 Spending Policy Amount was not available prior to the due date of this report; therefore, an estimated based on the FY 2022 Spending Policy Amount was used.*

Part B. Legislatively identified faculty positions

1. School of Energy Resources (SER) faculty

The Wyoming Legislature established and appropriated initial funding for the School of Energy Resources (SER) in 2006. The plan for SER stipulated the hiring of up to twelve (12) distinguished faculty who were to be co-appointed in departments across campus. Professors in the SER are internationally recognized energy experts who are actively involved in both energy research and teaching. They work in a variety of disciplines and have formed productive collaborations across campus. The current SER professors include:

Dr. Po Chen, (Ph.D. Geological Sciences, University of Southern California) ***SER Associate Professor of Geology and Geophysics***.

In recent years, machine learning and artificial intelligence have been transforming many disciplines of science and engineering. Dr. Chen has been working with his collaborators in adapting many of the latest developments in machine learning, in particular deep learning, to the study of natural and induced earthquakes. The new technologies developed by Dr. Chen's team can achieve super-human performance in many of the tasks that are crucial in the reliable interpretation of seismic data. Dr. Chen and his team have been actively applying this new technology in detecting and analyzing natural earthquakes in Taiwan and Southern California and the results have been published in peer-reviewed professional journals. Another research project Dr. Chen and his team has been working on is related to near-surface geophysics and the hydrological processes in Wyoming. Geophysical subsurface imaging methods have completely transformed our understanding of the critical role played by water in converting bedrocks into regolith and saprolites. Dr. Chen and his team have been applying the latest full-3D seismic waveform imaging technology to investigate the interactions between the water table and the weathering front at multiple sites near Laramie, Wyoming and the research results have been published in high-impact, peer-reviewed professional journals. In the past year, Dr. Chen and his collaborators at the National Cheng Kung University, Taiwan, the National Center for Supercomputing Applications (NCSA), University of Illinois at Urbana-Champaign (UIUC), and the Department of Geosciences, Penn State University, have published three (3) papers in peer-reviewed professional journals. In the past year, Dr. Chen taught four (4) courses: "Methods in

Petroleum Geology" in both Spring and Fall, "Introduction to Machine Learning for Scientists and Engineers" in the Spring and "Introduction to Wind Energy" in the Fall.

Dr. Timothy Considine, (Ph.D. Natural Resources Economics, Cornell University) ***SER Professor of Economics and Finance***.

During academic year 2021-2022, Dr. Considine taught undergraduate courses in Oil: History, Culture, and Power, and Energy Markets and Policy. His report to the Wyoming Energy Authority on the economic impacts of federal leasing policies generated considerable interest including a declaration by fourteen State Attorneys General supporting their complaint against President Joe Biden's federal leasing pause. A federal court later ruled in favor of the states. Considine also worked closely with U.S. Representative Cheney's office, developing the methodology and formulas to support the proposed legislation, "Payment in Lieu of Lost Revenue Act," and advised the offices of Senators Lummis and Barrasso on the economic impacts of proposed changes to federal leasing and royalty policies. He has also testified in several other cases before state and federal courts. Considine also completed a research paper on federal lands policy for a forthcoming book on energy policy and a research paper on the economic impacts of climate change that is currently under revision for the top environmental and resource economics journal. Finally, Considine served as Academic Director for the School of Energy Resources, helping to get their academic programs back on track.

Dr. Craig Douglas, (Ph.D. Computer Science, Yale University) ***SER Professor of Mathematics***.

Dr. Douglas is an internationally recognized expert in computational sciences who leads a research group that creates sophisticated mathematical models of physical phenomena using networks of remote sensors and high-performance parallel computers. He has a long-term collaboration with AirLoom, LLC, a renewable energy company located in Laramie. Two (2) of his current or former Ph.D. students have worked there, including one (1) full time. He has published a research paper recently with AirLoom staff on optimization techniques relevant to wind energy design development. Dr. Douglas also has a project on dual porosity models relevant to both the fracking industry and aquifer modeling. An open source two (2) and three (3) dimensional high-performance code has been released that runs efficiently on one to thousands of processors. A recent project involves the Wyoming Department of Transportation to create a machine learning model for predicting when Interstate 80 should be closed and re-opened. It currently works well with historical data. We are working to create a better model using a live data stream. Federal dollars are spent in state and the results enhance UW's reputation through high visibility internationally. One (1) of his projects has created the first 100 Gigabit/second computer network in Wyoming, which enhances Wyoming's ability to attract large data centers to the state. He has taught a first-year seminar course on Energy, the Environment, and Economics, that covers all aspects and forms of energy from the viewpoints of Wyoming and globally.

Dr. Maohong Fan, (Ph.D. Iowa State University; Ph.D. Osaka University) ***SER Professor of Chemical and Petroleum Engineering.***

Dr. Maohong Fan, SER Professor of Chemical and Petroleum Engineering. As a PI and Co-PI, Dr. Fan led and co-led >$10M research projects, including those funded by NSF and DOE, in the areas of advanced material development, energy production, and environmental protection. He was selected to be a Member of the Carbon Utilization Committee of the National Academies of Science, Engineering, and Medicine. He supervised fifteen (15) group members (undergraduate students + graduate students + research associate + scientist). His last year's publications are in the areas of clean energy production and environmental protection. Web of Science (WoC)

acknowledged that Dr. Fan has been on the Highly Cited Researcher list since 2018 in the world. In 2021, the WoC list recognizes the true pioneers in their fields over the last decade, demonstrated by the production of multiple highly-cited papers that rank in the top 1% by citations for field and year in the Web of Science™. Also, WoC says that "Of the world's scientists and social scientists, Highly Cited Researchers truly are one (1) in one thousand (1,000)."

Dr. Dario Grana, (Ph.D. Geophysics, Stanford University) ***SER Associate Professor of Geology and Geophysics*** and ***Wyoming Excellence Chair and School of Energy Resources Associate Professor in Geology and Geophysics*** (See WY Excellence Endowment Report)

Dr. John Kaszuba, (Ph.D. Geochemistry, Colorado School of Mines) ***SER Associate Professor of Geology and Geophysics*** and ***John and Jane Wold Chair of Energy.***

Professor Kaszuba has over twenty-five (25) years of experience researching geochemical interactions between fluids and rocks. His research group of five (5) graduate students, two (2) undergraduate students, and one postdoctoral research scientist presently focus on unconventional oil and gas reservoirs, carbon storage, and rare earth elements in Wyoming. His former students have successful careers in industry (Chesapeake Energy Corporation, ConocoPhillips, Enerplus Corporation, ExxonMobil, SRK Consulting (U.S.), Inc., Wyoming Whiskey) and government (Pacific Northwest National Laboratory, Los Alamos National Laboratory). His research is funded by several extramural resources, including an Energy Frontiers Research Center funded by DOE and a Joint Industry Project with ConocoPhillips Company. He teaches courses in the Department of Geology and Geophysics and SER. He serves on numerous committees, including graduate student committees as well as SER and University committees, and is a member of the Wyoming State Geological Survey Advisory Board. Professor Kaszuba is the John and Jane Wold Centennial Chair in Energy.

Dr. Subhashis Mallick, (Ph.D. Geology and Geophysics, University of Hawaii) ***SER Professor of Geology and Geophysics***.

Dr. Mallick's FY2022 included work on a research grant seismic waveform inversion by deep learning-one key tool toward attaining a carbon-neutral future, which also provided funding to a PhD student studying Geology and Geophysics. Dr. Mallick had four (4) publications/presentations and continued work on his book, *Computational Seismology, Optimization, and Machine Learning,* which is scheduled for publication in 2023.

Dr. Mallick submitted one (1) research proposal as Principal Investigator on Global-environment and its Outstanding-challenges with potential solutions via Geoscience Research, aided by Environmental Engineering, and Neural networks. Dario Grana and Pejamn Tahmesebi were listed as Co-PI's on the three-year project with $741,006 funding requested by from the US Department of Energy, Office of Sciences. The project status at the time of this report was not funded.

Dr. Mallick continues to work on a research proposal for Seismically derived oceanwater properties and their roles in global climate modeling. The three (3) year 1.5 million dollar project with the National Science Foundation and/or Department of Defense has three Co-PI's: Pejman Thamesebi (UW), Minal K. Sen (UT, Austin), Yunsoo Choi (University of Houston)

Dr. Bruce Parkinson, (Ph.D. Chemistry, California Institute of Technology) ***SER Professor of Chemistry and Warren Chair of Energy and Environment***.

Dr. Parkinson is an internationally renowned scientist who leads a research group that investigates novel methods to harness solar energy and developing new materials for electrochemical and environmental applications. He has over two hundred seventy (270) publications in peer reviewed journals that have been cited over 15,000 times. He is working on fundamental aspects of storing solar energy in chemical bonds such as producing hydrogen from sunlight and water and charging redox flow batteries directly with sunlight as well as a DOE grant for studying emergent phenomena to more efficiently convert sunlight to electricity. He still collaborates with Dr. Carrick Eggleston former professor in geology at UW, but now at the Worcester Polytechnic Institute, in investigating photoelectrochemical processes on the surface Mars with a grant from NASA. The resulting publications have enhanced UW's reputation for research and innovation with research that has upended previous models. In addition, he is co-inventor on a composition of matter patent and many application patents with Professor John Hoberg in a new area where they synthesize two (2) dimensional nanoporous polymers with unique properties useful for membrane separations that have many different commercial applications that could result in significant licensing revenue for UW. He also is on Department of Energy grant obtained for this project with Hoberg and Katie Li-Oakey from Chemical Engineering. He recently was a co-PI on a $1.4M grant from the National Science Foundation with PI-John Hoberg and co-PI Jonathon Brant from Civil Engineering focused on new membrane materials for water desalinization. He was the team leader, again with Professors Hoberg and Brant, on winning a Phase One award from the Geothermal Lithium Extraction Prize and submitted a proposal for the more substantial Phase Two Prize. Every year he teaches the introductory course for the Energy Resource and Management and Development majors called Energy and Society. This class uses many class participation activities to present the many sides of energy related issues. Students get exposure to a top- level researcher in the classroom with many years of experience in energy related issues and where they are encouraged to discuss current energy related topics. He also teaches a course on solar energy that has increased its enrollment every year. The main expenditures from the research grants are to pay graduate students and post-doctoral researchers with the result that federal dollars are being spent in Wyoming for food, lodging and at local businesses. He was the recipient of the University of Wyoming's Presidential Research Award for 2019 and received the David C. Grahame Award of the Physical and Analytical Division of the Electrochemical Society during a virtual symposium in his honor in 2021. He will receive the plaque for this award at the annual spring meeting of the Electrochemical Society in 2022.

Tara Righetti, (J.D. Law, University of Colorado Boulder) ***SER Associate Professor of Law***.

Tara Righetti teaches in the College of Law and the School of Energy Resources. During the 2021-2022 academic year, Professor Righetti was on sabbatical as a Fulbright Research Scholar at the Université de Lille completing research on energy transition policies and the integration of carbon capture and storage and circular economy. Professor Righetti published articles in Environmental Law and the University of Colorado Law Review. She co-authored a casebook on oil and gas law and published a book chapter on transitioning EOR facilities for incremental storage of CO2. Professor Righetti continued program development work on emerging markets for advanced nuclear technologies and was appointed co-director of the newly formed Nuclear Energy Research Center. She served on the special institutes committee and as vice-chair of the Diversity and Inclusion Task Force for the Foundation for Natural Resources and Energy Law as on the board of Albany County Safe Project.

Professor Righetti serves the landman and legal professions and energy industry in Wyoming by producing innovative research on emerging issues in the fields of oil and gas law, nuclear energy, and carbon storage.

Part C. Privately Endowed Faculty Positions

Over fifty (50) UW faculty positions are partially or fully supported by privately funded endowments established with gifts to the UW Foundation. In the 2021-22 Academic Year established endowed accounts support twenty-one (21) faculty chair positions, of which four (4) positions were vacant and thirty-one (31) professorship positions, of which one (1) was vacant during the year. Leadership support includes: one (1) Directorship endowment which had an active search underway and two (2) Deanships. The single Curator position is located at the American Heritage Center, and single Librarian position is located at Coe Library. A complete list of the privately endowed chairs, professorships, and faculty fellowships is available from the UW Foundation. That list describes the history of the endowment, the qualifications or purpose, the uses, and the current and past faculty recipients. Some of these endowed positions are not filled at the present time; others fund various faculty from year-to-year.

In all cases, the uses of the endowment earnings are specified in the gift agreements and are reflected in the focus of the teaching, research, and extension/outreach programs of the faculty member beneficiaries.

As discussed in Part A of this report, the funding for some privately endowed positions is bolstered by earnings from the state-funded Excellence in Higher Education Endowment. These public-private partnerships include:

> The *Thomas and Shelley Botts Endowed Chair in Unconventional Reservoir* and *Alchemy Sciences Petroleum Engineering Chair,* held by Dr. Mohammad Piri (College of Engineering and Applied Sciences).
>
> The *Eldon & Beverly Spicer Chair in Environment and Natural Resources*, held by Professor Steve Smutko (Haub School and College of Agriculture).

The individuals who currently hold endowed faculty positions are as follows:

College of Agriculture and Natural Resources

Dr. Donna Harris, (Ph.D. Plant Breeding, Genetics, & Genomics, University of Georgia), ***E.A. Whitney Professorship in Agriculture***,

Research in the Harris Lab is in the area of plant breeding and genetics where they are working on several relevant crops to Wyoming agriculture with a focus on the current and potential needs of both the producer and consumer. Current work in this area is on developing early maturing dry beans that maintain yield and upright stature, drought tolerant field peas and soybeans, and native grasses for restoration purposes in rangelands. Donna teaches PLNT 4520 Plant Breeding and LIFE 3050 Genetics. Starting in the fall, she will also teach PLNT 4050.5050 Plant Biotechnology. Her passion is to work together with her colleagues on the design and implementation of new technologies and methods to optimize the efficiency and output flow in plant breeding programs.

Dr. James K. Pru, (Ph.D. Molecular Reproductive Biology, University of Wyoming) ***Curtis and Marian Rochelle Endowed Chair in Animal Science***

Dr. Pru began his faculty appointment at the University of Wyoming (UW) in early 2021. He worked during his first year to establish his lab and continue studies that center on three primary areas of research which have

application to both domestic animal reproduction and women's reproductive diseases. First, Dr. Pru's lab seeks to understand the unique molecular dialogue that exists between the mother and implanting embryo as pregnancy is first being established. He uses conditional mutagenesis and gene editing to understand gene networks that coordinate maternal: embryo cross-talk. The significance of these studies is that the large majority of failed pregnancies in mammals occur during this time when the embryo first signals its presence to the mother. Second, Dr. Pru is interested in elucidating the natural reparative processes that occur in the uterus following birth and at the end of the estrous/menstrual cycle. The uterus harbors arguably the most highly regenerative tissue (*i.e.*, inner lining called the endometrium) of all mammalian tissues. The long-term goal of these studies is to understand the genetic events that coordinate endometrial regeneration under natural conditions with the hope of applying this knowledge to reparative processes in more vital organs such as the heart, liver, and kidney that do not undergo fibrosis-free natural tissue regeneration following injury. Furthermore, faulty uterine involution/regeneration after giving birth is a significant barrier to subsequent long-term fertility in cattle. Third, Dr. Pru has a long-standing interest in the etiology and progression of women's reproductive diseases such as endometrial cancer and endometriosis, as well as in the development of therapeutic strategies to combat these diseases. Such diseases dramatically increase female morbidity and mortality and reduce overall quality of life. Since coming to UW in 2021, Dr. Pru's lab received a $1.65M grant from the National Institutes of Health (NIH) to study non-classical progesterone signaling and endometrial cancer. Dr. Pru recently developed a new graduate level course in Animal Science that will be taught in spring 2023. He will also teach LIFE 3050 (Genetics) during the same semester. Dr. Pru continues to work with leaders at UW to procure a large institutional grant from the NIH to develop a center of biomedical research excellence in the areas of reproductive biology and cellular programming. The basic and translational research conducted in Dr. Pru's lab has impactful application to both the agricultural and health care sectors within the state of Wyoming and beyond.

Dr. Kerry Sondgeroth, (Doctor of Veterinary Medicine, Colorado State University; Ph.D. Infectious Disease, Washington State University) ***Riverbend Ranch Endowed Chair in Wildlife-Livestock Health***

Dr. Sondgeroth is an Associate Professor in the Department of Veterinary Sciences, and the only board-certified Veterinary Bacteriologist at the Wyoming State Veterinary Laboratory (WSVL). She is interested in bacterial infectious diseases that affect both wildlife and livestock, with a primary focus on those bacteria that cause pneumonia in cattle, bison, domestic sheep, and wild sheep populations. During the past year, she mentored five (5) undergraduate students on independent research projects.

- Two (2) of the student projects focused on bacteria isolated from the nasal mucosa of domestic sheep ewes and lambs from birth through weaning. The sampling required animal handling and coordination of sampling with faculty in the Department of Animal Science and UW's Laramie Research & Extension Center. For every sample collected, the students were responsible for setting up laboratory cultures for bacterial growth, identifying bacteria using mass spectrometry, and summarizing their findings over the course of the summer.
- One (1) student project focused on characterizing historical bacterial isolates from two bighorn sheep herds in Colorado using mass spectrometry and whole genome sequencing.
- One (1) student honor's project focused on developing a new PCR assay for detection of bacterium associated with severe enteritis in foals and will be utilized by the Bacteriology section of the WSVL.
- One (1) student honor's project characterized bacteria isolated from equine uterine samples, that were not identified using the existing database. This project involved mass spectrometry, whole genome sequencing, and bioinformatics analysis.

All five (5) students gave oral presentations at the Veterinary Sciences Undergraduate Research Day, two (2) students gave oral presentations at the INBRE summer 2021 symposium, four (4) students gave presentations at the 2022 Spring UW Undergraduate Research and Inquiry Day, and one (1) student presented her research at a national veterinary conference (American Association of Veterinary Laboratory Diagnosticians).

Dr. Sondgeroth continues to mentor a PhD student who gave oral presentations on his research project characterizing *Mannheimia* and *Pasteurella multocida* bacteria at the Northern Wild Sheep and Goat Council Symposium and the American Society of Microbiology-Rocky Mountain Branch. She co-mentors another PhD student on a project assessing the strain types of *Mycoplasma bovis* in captive and free-ranging bison. At the beginning the year, Dr. Sondgeroth recruited a Master's student to characterize strain types of *Mycoplasma ovipneumoniae*, as well as perform a longitudinal study of exposure to viruses that cause respiratory disease in Wyoming bighorn sheep herds.

Dr. Sondgeroth was acknowledged as one of the University of Wyoming Mortar Board's 2021 Top Professor's for her impactful teaching and received the Mortar Board's Award for Outstanding Mentor in 2022. She was also nominated for Supervisor of the Year by employees at WSVL.

This chair position has enabled Dr. Sondgeroth to continue her research passion on bacterial diseases that affect both livestock and wildlife while mentoring the next generation of scientists. The data from her research projects will help to inform management decisions, and aid in understanding disease transmission at the wildlife-livestock interface.

Vacant – ***Farm Credit Services of America Ranch Management and Agricultural Leadership Chair***

American Heritage Center

Dr. Mary Brown, (Ph.D. History, University of Missouri) ***Clara R. Toppan Curator of the Toppan Rare Books Library***

As the Toppan Curator, Dr. Brown manages all aspects of the Toppan Rare Books Library. As part of these duties, she provides instruction for numerous UW classes across the academic year. During the fall and spring semesters, the Toppan library saw visits from classes across the UW campus including the departments of History, Visual Arts, English, Religious Studies, Art History, and Communication & Journalism. Dr. Brown has also hosted researchers and groups from outside the university community, including local, national, and international visitors. She has worked with donors to acquire collections that expand the library's holdings to further tell the story of Wyoming and its people. In addition to teaching students, Dr. Brown supervises several undergraduate students who work part-time in the Toppan Library on projects aimed at improving access to the library's collections. During the spring semester, Dr. Brown oversaw a Museum Studies intern who successfully completed several projects at the Rare Book Library. These included a blog post on cosmetics during the Medieval period and created an exhibit about the use of color in illuminated manuscripts titled "Coloring the Dark Ages." This internship is beneficial for students because it enables them to gain real-world experience and have tangible projects to include in their portfolios and use in their applications for graduate school and employment. In addition to the teaching and mentoring of UW students, Dr. Brown has continued her research on the civil rights activism of World War II student veterans on college campuses across the country. Since her arrival at UW, the scope of her research expanded to include studying activism at college campuses in the West with a particular focus on UW.

College of Arts and Sciences

Dr. Ekaterina Alexandrova, (Ph.D. French, University of Pennsylvania) ***Clarence Seibold Professorship***

During 2021-22, Dr. Alexandrova was the recipient of the Seibold Professorship, which has allowed her to bring together her passion for teaching and scholarship by integrating her research into course development. Dr. Alexandrova spent the year in France, collecting authentic cultural materials in order to enhance courses she currently teaches as well as create interdisciplinary courses that would be of immense benefit to UW students. Dr. Alexandrova concentrated on Paris as a site of important cultural transformation, and gathered authentic materials such as images, videos, and interviews for a course entitled "The New Paris." She plans to offer "The New Paris," a course that is relevant to numerous programs of study, in the Spring of 2023 as a French Civilization course (French 3100) in the Modern and Classical Languages Department, and in Fall of 2023 as a FYS. In the future, she envisions it as an interdisciplinary course adaptable to both an in-person and online format, so as to be able to reach a wider pool of students. She has previously worked with the experts at Wiley to develop a number of online courses for her department, and as a result, has acquired considerable expertise in effective online course building and delivery. She also worked on a new film course, which will be offered for the first time in Spring 2023 as French 4800. The course introduces and analyzes similar cultural themes as "The New Paris"—national identity, immigration, cultural diversity—and has likewise been developed to appeal to a wide range of students, from programs in languages, history, political science, philosophy, law, or even agriculture. Thus, it will favorably position the MCL Department and the College of Arts & Sciences in championing interdisciplinarity, streamlining course offerings, and maximizing resources.

This project speaks to Dr. Alexandrova's established research and longstanding commitment to teaching. While at the University of Wyoming, she has received the "Thumbs Up" Award (2013), as well as the Wyoming Institute for Humanities Research Individual Research Grant (2015), the Basic Research Grant (2017), and the Caitlin Long Excellence Fund (2018), some of which have allowed her to travel extensively in France and enhance her cultural expertise. She has created important connections both in the local community, through her work with World Languages Day, the Wyoming Foreign Language Teachers' Association, and Wyoming Safe House, as well as internationally. Dr. Alexandrova has established her reputation as a researcher through publications in top venues in her field, her work as a reviewer for *Eighteenth-Century Fiction*, a top journal in her field, presentations at numerous national and international conferences, and scholarly collaborations. This past year, she also continued work on her book project, *Une Idée Fatale: The Representation of Suicide in the Eighteenth-Century French Novel*. Some of the research for the book project will be presented in October at an international conference organized jointly by the Université de Montréal, Université du Québec à Montréal (UQAM), Cégep Édouard-Montpetit (Longueuil), and the Centre de recherche interuniversitaire sur la littérature et la culture québécoises (CRILCQ). Furthermore, she also published an article entitled "Laissez-nous faire: The Female Utopian Model, Collectivity, and Social Engagement in the Work of Leprince de Beaumont" in the new book series of *The French Review*, which is the official journal of the American Association of Teachers of French and has the largest circulation of any scholarly journal of French studies in the world. Edward Ousselin, the Editor in Chief of *French Review*, has recommended that the volume be acquired by university libraries nationwide, ensuring that the article will reach a wide readership. The outcomes of Dr. Alexandrova's teaching and research agenda in 2021-22 speak directly to UW's mission of collaborative learning, exposing students to innovative scholarship, and internationalization.

Dr. Craig Benkman, (Ph.D. Biology, State University of New York at Albany) ***Wolf Creek/Bob and Carol Berry Chair***

Dr. Benkman continues to conduct research on crossbills – seed-eating finches widespread in conifer forests such as Wyoming. He is writing a book for academic biologists and naturalists synthesizing his forty (40) years of research on crossbills, research for which he has been widely recognized (e.g., E. O. Wilson Naturalist Award from the American Society of Naturalists, Brewster Medal from the American Ornithological Society, Fellow of the American Association for the Advancement of Science). In addition, Benkman continues to conduct research and publish papers on crossbill behavior, ecology, evolution, and conservation with former students and post-docs. He is also involved in the design and coordination of surveys of the potentially endangered Cassia Crossbill in southern Idaho (a species Benkman discovered and one of only two (2) bird species discovered in North America in the last eighty (80) years). Population surveys of the Cassia Crossbill show that it has declined from around five thousand eight hundred (5,800) individuals in 2016 to about five thousand (5,000) in 2021 due in large part because of a fire that burned about 25% of its habitat in 2020. Benkman is working closely with the U.S. Forest Service, U.S. Fish and Wildlife Service, Idaho Game and Fish, Intermountain Bird Observatory, and others to provide guidance in the management of the crossbill's habitat to prevent further declines. Students take Dr. Benkman's Ornithology and Herpetology courses as upper division electives, and those taking them are predominately in wildlife management. Fifty-eight (58) students were in these two (2) courses, and most are Wyoming residents. Finally, Benkman provides consultation to Robert Berry from Sheridan on his studies of a falcon in Central America and serves on a related board of directors for a foundation devoted to the management and conservation of lands near Sheridan and in Belize.

Dr. Daniel Dale, (Ph.D. Physics, Cornell University) ***Harry C. Vaughan Professor in Astronomy*****,**

As Associate Dean of A&S during the 2021-2022 academic year, Professor Dale's time spent the bulk of his time in assisting with the operations of UW's largest college. However, Professor Dale was also taught ASTR5470. This is a graduate-level course focused on the physics of the 'interstellar medium', everything that lies between stars within galaxies. He was pleased to have a record enrollment for that course—twelve (12) graduate students. Professor Dale's research focuses on star-forming galaxies. He gathers astronomical data—images and spectra—from the *Wyoming Infrared Observatory* and the *Hubble Space Telescope*, among other astronomical observatories, to understand how galaxies convert gas clouds into stars and how the life cycles of those stars impact the formation of the next generation of stars. He published a total of twenty-one (21) refereed publications in the 2021 calendar year and oversaw multiple federal grants that funded his research group of four Ph.D. students and several undergraduate students. He has averaged ten (10) refereed publications per year for the twenty (20) plus years that he has been on the faculty at UW. Two (2) of the graduate students in his group earned their Ph.D.s in May 2021; one is a data scientist supporting the defense industry, and the other is a research scientist at a NASA lab. In 2021 Professor Dale oversaw six (6) extramural grants totaling $3.4M, and he was directly responsible for $491K of that funding here at UW. One of these federal grants involves Professor Dale directing a summer internship program for astronomy undergraduates. A critical aspect to Professor Dale's work is the career preparation student interns receive as they carry out research in his group. Students learn marketable skills in computer programming ("coding" in today's vernacular), public speaking, and technical writing in addition to gaining teamwork and leadership experience in his team-based work. Professor Dale also served as the director of the *UW Harry C. Vaughan Planetarium*, as Director of *Wyoming Astro Camp* for middle school students, and as head coach of the UW Women's hockey team (for the 13th consecutive year!).

Dr. Michael Dillon, (Ph.D. Biology, University of Washington) ***L. Floyd Clarke Professorship in Zoology and Physiology***

Dr. Dillon is a Professor in the Department of Zoology and Physiology and in the Program in Ecology. His research centers around two (2) core and related questions: How do environments determine whether and where animals persist? and how do animals respond to environmental challenges? Dr. Dillon published seven (7) peer-reviewed manuscripts in the last year, including three papers in top ecology journals. His US patent on temperature control equipment was awarded and the international version is pending. He has two (2) active grants bringing ~$3.5 million to UW and gave five (5) invited seminars in 2021 in addition to six (6) poster presentations and nine (9) talks by him and his students at international conferences three (3) of which won best poster/talk awards). In addition to mentoring four (4) graduate students and WRSP and INBRE undergraduate scholars, he served on graduate committees for an additional seven (7) UW students and five (5) students from institutions across the US. He taught Comparative Physiology, a core course for three undergraduate majors, Animal Biology, a large (~200 students) introductory course that serves undergraduates from across campus, as well as a graduate seminar in Physiological Ecology. Three (3) of his graduate students leveraged their participation in the UW Science Initiative LAMP program to develop new classroom teaching approaches. He engaged with communities across the state with his Field Guide to Native Bees of Wyoming, published by the UW Biodiversity Institute and shared as a resource for state and federal agencies, local organizations and the broader public. Dr. Dillon also gave a public lecture for the Sheridan College Museum of Discovery and his students are working with Science Kids, Wyoming PBS, and Science Loves Art for multiple pollinator outreach events across the state. He worked with the Shell 3D visualization center to develop an online video game to engage the public in understanding how bumble bees survive in extreme environments, like Wyoming. The game was used in middle and high school classrooms in Laramie and Rock Springs to help teachers address state science standards, with assessment of impact led by his graduate student. Michael is honored to serve as the L. Floyd Clarke Chair and looks forward to expanding its impact in the coming year.

Dr. Shane Epping, (Ph.D. Journalism, University of Missouri) ***Bobby Model Professorship in Photojournalism***

Epping is the inaugural recipient of the Model Professorship. In his first year, Epping taught courses in photography, photojournalism, and entrepreneurship as it relates to creative careers. Before Epping's arrival to UW, the latter course had not been offered to students. To expose students to the best photojournalism in the world, Epping invited multiple guest speakers to his classrooms. Among others, these included a recent Newspaper Photographer of the Year (POYi) Runner-Up, and the set photographer for film director/producer Tim Burton. In the spirit of linking theory to practice, the work of Epping's students was featured both locally and worldwide. In terms of the former, his photography students showcased an exhibit on campus at Coe Library for the duration of the spring semester. The images were so well received by the UW community, that library administrators have requested another student exhibit in the fall. In terms of global viewership, Epping facilitated access and funding for a graduate student to photograph UW's football team at the 2021 Famous Idaho Potato Bowl. The student's images were posted to institutionally sponsored social media sites and seen worldwide. Epping also served as a faculty mentor on a UW Honors Capstone creative project that documented life on the Wind River Indian Reservation, home to two (2) Native American tribes, the Eastern Shoshone and the Northern Arapaho. In terms of research, Epping focuses on the intersection of photography and health care. He published two (2) refereed articles as a co-author in 2021 about identifying HIV stigma with Photovoice as a methodology, as well as a book review in 2022 about a documentary photojournalist in Mississippi, presented a paper about the significance of photography in connection with a life threatening disease at a national conference in Oregon, and served as the Professional Freedom and Research (PF&R) Committee Chair for an international association of

educators, researchers, and media professionals. In the spirit of honoring Bobby Model's philanthropic endeavors with small community health clinics and rural schools in faraway places, Epping plans to join two (2) UW students in the Peruvian jungle to document the initial construction of a high school classroom. Epping secured external funding for the students to attend so that their airfare, lodging, and food will be covered by private donations. He plans to pursue an additional study abroad opportunity in the summer of 2023 and is in the initial stages of creating a photojournalism minor that will appeal to students from varying majors.

Dr. Jean Garrison, (Ph.D. Political Science, University of South Carolina) ***Clarence Seibold Professorship*** –

During this academic year, Dr. Garrison was released from teaching and service to pursue projects focused on civic engagement and her work as a publicly-engaged scholar in order to enhance her teaching and work with students, her scholarship, and the university's relationship with the state. Her work focused in three specific areas. First, as co-director of the Malcolm Wallop Civic Engagement Program, she (with her co-director and team) expanded its partnership with Wyoming's educational community. This included expansion of the multimedia lessons available for free to Wyoming teachers in the Wallop K-12 social studies catalog. As Co-PI with UW colleagues, she received a National Endowment for the Humanities grant "Integrating the Humanities Across Civics Education in Wyoming," a $150,000 grant that provides funds to expand the social studies catalog, stand up a new English language arts catalog, and monies to host two (2) teacher professional development workshops in summer 2022 & 2023. Currently, Wallop K-12 catalog resources are being used by educators in fifty (50) schools in thirty (30) out of the forty-eight (48) districts across Wyoming. With Wallop co-direct, Dr. Jason McConnell, she launched the Profiles in Wyoming Resilience Research Project, a project designed to gather a broad range of citizen and stakeholder voices through pictures and narratives they provide to understand better how Wyomingites perceive barriers and opportunities to success in academic achievement, employment, and community resilience.

Second, she worked with partners from the Freie Universität Berlin (FUB) to move forward an ongoing joint research project. She co-hosted one international workshop online (with FUB partners and UW colleague Dr. Stephanie Anderson) in September 2021, attended and co-hosted a Wyoming-Berlin authors' workshop (June 2022), and is co-editing the subsequent book on "Global Leadership Crisis, Rising Inequalities, and Culture Wars: Contestations of the Liberal Script in the U.S.," which will be sent out for peer review in fall 2022 to Oxford University Press. Finally, she has developed a new public policy course "Conflict vs Civic Engagement" (designed for upper division undergraduates and graduate students) that incorporates a service-learning project based on her civic engagement programming from across the academic year. Across the academic year, she enrolled in and graduated from the Ruckelshaus Institute's "Collaboration in Natural Resources Program" and served as a facilitator for the Study Circles on Mental Health hosted by the Center for a Vital Community in Sheridan.

Dr. Amy Navratil, (Ph.D. Biomedical Science, Colorado State University) ***Gardner Chair in Physiology*** –

As a physician, Dr. Hank Gardner was interested in improving health care through innovative, biomedical research, academic leadership and teaching excellence in the field of human physiology. In support of this mission, Dr. Navratil is bringing biomedical science to the forefront of the department of Physiology and Zoology through her excellence in teaching of core pre-health classes and academic advising of pre-health professional students in the Physiology major. In the Fall semesters, she teaches a five-week section of Human Systems Physiology (ZOO3115) and Integrative Physiology (ZOO4125). Combined, these classes service over four hundred (400) students who are interested in pre-health careers. For Fall 2022, she again revamped Integrative

Physiology to include clinical case studies and moved the class to the new Science Initiative's active learning classroom. She also teaches in the WWAMI program and offers an advanced Endocrinology class dealing with Mechanisms of Hormone Action (ZOO4735). For her efforts this year, she received the T.S. Harris Outstanding Merit in Teaching Award from the Department of Zoology and Physiology. Dr. Navratil also provides laboratory training to graduate and undergraduate students in hypothesis driven scientific research. The ultimate goal of her program is to vertically advance the field of reproduction by discovering novel mechanisms that regulate fertility. More specifically, Dr. Navratil's laboratory is providing critical insight into the pathophysiology of impaired reproductive function in women.

Dr. John Rees, (Ph.D. Politics and International Relations, University of Notre Dame Australia) ***Milward Simpson Professorship in Political Science***.

Dr. Rees commenced his Fulbright program of teaching and research in January 2022. In the area of teaching, he coordinated two (2) courses, *Religion in World Politics* and *Nationalism in Global Perspective*, which attracted an enrolling cohort of both undergraduate and graduate students. Dr. Rees also provided guest lectures in other SPPAIS courses on the following topics: Australia's complex connections to Asia (Intro to Asian Studies) geopolitical analyses of Australian society (for Geopolitics); the Australia-US Alliance, including an additional hour of recorded interview material arranged with a leading Australian expert, Professor Peter J. Dean (for American Foreign Policy); populism and nationalism in Europe (for European Union); and the Australian electoral system (for Electoral Systems). John has also met with four (4) graduate students in a mentoring capacity to discuss their respective research projects. In the research domain, John has submitted an article to a leading peer-review journal and is in advanced discussions with Palgrave MacMillan regarding the submission and evaluation of a book proposal in the series *Culture & Religion in International Relations*. The proposal is directly related to a public talk given at UW on 4 March, as well as a second talk to be delivered at the Keough School of Global Affairs, University of Notre Dame, Indiana, on 27 April. In all of these initiatives, Dr. Rees recognized UW and the Milward L. Simpson Fulbright Visiting Professorship, hosted by SPPAIS. As a service to the wider research community, John was a co-organizer and respondent for a SPPAIS seminar on 11 April, hosting Associate Prof John D. Wilsey (Southern Baptist Theological Seminary in Louisville, Kentucky) addressing the intersection of religion, foreign policy, and the life of John Foster Dulles. Dr. Rees also completed an internal manuscript review for a forthcoming compendium of essays on populism and religion in America. To be published by University of Notre Dame Press, contributors include leading scholars such as Phillip Gorski, Ebrahim Moosa, Atalia Omer, and Geneviève Zubrzycki. Dr. Rees was interviewed (http://www.uwyo.edu/uw/news/2022/02/visiting-fulbright-professor-from-australia-enjoying-time,-students-and-weather-at-uw.html) by UW News on February 16. His visit to UW concludes at the end of spring term, May 2022.

College of Business

Dr. Todd Cherry, (Ph.D., University of Wyoming) ***John S. Bugas Professor of Economics***

During the 2021-22 academic year, Dr. Cherry engaged with students at all levels. As the current Director of Graduate Studies, he mentored the MS and PhD students and served on multiple theses and dissertation committees. At the undergraduate level, he taught a freshman introductory course (Principles of Microeconomics). At the graduate level, Dr. Cherry was the instructor of record for many thesis and dissertation credits, including being chair of two (2) MS thesis projects and a member on five (5) PhD dissertation projects. As Director of Graduate Studies, Dr. Cherry continues to build and strengthen the MS and PhD programs. He

followed last year's recruitment of a stellar 2021 cohort with another excellent group of incoming graduate students for Fall 2022. Dr. Cherry continues to mentor and assist graduate students in their studies and employment. Cherry's research addresses policy-relevant challenges, with a particular focus on energy and environmental resources. In the past year, he published multiple journal articles in leading peer-reviewed journals and continues to be ranked among the top economist in his field. Consequently, he received an excellence in research award from the College of Business. Much of his work attracts external funding that supports graduate students. Dr. Cherry continued his work as lead investigator on a National Science Foundation (NSF) funded research project that investigates the strategic and governance issues related to the emerging technologies of solar geoengineering. The three (3) year project is a collaborative effort with Duke University. Along with his team, Dr. Cherry received funding from Resources for the Future in Washington DC to investigate governance structures for solar geoengineering. Looking ahead, Dr. Cherry collaborated with UW colleagues on two multidisciplinary proposals for external funding—a project to study the energy transition in Wyoming (Environmental Protection Agency) and another to study the potential for behavioral insights to improve the performance of epidemiological models (National Science Foundation). He was also a member of a UW team that submitted a large proposal for NSF's Track-1 EPSCoR program. Cherry is on the editorial team of four international journals, including Resource and Energy Economics and Journal of Environmental Economics and Management. He is a faculty affiliate with the Ostrom Workshop at Indiana University-Bloomington and a Senior Research Fellow in the Climate Policy Program at the Center for International Climate Research in Oslo Norway.

Dr. Eric Johnson, (Ph.D. Accounting, Arizona State University) ***The Clara Raab Toppan Distinguished Professorship in Accounting***

During the 2021-22 academic year, Dr. Johnson completed several working papers, with two (2) ready for journal submission as of May 2022. Both papers are collaborations with other UW Accounting faculty, as well as coauthors from other institutions. The first paper (with Professor Kenneth Zheng) focuses on the ethical aspects of employee downsizing (layoffs) from a management accounting perspective. The experimental results are promising and should receive interest from management accounting journals. The second paper (with Professor Mac Festa) examines the influences of supervisor abuse and mentor support on public accounting interns' intentions to start their careers with a large CPA firm. The experimental results are very strong, indicating a good potential for acceptance in a top-tier Accounting journal.

Dr. Johnson also has three (3) current projects with junior Accounting faculty at UW. These studies cover a range of topics including personality effects on seeking supervisor feedback in management accounting (with Professors Stephanie Cheng and Mac Festa), the spillover effects of auditor technology on client investment in internal controls (with Professor Patrick Witz), and the effects of top manager antagonistic narcissism on performance evaluations of managers (with Professor Cheng). These projects all have significant promise and are in various stages of completion, with completed working papers and possible journal submission planned for the 2022-23 academic year.

Dr. Patrick M. Kreiser, (Ph.D., University of Alabama) ***Rile Endowed Chair of Entrepreneurship and Leadership***

During the 2021-2022 academic year, Dr. Kreiser served as the faculty lead for the John P. Ellbogen $50K Entrepreneurship Competition; continued to serve in a leadership role related to the revised cross-campus Entrepreneurship Minor and new COB Entrepreneurship Major; served as a champion and thought leader representing Entrepreneurship within the College of Business, across the University of Wyoming, and throughout

the state of Wyoming; mentored and advised multiple student start-ups; served on the Editorial Review Board for *Journal of Business Venturing* and *Entrepreneurship Theory and Practice* (recognized as the top two (2) journals in Entrepreneurship); and taught ENTR 4750 (Theories of Entrepreneurship), which serves as the required capstone course for the new Entrepreneurship Major. Dr. Kreiser received the "COB Belt Buckle Research Award' for research productivity from the College of Business in 2021 and also received a COB merit-based research award for his research publications. He was promoted to Professor of Management effective Fall 2021. During 2021-2022, Dr. Kreiser had a first-authored paper published in *Entrepreneurship Theory and Practice* (5-year impact factor=10.075), which is one of the top two (2) journals in Entrepreneurship and a first-authored paper published in *Small Business Economics* (5-year impact factor=8.164), which is one (1) of the most recognized journals in the field. He had eight hundred eighty-eight (888) citations of his research during 2021-2022 according to Google Scholar as of May 15, 2022.

Dr. Mark Leach, (Ph.D. Marketing, Georgia State University) ***Mendicino Chair in Sales and Salesmanship***.

Dr. Leach's research is in business-to-business marketing and sales. More specifically, his research focuses on understanding buyer and seller relationships, leveraging the sales function to manage relationships with profitable customers, and providing effective sales training. Mark has published articles in the *Journal of Business Research, Journal of Personal Selling & Sales Management, Industrial Marketing Management, Journal of Applied Social Psychology*, and other leading academic journals. Mark is a member of the editorial review board of the *Journal of Marketing Theory and Practice, the Journal of Business and Industrial Marketing,* and the *Journal of Business-to-Business Marketing*. Prior to joining the University of Wyoming in 2017, Dr. Leach was a member of the faculty at Loyola Marymount University and Purdue University. He has also been a behavioral research scientist at the Centers for Disease Control and Prevention. During the 2021-2022 academic year, Dr. Leach has published research examining effective selling strategies during the COVID-19 pandemic in the journal *Industrial Marketing Management*. His work examining the impact of a customer's supplier advocacy on sales was published in the *Journal of Personal Selling and Sales Management*. Furthermore, this year he has worked to improve UW's new major and minor in Professional Selling where he has continued to develop and refine curriculum for these new programs. Dr. Leach has continued to develop and expand the UW Center for Professional Selling and has brought together a team of faculty and sales practitioners to effectively deliver classes and establish of the Center as a hub for sales thought-leadership.

Dr. Charles Mason, (Ph.D. Economics, University of California, Berkeley) ***H.A. (Dave) True Jr. Chair in Petroleum and Natural Gas Economics***

During the past fiscal year, Dr. Mason taught one graduate class (Advanced Microeconomics II - Economics of Uncertainty and Game Theory; ECON 5120) and one undergraduate class (Energy Economics, ECON 4340). He directed one (1) doctoral student and participated in the graduate committees for several students. He had three (3) papers accepted or published and gave a variety of zoom presentations. He was named as the Editor-in-Chief for Economics of Energy and Environmental Policy, a key publication produced by the International Association of Energy Economists. His research program is largely centered on studying oil and gas markets, including studies of oil and gas prices, motives to hold oil inventories, and the incentives for deployment of infrastructure, such as pipelines, and the implications of constrained infrastructure upon energy markets. These topics have clear relevance to the energy sector of the state, and policy relevance to the nation. Dr. Mason's research agenda also provides valuable input that allows regular updating of the undergraduate oil and gas class, which he teaches most years (and is scheduled to teach next spring), enhancing the educational value and relevance of the class. He has several projects underway, many of which directly relate to oil or natural gas markets; one of these is based on a

recently awarded grant from the Sloan Foundation (shared with colleagues at the University of Texas - Austin) to study the economics of carbon capture, utilization and storage. Students in his undergraduate class obtain a deep understanding of the recent history of oil and gas markets, and how that informs current events. Students in his graduate class gained important skills that modern micro-economists use regularly in their professional work. His approach to this class encourages students to speak up, and he capped the class off with a round of zoom presentations by the students. Material he discusses in that class is also amenable to public presentations, which provides visibility for the University and helps lay people better understand these markets.

Dr. Ali Nejadmalayeri, (Ph.D. Finance, University of Arizona) ***John A. Guthrie Endowed Chair of Banking and Financial Services.***

Since joining UW in August 2018, Dr. Nejadmalayeri has taught four (4) classes (Bank Management, FIN 4510; Bank Policy, FIN 4540; Fixed Income Securities 4530; Secular Stock Cycles BUSN 5959; Blockchain and Digital Financial Services FIN4910). His broad research agenda concerns the intersection of corporate finance and capital market. Most recently, he has been engaged in projects on network economics: bondholder networks and decentralized networks. Relatedly, in the summer of 2021, Dr. Nejadmalayeri assisted on Cardano/IOHK's project on decentralized consortium funding. Currently, the co-chairs Decentralized Treasury Working Group of Blockchain Governance Initiative Network (BGIN). His collaborators include: financial economists (UT-Austin and U. of Oklahoma), network scientists from UZH (Switzerland), experts from Norges Bank (Norway), and law scholars from UniFI (Italy). During 2020-2021, Dr. Nejadmalayeri published one (1) paper "Corporate Cash Holdings, Agency Problems, and Economic Policy Uncertainty" in the *International Review of Financial Analysis*, for which he has won College of Business' "Belt Buckle Award" for research excellence. Additionally, Dr. Nejadmalayeri has two (2) other late-round papers under review: (1) "Real Asset Liquidity, Cash Holdings, and the Cost of Corporate Debt" at *Global Finance Journal* and (2) "Distressed Acquirers and the Bright Side of Financial Distress" at *International Review of Financial Analysis*. Dr. Nejadmalayeri is additionally collaborating with the junior faculty and former doctoral students on six (6) other projects concerning taxation, debt covenants and corporate bond ownership. Dr. Nejadmalayeri teaches a unique, globally recognized course in Blockchain and Digital Financial Services. The course is an in-depth and broad coverage of payment systems, applications of distributed ledger technologies in payments, central bank digital currencies, decentralized finance applications, smart contracting, and non-fungible tokens. Dr. Nejdmalayeri is also awarded to be the John and Esther Clay Honors College Faculty Fellow for which he teaches a course titled Secular Stock Cycles; a *tour de force* of the conceptual foundations of secular stock market cycles. The course starts with pioneering business cycle theory of Schumpeter and examines the enduring impacts of demography and technology in the last 200 years of U.S. stock market cycles. Dr. Nejdmalayeri's research in network economics and bondholding intimately compliments his teaching in banking, digital financial services and fixed income securities. Through scholar speaker series, Dr. Nejadmalayeri has continued to bring luminaries of accounting and finance which this year include: Hank Bessembinder from Arizona State University, Shiva Rajgopal from Columbia University, and, Ioannis Ioannou from London Business School. Building upon successful guest speaking webinars in the prior year, Dr. Nejadmalayeri launched "Fireside Chat with Dr N" whose guest include: Mathais Imbach (CEO of Sygnum, world first digital asset bank), Paolo Sironi (best-seller author and IBM Institute researcher), Franklin Noll (Treasury historian), Mike McGlone (Bloomberg Intelligence), and Silvan Andermatt (Swiss Finance + Technology Association).

Kent R. Noble, (B.S., University of Wyoming) Department of Management and Marketing, ***Bill Daniels Chair of Business Ethics***

The Daniels Fund Ethics Initiative Collegiate Program (https://danielsfund.org/Ethics/Collegiate) is making an impact on current and future business leaders in Wyoming and beyond. In an anonymous survey of Fall 2021 Business Ethics students, 91% agreed with the following three (3) statements, "This course is valuable to me." "I am learning a great deal in this course." "This course is increasing my competence in this area." In Spring 2022, 112 Business Ethics students (100%) distinguished themselves by completing their Ethical Leadership Certification through the NASBA Center for the Public Trust, a certification achieved by fewer than 1% of college students. In AY 2021-22, UW's Ethics Club worked with Sales Seminar students, the UW Foundation and two hundred forty (240) donors to raise $115,000 for SparkTank 2022 (http://www.uwyo.edu/uw/news/2022/05/uws-ethics-club-invests-in-local-nonprofits-through-sparktank-initiative.html). Ethics Club members used the Daniels Fund Ethics Initiative Principles, site visits, and live presentations from the finalists to determine where to invest the resources. Results were as follows: My Front Door (https://www.myfrontdoor.org/) ($45,000), Albany County Safe Project (https://www.safeproject.org/contact-us-c1z0x) ($35,000), Cathedral Home for Children (https://www.cathedralhome.org/) ($20,000), and Healthy Kids Rx (https://www.healthykidsrx.org/about_us) ($15,000). The purpose of UW's SparkTank initiative is to provide the "spark" that helps local nonprofits fulfill their missions and to "spark" a sense of community service within Wyoming's next generation of business and community leaders.

In 2021, UW's Mortar Board Honor Society recognized Kent with UW's *Outstanding Service and Dedication Award*. In 2022, he received the College of Business's *Impact Award*. Kent was appointed by former Governor Matt Mead to the Wyoming Commission on Judicial Conduct and Ethics in 2018, and he was reappointed in 2021 by Governor Mark Gordon. He also serves on the board of directors of the John P. Ellbogen Foundation, the Better Business Bureau Foundation Board of Advisors for Northern Colorado and Wyoming, and the NASBA Center for the Public Trust. In AY 2021-22, Kent used two (2) primary outreach vehicles to conduct presentations for business, education, and community leaders. The first, *What Do You Stand For*?, is spotlighted in this three-minute promotional video (https://vimeo.com/171812184). The other primary offering is *What's Your Brand?,* a personal branding presentation that focuses on integrity, attitude, and grit. An abbreviated version of his *What's Your Brand?* talk is featured in this thirteen (13) minute TEDx presentation (https://www.youtube.com/watch?v=ZrAbwdL2G4Y) Additional outreach included sessions for Leadership Laramie, Reveille Rotary in Casper, OtterBox in Northern Colorado, the UW Ranch Management and Agricultural Leadership Symposium, Casper Chamber of Commerce, the Mountain West Regional Research Symposium, and the California Police Chiefs Executive Leadership Institute. Kent and his students are heavily involved in two (2) statewide recognitions honoring individuals who embody ethical business practices: The Bill Daniels Ethical Leadership Award (https://www.wyomingbusinessalliance.com/post/tucker-fagan-receives-2020-bill-daniels-ethical-leadership-award) and the Wyoming Business Hall of Fame (https://www.wyomingbusinessalliance.com/post/2021-recipients)N

Dr. Linda Price, (Ph.D. Business Administration, University of Texas at Austin) ***W. Richard Scarlett III and Margaret W. Scarlett Chair of Business Administration***.

This is Dr. Price's second academic year at University of Wyoming. Linda completed a BA and MBA at University of Wyoming and then proceeded to have an extraordinary career as one of the top scholars in marketing, one (1) of the select few scholars to be named an *American Marketing Association* Fellow, an *Association for Consumer Research* Fellow and Distinguished Educator for the *Academy of Marketing Science*. In 2021 she joined only two (2) other scholars in receiving a life-time mentorship award for Marketing Doctoral Education from the *American Marketing Association* Foundation. In Fall 2021 she took over as Director of the Marketing PhD program and taught a PhD seminar in Marketing Theory. In Spring 2022 she taught Services

Marketing for undergraduate students from COB and the Haub School. This course is an important component in building on the Wyoming Outdoor Recreation, Tourism and Hospitality (WORTH) initiative. The WORTH initiative will serve as a hub for our state's tourism. Dr. Price also worked with PhD students, supporting them to present at top conferences, and prepare their work for publication, and recruited an outstanding incoming PhD cohort for Fall 2022. Because of her Wyoming roots, there is little Dr. Price believes in more than the power of University of Wyoming to enable students to accomplish anything they desire. She brings this commitment and energy to every encounter with PhD and undergraduate students as they seek to identify who they want to be and what they want to study. This year she shaped future career plans of multiple undergraduate students, in some cases helping them apply for and get into top graduate programs. At this spring's commencement, Dr. Price will hood her first Wyoming PhD student, a non-traditional student with all three (3) degrees from University of Wyoming. She looks forward to continuing to impact the ambitions and opportunities of University of Wyoming students.

This year, in addition to several journal publications, numerous invited presentations around the world (most virtual) and presentations in top conferences, Linda published two (2) articles in a top marketing journals (*Journal of Consumer Research*). Publishing in the top business journals may seem of little consequence to constituents of Wyoming, but doing so directly impacts the ranking and reputation of the College of Business. As the only four year university in Wyoming, and in pursuit of R1 ranking, top publications enhance our ability to attract students, especially graduate students, and our ability to compete for national and international grants. Dr. Price not only consistently publishes her work in top journals, but is well-known for research that is consequential for practitioners, well-cited, and built on by other scholars. For example, this year one (1) of the papers she published is the first to examine whether, when and why consumers repair objects rather than replace them. Although repair is critical to sustainable practices, and many Wyoming ranchers and farmers are likely well-versed in the art of repair, it has received little research attention. Finding ways to better integrate consumption and repair practices can have significant stewardship implications. This year Dr. Price was also invited to join a small cohort of leading world-wide marketing academics as part of a *Better Marketing for a Better World* Initiative, which complements a broader AACSB initiative to support RRBM (Responsible Research in Business and Management) Initiative. Dr. Price has been active in this initiative since its inception.

In addition to taking over as Director of the Marketing PhD program this year, Dr. Price is also co-director of research in the College of Business. She also serves on several key committees within the college and University in addition to several academic editorial boards and foundations. In particular, this year she served on the University Promotion and Tenure Committee, one of the most important academic responsibilities. She is also serving on a university committee to consider General Education Requirements for the next generation of University of Wyoming undergraduates. One (1) of her most important charges is to enhance the regional visibility and participation in research for the Department and College. Notably, this spring the Dick and Maggie Chair co-hosted with the Center for Social Impact at CSU a regional research symposium attended by faculty and students from over eighteen (18) institutions in the region and beyond. Not only did this symposium allow marketing faculty and graduate students to engage with leading researchers around important conversations, but the event itself was transformative, ending with an engaging and interactive session on ethical leadership guided by some of our own management faculty. This will be an annual event, hosted on a rotating basis by other regional universities. Dr. Price looks forward to continuing to use her international academic network and reputation to enhance the research opportunities of faculty and students at University of Wyoming. The funds and support linked to the Dick and Maggie Scarlett chair have not only supported Dr. Price's own outreach engagements, research and publishing, but have also provided support to graduate students to develop their learning and networking and enhance their marketable value.

Dr. Jason Shogren, (Ph.D. Economics, University of Wyoming) ***Stroock Chair of Natural Resource Conservation and Management***.

Jason Shogren, (Ph.D., University of Wyoming, 1986), Department of Economics, Stroock Chair of Natural Resource Conservation and Management. Returning to his alma mater, Dr. Shogren has been the Stroock Chair of Natural Resource Conservation and Management now for twenty-eight (28) years. For the academic year 2021-22, Shogren continued to work on teaching, research, service, and outreach. Shogren taught a course on Environmental and Natural Resource Economics for the graduate students. He also taught Evolution of Economic Ideas, the capstone course for undergraduate economics students. He chaired or co-chaired the Ph.D. committees for several PhD students. He also advises numerous recent graduates to help them with their research program. He also serves on the committees of several Ph.D. and MS candidates, both inside and outside the Department. Shogren went through his five (5) year review last year and was recommended for reappointed by the Interim Dean Robert Godby.

Dr. Shogren published nearly numerous research articles over the past two years. According to Google Scholar, his work has been cited over eight thousand two hundred (8,200) times during the five (5) year evaluation period (since 2017) and has been cited nearly twenty-eight thousand (28,000) times over his career. He published numerous peer-reviewed papers in top general and field journals and was awarded a COB Belt Buckle Research Award. Shogren is on the editorial board of two international journals, he is a foreign member of the Royal Swedish Academy of Sciences, he is a fellow of the Association of Environmental and Resource Economics, the Association of Applied and Agricultural Economics, he is a fellow of the Beijer Institute of Ecological Economics, the Ecological Society of America, US Steering Committee for Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), and he is serving on board for the Laramie Plains Civic Center and was re-appointed to the Wyoming Arts Council by Governor Mark Gordon. He has received his two (2) Honorary Doctorate degrees, one from Aix-Marseille University in France and the other from the Swedish University of Agriculture Sciences (SLU). Dr. Shogren also talked with numerous media outlets about economics throughout the year.

Endowed chairs at the University of Wyoming benefit the people in Wyoming in three specific ways: (1) help attract world- class economists to Wyoming to continue to provide effective and timely policy advice to local businesses, non- profit organizations, and local government; (2) provide a sound structure to understand better the economics of environmental, resource, and energy challenges; (3) to attract extremely talented undergraduate and graduate students to UW economics department. UW economics alumni now work to keep the cycle going—UW produces good students, who become business leaders, academics, and policy makers who continue to send us their top students. The main contribution of the Stroock chair has been through the students. Dr. Shogren enjoys working with graduate students on their ideas and helping them find their own voice. Other contributions include working with government agencies at the State, Federal, and international level; working with scholars from other disciplines (e.g., ecology, biology, psychology) to understand better how they approach a problem. Dr. Shogren's current work has focused on the economics of controlling the COVID-19 pandemic, and the integration of economics with the natural and life sciences.

Vacant - ***Timothy M. Miles Sales Center Director of Excellence Endowment***

College of Education

Dr. Kimberly Gustafson (Ph.D. Educational Leadership, University of Wyoming) ***Everett D. and Elizabeth M. Lantz Distinguished Professorship in Education.***

Kim Gustafson was awarded the Everett D. and Elizabeth M. Lantz Distinguished Professorship in Education in May 2020 and continues until May 2022. The research focuses on purposefully and consistently integrating social studies content into elementary curricula in Wyoming elementary classrooms. In the second year of this scholarship, the focus of the research has been more specific to Native and Indigenous People. The research of social studies and literacy in the classroom naturally melded with the American Indian Education Act for All. Partnering and collaborating with the WDE, LRCC and Tribal Councils, to work on creating k-3 teaching modules for educators and students to provide culturally accurate background information on the Northern Arapaho and the Eastern Shoshone. Cultural mentors from the Northern Arapaho and Eastern Shoshone have been suggested by their respective Tribal Councils to help provide and develop culturally relevant background information, lesson plans and best teaching practices. Working with cultural mentors and teachers to create modules of learning will help educators with the proper cultural understanding, tools, and materials to teach units of study on the Northern Arapaho and Eastern Shoshone in effective ways to integrate social studies into the classroom in purposeful and consistent ways.

Dr. Tiffany Hunt, (Ph.D. Special Education, University of Northern Colorado) ***Everett D. and Elizabeth M. Lantz Distinguished Professorship in Education.***

As an appreciative recipient of the *Everett D. and Elizabeth M. Lantz Distinguished Professorship in Education*, I welcome the opportunity to provide an update regarding my work thus far. This past year has largely been devoted to learning about and growing my ability to create high quality Flash Briefings driven primarily through student inquiries and personal experiences. Consequently, I have successfully created and implemented course specific Flash Briefings with unique music, cover art, and content. In surveying students, I am excited to report that the enthusiasm and appreciation for content specific flash briefings is high. All students surveyed believed on some level that engaging in flash briefings was a good way to help students, and 81% of respondents could envision themselves utilizing this methodology in another class. Additionally, many students expressed their excitement for the Flash Briefings. One student shared, “I truly enjoyed the flash briefings and I think they were very beneficial… I do think I will utilize Flash Briefing in my new position next year. It's a way to personally connect with staff and provide meaningful information. Thank you for getting me out of my comfort zone!!” Another student wrote, “The Flash Briefings were amazing. They were quick nuggets of information that addressed pertinent information for the class. I wish more classes would use it to help explain the content more to students. Thank you for taking the time to make them and providing extra details of content.” This initial positive feedback indicates that Flash Briefings are valuable and to students and support content acquisition. Additional feedback regarding length, frequency, and continual access to flash briefings will be utilized to improve the creation and utilization of flash briefings in the fall. I look forward to continuing and expanding this work, as I shift toward sharing content with Wyoming teachers via statewide initiatives and support.

Dr. Patrick Manyak, (Ph.D. Language, Literacy and Learning, University of Southern California) ***Everett D. and Elizabeth M. Lantz Distinguished Professorship in Education.***

Dr. Patrick Manyak is currently completing the second year of his research funded by the Lantz Distinguished Professorship Award. His project has involved working with thirteen (13) kindergarten teachers at the Aspen Early Learning Center in Riverton, Wyoming to implement and test the effects of multifaceted vocabulary instruction. Analysis of student outcomes from Year 1 indicated that the participating students made greatly

accelerated growth in general vocabulary vis-à-vis the norming sample, despite a large mean number of absences at the school resulting from the pandemic. Specifically, the mean score for the Aspen students at the beginning of the year showed that the group was at the 45th percentile (i.e., lower than sixty-five (65) percent of the students in the norming sample) in vocabulary knowledge. The end-of-year mean score for the group corresponded to the 68th percentile. During Year 2 of the award, Dr. Manyak submitted a research paper reporting these results to a top-tier journal, and it is currently under review. He also made presentation on the project instruction for the International Dyslexia Association conference in October 2021 and at the Wyoming State ESL conference in April 2022. Year 2 fieldwork involved minor revisions to the instructional materials, instruction of over one hundred seventy (170) student participants, and a quasi-experimental trial. Dr. Manyak has completed assessment of the control students, and the mean growth in standard scores for the students on the Peabody Picture Vocabulary Test was 3.9. He will be conducting end-of-year assessment of students at the research school in coming weeks. However, in Year 1, the Aspen students' mean growth in standard scores was 9.1, substantially larger than that of the Year 2 control group. Dr. Manyak will analyze the Year 2 data and write a research article during the summer of 2022. As a result of his presentations on this project, other high-needs schools in Wyoming have expressed interest in collaborating with him to implement effective vocabulary instruction.

Dr. Scott Thomas, (Ph.D. Education Policy, Leadership and Research Methods, University of California, Santa Barbara) ***John P. "Jack" Ellbogen College of Education Deanship Fund***

Dr. Thomas joined the University of Wyoming as a John P. "Jack Ellbogen Dean in July 2021, moving from the University of Vermont where he had served as Professor, Dean of the College of Education and Social Services, and Interim Dean of the College of Nursing and Health Sciences. Thomas has also served as the Dean of the School of Educational Studies and Vice President for Strategy and Academic Planning at the Claremont Graduate University. Driving his work is the opportunity to advance individuals' social mobility, build vibrant communities, and strengthen democracy by providing high-quality educational opportunities accessible to everyone, regardless of background.

Dr. Thomas' scholarship has been supported funding from a variety of foundations and federal agencies, including the US Department of Education, the National Science Foundation, the National Institutes of Health, and the Lumina Foundation. His substantive research interests include higher education policy, science and technology, and the stratification of postsecondary opportunity. In addition to his scholarship in these substantive areas, Dr. Thomas has a related line of interest and work focusing on methodological issues. His applied methodological work focuses on multilevel statistical modeling, social network analysis, and spatial analytics. Dr. Thomas' substantive expertise in higher education is further informed through a seven-year term as the editor in chief of the Journal of Higher Education, the oldest and most distinguished journal in the field of higher education, and the book series International Studies in Higher Education (26 volumes), co-edited with colleagues at Oxford University.

College of Engineering and Applied Science

Dr. Mike Borowczak, (Ph.D. Computer Science, VLSI Design Automation for Hardware Security, University of Cincinnati) ***Loy and Edith Harris Assistant Professor***

In the 2021/2022 academic year Dr. Mike Borowczak taught nine (9) courses (≈ 160 students), was awarded just over $1.8 million dollars in funding ($1.6M as PI), and was part of a interdisciplinary team which was awarded

both a UWYO Grand Challenges award as well as a Provost's Initiative award. He was actively involved in research and outreach funded by the National Science Foundation, the National Security Agency, Department of Energy (through Idaho National Laboratory), Wyoming Department of Education, as well as several industry partners (IOHK, Kraken, Ripple, Microsoft, MilliporeSigma). His outreach work included developing and running three (3) week-long federally supported professional developments for over one hundred (100) Wyoming K-12 educators, students, and state librarians through a collaboration known as the WyCSHub (uwyo.edu/WyCS) with the College of Education. His current labs, the Cybersecurity Education and Research Center (Director) and Wyoming Advanced Blockchain Lab (Co-Director) support one (1) Post-Doctoral researcher, ten (10) PhD students, two (2) MS student, and another thirty plus (30+) undergraduate students as well as three (3) external researchers (2 PhD and 1 BS). His research lab saw two (2) PhD and one (1) MS students successfully defend and graduate. In the past year he his collaborators have published twenty (20) peer-reviewed publications including: two (2) book chapters, four (4) journal publications, and fourteen (14) conference publications. His endowed professorship has enabled him to support students in ways that go beyond what federal agencies would typically support. In particular, Dr. Borowczak was able to use the Loy and Edith Harris endowment to support several student and faculty conference registrations, student participation in the Wyoming Innovation Networks pilot Software Engineering Bootcamp, a part-time undergraduate student researcher, and the overhaul of a national organization's open access journal (ASEE Computers in Education - coed.asee.org), and a communication platform for the Computer Science Department's students, faculty and alumni. Finally, in addition to these contributions, the endowment funds were also used to support new student organization (Women in Cybersecurity - WiCyS) and several capstone team projects. Dr. Borowczak's interdisciplinary work is rooted in partnerships - he continues to utilize his Loy and Edith Harris Assistant professorship to bring people together to create and support positive change in our Wyoming communities. Visit https://borowczak.com for more details about Dr. Borowczak's work.

Dr. Jonathan Brant, (Ph.D., University of Nevada, Reno) ***Vincent O. Smith Professorship in Engineering***.

During the 2021-22 academic year Dr. Brant taught 1 course: CE 4410 Design of Wastewater Treatment Facilities. He was the advisor for two (2) MS and, two (2) PhD candidates. He was also the advisor for three (3) post-doctoral researchers. He was the Principal Investigator on four active research grants related to technology development for treating oil and gas produced waters and extraction of critical minerals from brines. Funding agencies for these projects included the Department of Energy (DOE) and the National Science Foundation (NSF). Together with Drs. Parkinson and Hoberg, from the Department of Chemistry, Dr. Brant was selected to move to Phase II of the Lithium extraction X-Prize (Phase II results are pending). Collectively, Dr. Brant's projects aim to reduce the energy consumption of desalination processes to make them more viable for rural communities and industries. Further, by making "smarter" membrane materials he aims to create selective separation processes capable of recovering strategic minerals and metals from Wyoming's waters. The benefits of Dr. Brant's work to Wyoming include the expansion of our ability to successfully utilize our State's resources, diversification of our water resources, and environmental protection. Diversifying our water resources is particularly needed in light of the ongoing drought in the Rocky Mountain Region. His research is currently developing pilot0skids to evaluate advanced water treatment systems, some utilizing Wyoming coal products, at the city of Laramie's wastewater treatment plant. Our goal is to demonstrate to water managers from across Wyoming how existing and new treatment technologies may be implemented to improve our access to safe drinking water and enhancing environmental protections.

Dr. Dennis Coon, (Ph.D. Ceramic Science, Pennsylvania State University) ***H.T. Person Professorship of Engineering Education***.

Dr. Coon coordinated H.T. Person Distinguished Speaker Series with Ken Pomeroy, owner of kenpom.com, which is a widely acclaimed online resource for college basketball statistics. Mr. Pomeroy is a graduate of the UW Atmospheric Science Department. He presented a talk entitled "The Crossover: Using Meteorological Principles to Predict Basketball Outcomes" on Friday, October 22, 2021. Professor Coon coordinated the CEAS Freshman Design Challenge for Fall 2021. The Freshman Design Challenge activities were integrated into the ES 1101 FYS course. Professor Coon used H.T. Person Endowment funding was used to provide equipment to several CEAS faculty to implement the online and active learning activities in engineering courses. Professor Coon also provided funding for faculty to travel and attend events focused on active learning, engineering education, and engineering accreditation. He also initiated a pilot program to fund two Ph.D. students to serve as the instructor of record in foundational engineering science courses. The goal of this pilot program is to train the next generation of engineering instructors. Professor Coon provided a detailed analysis of data from U.W. students completing the Fundamentals of Engineering Exam and was the instructor of record for three engineering courses during AY 21-22. He has also worked with Dean's Office personnel to implement the selection process for the next H. T. Person Professor since his term expires on June 30, 2022.

Dr. Lamia Goual, (Ph.D., Imperial College in London, UK) ***Castagne Endowment for Mechanical, Petroleum Engineering and Computer.***

Dr. Goual is the only female full Professor in the College of Engineering and Applied Science. She is an internationally renowned scholar in the field of petroleum colloid and interface science, and her research has a direct positive impact on the State of Wyoming's economy. In the 2021-2022 academic year, she was a co-Principal Investigator in the Wyoming Gas Injection Initiative, a $25M grant funded by the State to develop and de-risk new technologies for the beneficial use of greenhouse gases in the recovery of oil from mature assets in Wyoming. This project is scheduled to start in Summer 2022 and will be performed in collaboration with local oil producers, the Dow Chemical company, and the Enhanced Oil Recovery Institute. Dr. Goual has been leveraging her expertise to other energy areas to help the State diversity its revenue portfolio. In Spring 2022, she was closely involved with the preparation of a multi-institutional research proposal to the U.S. Department of Energy for the creation of an Energy Frontier Research Center for Understanding and Control of Multiphase Flow and Transport in Subsurface Fractures. Additionally, she has contributed to a research preproposal to the U.S. National Science Foundation for the creation of an Engineering Research Center for Hydrogen Storage in Depleted Petroleum Reservoirs. In the past year, Dr. Goual taught Rock and Fluids Laboratory (PETE 3100), Interfacial Phenomena (PETE 5080), and Flow Assurance (PETE 5100-03). She was the advisor of one (1) MS student and five (5) PhD candidates, one of which graduated during this time period. She has published four (4) peer reviewed papers and has two (2) more under review. She continued to serve as an Associate Editor for Energy & Fuels and the graduate coordinator of the department of Petroleum Engineering. She also served on the graduate committee of four (4) PhD students. Dr. Goual was a member of the UW 2-13 Review Committee for the Reorganization of Petroleum Engineering and Reduction in Geology and Geophysics, and a member of the PETE department head search committee. She engaged in several K-12 outreach activities including the Wyoming Summer High School Institute and the Wyoming Latina Youth Conference.

Dr. Dimitri Mavriplis, (Ph.D. Mechanical and Aerospace Engineering, Princeton University) ***A.J. Castagne Professorship in UW's College of Engineering and Applied Science (CEAS)***.

During the 2021-2022 academic year, Professor Mavriplis taught two (2) courses in the department of Mechanical Engineering, managed a research group consisting of one (1) PhD graduate student, one (1) MS graduate student, and three (3) postdoctoral researchers, and was involved in various university and external professional service commitments

In Fall 2021, Professor Mavriplis taught ME 4240: Gas Dynamics, a senior elective course in our department. In Spring 2022, he taught ME 5442: Advanced Fluid Mechanics, which is a graduate level course in our department in the area of specialization of Professor Mavriplis. Throughout the year, Professor Mavriplis managed his on-going research group which currently consists of two (2) postdoctoral researchers and one MS graduate student. Additionally, two (2) external postdoctoral researchers were supported on a part-time basis over the past academic year. Soudeh Kamali obtained her PhD in Fall 2021 and is currently employed at the National Center for Atmospheric Research (NCAR). During the past academic year Professor Mavriplis and his research group have published seven (7) conference papers and three (3) archival journal papers. Professor Mavriplis was also a lead author on a recent NASA report entitled: "Requirements for Aircraft Certification by Analysis: A twenty (20) year Vision for Virtual Flight and Engine

Testing". This report documents a two-year effort, sponsored by NASA, to establish requirements for aircraft certification by computer analysis, undertaken by the team which included representation from Boeing, Pratt and Whitney, Stanford University and the University of Wyoming. A follow-on paper on this topic was presented in January 2022 at the AIAA Scitech Conference in San Diego CA.

Professor Mavriplis has been involved extensively with the NCAR-Wyoming alliance and has served on the Science Requirements Advisory Panel (SRAP) for the NWSC-3 procurement.

Professor Mavriplis currently serves as the Chair of the CFD2030 Integration Committee within the American Institute of Aeronautics and Astronautics (AIAA). Professor Mavriplis also serves as a member of the AIAA High-Lift Prediction Workshop organizing committee, the Drag Prediction Workshop organizing committee, and the AIAA Community of Interest on Aircraft Certification by Analysis.

Professor Mavriplis also serves on the NREL Working group on wind-sim benchmarks. In May 2022, Professor Mavriplis became a fellow of the AIAA.

Finally, Professor Mavriplis and two (2) of his former students wrote an SBIR Phase 2 proposal which was awarded in May 2019 and ended in May 2021. Another Phase 1 proposal was written in March 2021 and was selected for award in June 2021 and will be completed in May 2022. NASA is the sponsor for both SBIR projects.

The research on computational methods for aerodynamics and wind energy undertaken by Professor Mavriplis' group is highly relevant and of interest to the various companies involved in current and future planned wind plant installations in the State of Wyoming. Dr. Mavriplis' research has also been instrumental in leveraging the NCAR-Wyoming Supercomputer (NWSC) facility and demonstrating the importance of this facility for competitive research at UW, for student and faculty recruitment, as well as for economic development and diversification within the State of Wyoming.

Dr. Suresh Muknahallipatna, (Ph.D. Electrical Engineering, University of Wyoming) ***G.J. Guthrie Nicholson Professorship in Electrical Engineering***.

Dr. Muknahallipatna has received awards and recently earned the Tau Beta Pi Outstanding Undergraduate Teaching Award for 2022. The G. J. Guthrie Nicholson Chaired Professorship of Power Engineering is specific to the field of electric energy. Dr. Muknahallipatna was appointed to the position effective July 2019, recognizing his research work in optimizing parallel algorithms and software for execution on heterogeneous hardware architectures consisting of traditional CPUs and accelerators.

He has applied high-performance computing and deep learning research expertise to perform cybersecurity and stability analysis of the power grid in near real-time. Achieving near real-time detection of cyberattacks and stability issues of power grids allows grid operators to operate grids reliably and transfer more power over existing transmission lines. Dr. Muknahallipatna and his research team have four publications on using machine learning algorithms to address the stability and security of grids in the academic year 2021 - 2022. In addition to research on the grid, Dr. Muknahallipatna also researches the use of Deep Learning to detect the no-passing zones on two-lane highways, rear-end collision avoidance systems for Snowplows, and real-time black ice detection as part of funded three research grants from WYDOT. Dr. Muknahallipatna also researches the use of augmented reality devices for medical surgery and education. Recently, he, along with a graduate student, another ECE faculty, and Dr. McGinley, McGinley Orthopedics, were awarded the patent# 11191609: Augmented Reality Based Real-Time Ultrasonography Image Rendering for Surgical Assistance, 2021. Dr. Muknahallipatna teaches undergraduate and graduate-level high-performance computing courses, machine learning topics, and Quantum Computing.

Dr. Mohammad Piri, (Ph.D. Petroleum Engineering, Imperial College London) ***Thomas and Shelley Botts Endowed Chair in Unconventional Reservoirs in the College of Engineering and Applied Sciences and Alchemy Sciences Petroleum Engineering Chair*** (See WY Excellence Endowment Report)

Renee Schoenborn, P.E., (BS Electrical Engineering, University of Wyoming), ***E.G. Meyer Family Visiting Industry Professorship***

After graduating from UW, Ms. Schoenborn went to work as an Instrument Engineer for Shell Oil Company and ended up working in the specialty areas of field instrumentation, process control, and control systems for her entire career. She spent most of her career supporting capital project work (working on global major and mega-projects). She retired from Shell Oil Company in 2020 after thirty-four (34) years of service in the oil & gas industry.

Ms. Schoenborn joined the Department of Chemical Engineering in the fall of 2021 in response to the addition of the "Process Control & Instrumentation" minor that was recently added to the curriculum. She taught an elective course in both the fall and spring semesters titled, "Process Control Safety". The course emphasized real-world concepts regarding safety instrumented systems that are overlayed on process control systems to maintain safe operation. The course discussed process risk, failure rate calculations, and the probability of device failure to assist in designing proper safety functions. She guest-lectured in classes upon request on Ethics, Project Management, Cyber Security, and Safety Systems Overview. She mentored two Chemical Engineering Senior Design Teams. She also interacted with the Department's Industrial Advisory Board, gaining their feedback, and incorporating some of their requests into her course lectures.

Ms. Schoenborn served as an Advisor to the WY A Tau Beta Pi Chapter (National Engineering Honor Society) and supported the AICHE and SWE Student Chapters on campus. Her real passion is supporting the students one-on-one by mentoring, encouraging, and inspiring them to achieve excellence.

Dr. Cameron Wright, (Ph.D. Electrical and Computer Engineering, University of Texas at Austin) ***Carrell Family College of Engineering and Physical Sciences Deanship,*** (New appointment in 2022, first report will be in 2023).

Dr. Haibo Zhai, (Ph.D. Environmental Engineering, North Carolina State University) ***Roy and Caryl Cline Distinguished Chair of Engineering, Environment, and Natural Resources***.

Dr. Haibo Zhai is an associate professor in the Department of Civil & Architectural Engineering and Construction Management at the University of Wyoming (UW) and also an adjunct associate professor in the Department of Engineering and Public Policy at Carnegie Mellon University (CMU). At UW, Dr. Zhai has developed an interdisciplinary program of research and education in low-carbon energy and environmental sustainability. Dr. Zhai offers two (2) interdisciplinary courses for both undergraduate and graduate students: CE4920/5700 Carbon Capture & Storage and CE4920/5700 Water for Energy. Invited by Elsevier, Dr. Zhai has submitted for review the proposal of a textbook titled *Carbon Capture and Sequestration: Principles of Engineering and Policy Analysis*. His research program addresses technical, economic and policy issues related to energy and environmental systems. His research interests mainly include low-carbon energy systems, carbon capture and storage (CCS), negative emissions technologies, low-grade heat & water recovery and reuse, and the energy-water nexus under carbon constraints for climate change mitigation. Dr. Zhai's research program has sponsored two (2) PhD students, three (3) postdoctoral research associates, and one (1) undergraduate student since August 2020. In the past year (2021-2022), Dr. Zhai received three (3) research grants from the U.S. Department of Energy's National Energy Technology Laboratory (DOE/NETL) via KeyLogic Systems, Inc. and the School of Energy Resources (SER), plus one (1) equipment grant from the Cline Chair Funds. He also submitted three (3) research proposals to the U.S. DOE. To support low-carbon energy policy development in the State of Wyoming, Dr. Zhai examined the viability of CCS deployment for compliance with the State's House Bill 0200 Low-Carbon Energy Standards. To provide strategic planning support for the DOE/NETL's water program, Dr. Zhai conducted systems research on advanced cooling technologies and reuse of non-traditional water sources for thermoelectric power plant cooling in water-stressed regions. Dr. Zhai continued his collaboration with the National Renewable Energy Laboratory on an Advanced Research Projects Agency–Energy (ARPA-E) project on flexible CCS technologies. Dr. Zhai published eight (8) articles in top journals in the past year, such as *Applied Energy* and *Environmental Science & Technology*, and now have five (5) journal manuscripts under peer review. A series of his carbon capture studies were referenced in the latest Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report. Starting this summer, Dr. Zhai will serve as Director for the Integrated Environmental Control Model (IECM) development under a technology transfer agreement made between CMU and UW. The IECM is a publicly available computer tool for power plant modeling and assessment, which has been developed by CMU for the DOE/NETL for more than three (3) decades. This tool has been adopted by users from more than sixty (60) countries for a wide range of applications related to energy and the environment. Regarding professional and public services, Dr. Zhai currently serves as a member on the graduate student committee and the ABET committee in the home department and will start to serve on the UW Faculty Senate Committee's Research Advisory Subcommittee this fall. In addition, Dr. Zhai is a guest editor of *Energies*, a journal of the Multidisciplinary Digital Publishing Institute, and serves on the advisory board of *iScience*, an interdisciplinary journal of Cell Press. Dr. Zhai regularly serves as an *ad-hoc* reviewer for academic journals, such as *Science*, *Nature Energy*, *Nature Sustainability*, and *Environmental Science & Technology*.

Vacant - ***Le Norman Endowed Leadership Chair in Petroleum Engineering***

Vacant - ***Snaptron Innovation and Entrepreneurship Professorship***

Interdisciplinary

Dr. Drew Bennett, (Ph.D. Geography, Oregon State University) ***Whitney MacMillan Professor of Practice in Private Lands Stewardship***.

Dr. Bennett leads the Whitney MacMillan Program in Private Lands Stewardship, housed within the Ruckelshaus Institute at the University of Wyoming. The program supports research, information synthesis, outreach, and teaching to help sustain working farms and ranches in Wyoming and the West. During 2021-22 academic year, Dr. Bennett authored or co-authored five (5) peer-reviewed journal articles. Under Dr. Bennett's mentorship, undergraduate students were lead authors on two (2) of the articles, which will serve to differentiate these students as they launch their careers. A graduate student in the Juris Doctor / Master of Arts in Environment and Natural Resources (JD/MA) program was the lead author on an article examining strategies to open the voluntary carbon-market to more landowners in western rangelands. Dr. Bennett also worked with partner organizations outside the University to create paid internships for three (3) students to gain practical experience with pressing environmental challenges, such as mitigating wildlife-livestock conflicts. Through his outreach program, Dr. Bennett organized three (3) webinars for environmental managers on a range of topics, including communicating emerging science on the benefits of flood irrigation to sustaining wetland habitats for migratory bird species. With students, Dr. Bennett is supporting a collaborative group in the Cody area to understand the portfolio of tools available to landowners to conserve working ranchlands, manage conflicts with wildlife, and maintain agricultural operations. He also spoke with the media on multiple occasions about national land and wildlife conservation efforts and was quoted in feature stories in the *Washington Post* and the *Washington Post Magazine*. Dr. Bennett continues to teach *Conservation Entrepreneurship*, a course that applies an entrepreneurial mindset to environmental conservation and trains students in business concepts with the aim of inspiring innovation in the environmental sector. These endeavors collectively support the stewardship of private lands in Wyoming and the West.

Dr. Steven Smutko, (Ph.D. Economics, Auburn University) ***Eldon & Beverly Spicer Chair in Environmental and Natural Resources*** (See WY Excellence Endowment Report)

Dr. Jacob Hochard, (Ph.D. Economics, University of Wyoming) ***Knobloch of Conservation Economics and Finance***

Dr. Hochard taught undergraduate level "The Economics of Climate and Critters" and "Approaches to ENR Problem Solving" to Haub School of Environment and Natural Resources students. Hochard successfully hired three (3) post-doctoral scholars, mentored, and funded a PhD student, a MS student in the school's new Environmental Science and Society program and two (2) undergraduate Haub School research assistants. Hochard also launched the Wildlife Tourism for Tomorrow summer ambassadorship program for University of Wyoming students. The program's inaugural cohort will include four (4) to five (5) undergraduate students spread across the State of Wyoming who will focus on progressive approaches to financing conservation projects alongside the small business community. During the academic year 2021-2022, Hochard oversaw nearly $2 million in externally, internally and foundation funded awards. One (1) such internal award was a Haub School and School

of Energy Resources collaboration, "Adapting Pandemic-Driven Technological Advancement to Expand Ecosystem Service Reach and Virtual Access to Wyoming's National Parks", funded under the University of Wyoming's Grand Challenges initiative. Hochard also led a major Haub School-School of Energy Resources proposal to the U.S. Environmental Protection Agency (EPA) that is currently pending. Hochard continues to lead the construction of Wyoming natural wealth accounts with the near completion of a statewide accounting of economic value stored in the state's elk population. This project will soon expand to mule deer and will be made publicly available to all state constituents in the Wyoming Geospatial Hub. Hochard co-organized the Bioecon Conference held in Jackson, Wyoming in September 2021, presented two (2) in-person presentations as the Southern Economic Association meetings in Houston, TX in November 2021 as well as a presentation to the U.S. Environmental Protection Agency in May 2022. Hochard also had two (2) high-profile publications appear in Nature Publishing Group journals, *Nature Sustainability* and *Scientific Reports.*

Vacant - *Occidental Petroleum Corporation Chair in Energy and Environmental Policies (OPDDEEP)*

School of Energy Resources

Dr. Bruce Parkinson, (Ph.D. Chemistry, California Institute of Technology) ***J.E. Warren Distinguished Professorship of Energy and the Environment.*** (See SER Endowment Report)

Dr. John Kaszuba, (Ph.D. Geochemistry, Colorado School of Mines) ***SER Associate Professor of Geology and Geophysics*** and ***John and Jane Wold Chair of Energy.*** (See SER Endowment Report)

Saman Aryana, (Ph.D. Energy Resources Engineering, Stanford University) ***Occidental Petroleum Corporation Chair in Energy and Environmental Technologies (OPECCEET).***

Dr. Aryana is an Associate Professor and the Graduate Coordinator in the Department of Chemical Engineering. The main thrust of Dr. Aryana's research is the study of multiscale, multiphysics systems at the nexus of energy, water, and the environment with a focus on the fundamentals of flow and transport processes. Dr. Aryana is currently a Lead Scientist (co-PI) in CMC-UF (Center for Mechanistic Control of Unconventional Formations), an Energy Frontier Research Center funded by the US Department of Energy. The center is led by Stanford University and is a collaboration between researchers and scientists from Stanford University, University of Wyoming, University of Southern California, University of Illinois Urbana-Champaign, University of Wisconsin-Madison, and SLAC National Accelerator Laboratory. Dr. Aryana's work is currently focused on microscopic and mesoscopic models of phase behavior and transport in confined systems, the study of flow dynamics using particle tracking, and development of novel monitoring schemes for CCUS. He directs a microfluidic laboratory in the College of Engineering and Applied Science where researchers design and fabricate surrogate permeable media in glass substrates to study flow dynamics using fluorescent particle image velocimetry and optimal design of complex fluids, such as nanoparticle-stabilized foams, for geologic storage of CO_2 and CO_2-Enhanced Oil Recovery. He is also a co-PI in a project, funded through the UW Provost Strategic Investment Fund, exploring gateways to computational thinking that integrate the arts and geosciences into rural early childhood education. Dr. Aryana taught graduate and undergraduate courses on Mathematical Methods in Chemical Engineering and Multicomponent Thermodynamics, which are foundational courses that help develop our future engineers as creative and impactful problem solvers. Dr. Aryana is an active member of the UW community - he is currently a faculty fellow with the UW Office of Global Engagement, a member of the Strategic Planning Team, and a member of the Advanced Research Computing Center (ARCC) Faculty Advisory Committee. He also serves as a mentor in the Diverse Graduate Student Mentorship program, is the founding faculty advisor of the UW Chapter

of the National Society of Black Engineers and is a member of the University Graduate Council. In 2021, he served as a reviewer for several scholarship programs of the American Indian Science and Engineering Society, the representative of the Chemical Engineering department in the UW Chem & ChE 2-13 Review Committee, and a member of the College of Engineering and Applied Science Bylaws Committee. In 2021-22, he authored/co-authored sixteen (16) peer-reviewed papers in high-impact journals, delivered four (4) invited talks (IOR Event – University of Kansas Tertiary Oil Recovery Program; CMC-UF and joint CMC-UF/MUSE meetings; Geoscience and Geoenergy Webinar Series, available at https://youtu.be/6sc4qFpZe5Y), and presented work and/or served as co-convener and co-chair at the American Geophysical Union Fall Meeting, International Conference on Porous Media & Annual Meeting, and the Annual Meeting of the American Institute of Chemical Engineers. Moreover, he delivered an invited short course at China University of Petroleum (East China) and completed a three (3) year term as the founding president of the Northern States Section of the Society for Industrial and Applied Mathematics (covering Wyoming, Utah, South Dakota, North Dakota, and Montana).

University Libraries/Honors College

Janice Grover-Roosa, (M.L.S. Library Science, Emporia State University; MA, University of Wyoming) ***Carol J. McMurry Endowed Librarian for Academic Excellence***.

During academic year 2021-2022, Ms. Grover-Roosa provided information literacy instruction for undergraduate and graduate students. She also taught undergraduate courses, Colloquium I & II, for the UW Honors College. She and her colleagues in the Research and Instruction department at William Robertson Coe Library continue their research on information literacy competencies in transfer students, recently completing focus groups that determine the efficacy of information literacy modules used in many Wyoming community colleges and at the University of Wyoming. This study provides foundational information pertinent to information literacy instruction for institutions of higher education in Wyoming. Ms. Grover-Roosa received two (2) teaching awards in this academic year—Promoting Intellectual Engagement in the First Year (PIE), and Teaching Excellence in Honors Colloquium.

College of Law

Jacquelyn Bridgeman, (J.D. Law, University of Chicago), has been the ***Kepler Distinguished Professorship of Law***.

Ms. Bridgeman continued to provide service to both the College of Law and the College of Arts and Sciences through her continued work as the Director of the School of Culture, Gender, and Social Justice. In the 2021/2022 academic year, Professor Bridgeman again taught courses in Race, Gender, and the Law, and Social Justice and the Law. Ms. Bridgeman also taught a course on Employment law that was offered to law students only. Putting theory into practice, Ms. Bridgeman continued her work as the magistrate judge for the Albany County Integrated Juvenile Treatment Program (juvenile drug court). Working with a team of community members, Ms. Bridgeman continues to help develop the program according to national best practices and to work to make it a model program for the state and nation, particularly with respect to how to develop a strong program in rural areas. During this past year, she worked with a team to develop two (2) new pilot programs designed to further help juveniles with substance use issues, which are the first of their kind in the United States. She is also a member of the Access to Justice 2.0 statewide committee, which is focused on how to make the Wyoming judicial system more accessible

to all Wyomingites. In this past year, Ms. Bridgeman continued work on two book projects. The first with four (4) co-authors aimed at helping students from unrepresented populations be successful in college. The second is a book on social justice in American society.

Stephen M. Feldman, (J.S.M. Law, Stanford University, J.D. Law, Oregon State University), ***Jerry W. Housel/Carl F. Arnold Distinguished Professor of Law***.

Professor Feldman has been the **Jerry W. Housel/Carl F. Arnold Distinguished Professor of Law** and Adjunct Professor of Political Science since 2002. During the past year, he published a book: Pack the Court! A Defense of Supreme Court Expansion (Temple University Press, 2021). This publication generated numerous interviews, podcasts, and review essays. For example, Michel Martin conducted a radio interview with Professor Feldman for All Things Considered, on NPR (Sept. 5, 2021). Professor Feldman also published numerous articles and essays, including the following: Review of J. David Holcomb, Guardian of the Wall: Leo Pfeffer and the Religion Clauses of the First Amendment (2021), 63 J. Church & State 741 (2021); Democrats Should Pack the Court, Tikkun.org (August 12, 2021); Court Packing Time? Supreme Court Legitimacy and Positivity Theory, 68 Buff. L. Rev. 1519 (2020); Free-Speech Formalism Is Not Formal, 12 Drexel L. Rev. 723 (2020) (presented at Symposium on Not Your Father's First Amendment); Free-Speech Formalism and Social Injustice, 26 Wm. & Mary J. Race, Gender & Social Justice 47 (2019) (presented at Symposium on First Amendment Marketplace Morass). As he does regularly, Professor Feldman taught Constitutional Law I, Constitutional Law II, and Jurisprudence. His research and writing projects emphasize national concerns and are of national interest. As such, they benefit the University of Wyoming, the state of Wyoming, and Wyoming residents. His articles and essays consistently rank in SSRN's Top Ten Percent Total New Downloads List as well as SSRN's Top Ten Percent Total All-Time Downloads List. He is the faculty adviser for the American Constitution Society Wyoming student Chapter.

James Delaney, (J.D. Law, Gonzaga School of Law, LL.M University of Florida School of Law), ***Carl M. Williams Centennial Distinguished Professor***.

Professor James Delaney was appointed as the Centennial Distinguished Professor of Law at the beginning of the 2020-2021 academic year and he is now finishing his second year in that capacity. The College of Law committee appointed Professor Delaney based upon his successful teaching record, scholarly publication achievements, active involvement in the work of the Tax Section of the American Bar Association, his numerous presentations at tax conferences which are both national and regional, and his membership in both the American College of Tax Counsel and the American College of Trust & Estate Counsel. During the 2021-2022 academic year, Professor Delaney finished writing and updating a chapter of Planning for Large Estates, which was published several months ago by Matthew Bender Elite Products, a subsidiary of LexisNexis. During the fall of 2021 and the spring semester of 2022, Professor Delaney co-authored an article, Recent Developments in Federal Taxation: The Year 2021, accepted for publication in The Tax Lawyer, summer 2022 (forthcoming). Professor Delaney taught Contracts 1, Business Entities Taxation (corporate and partnership taxation), Federal Income Taxation, and Estate & Gift Taxation during the 2021-2022 academic year. In March of this year, Professor Delaney was selected by the graduating class of 2022 as one (1) of two (2) Faculty Hooders at the College of Law. Being selected as a Hooder is a teaching award and Faculty Hooders have the privilege of hooding graduating law students on stage during the College of Law commencement ceremony. Professor Delaney's teaching efforts at the College of Law reflect his dedication to teaching law students who largely practice law in Wyoming and other states in the Mountain West. His scholarly endeavors emphasize both local and national interests. As such, his publications benefit the University of Wyoming, the state of Wyoming, and Wyoming residents. For example, his books on

Federal Income and Estate & Gift Taxation Serve to educate students here at the University of Wyoming, Colleges of Law throughout the Mountain West, and abroad. In relation to scholarly presentations, in the fall of 2021, Professor Delaney presented at the University of Montana Tax Institute, which took place in Missoula, Montana. In May of 2021, Professor Delaney co-spoke at a tax conference for the Virginia Law foundation. In June of 2021, Professor Delaney also co-spoke at the Oregon Tax Institute conference. Professor Delaney would like to thank the University of Wyoming and Dean Klint Alexander for the support he has received over the past year, which has allowed him to engage in the above endeavors.

Alan Romero (J.D. Law, Harvard University), ***Carl M. Williams Professor of Law & Social Responsibility***.

Professor Romero is the founding Director of the University of Wyoming Rural Law Center. One (1) of its ongoing projects is its Legislative Research Service, which offers student legislative research and drafting on rural policy issues to local governments and public-interest groups. These projects give students unique experience researching and writing about current public policy issues in the state. During the 2021-2022 academic year, Professor Romero continued and completed supervision of three legislative research projects. One (1) of the completed projects was researching and drafting a legal guide for Wyoming conservation districts and the public, explaining how to formalize and incorporate irrigation ditches in Wyoming. Another project completed research for the Wyoming County Commissioners Association about land use laws and policies to help preserve wildlife migration corridors. The third project was research contributing to the efforts of a working group with the state bar that is considering programs and proposals to attract lawyers to rural communities, support rural practitioners, and better serve rural legal needs. The student director of the project ultimately wrote an independent study paper for credit and then developed the paper into a comment published in the first 2022 issue of the Wyoming Law Review, advocating financial incentives and support for attorneys beginning rural law practices. The student director joined the state bar working group, with which Professor Romero has continued working throughout the academic year. In collaboration with the state bar, Professor Romero organized and co-hosted a conference about rural, small, and solo practice at the College of Law on April 14 and 15, 2022, with about two hundred thirty (230) people attending in person and online. The conference included a well-attended evening reception that gave rural practitioners from around the state an opportunity to connect with each other and with law students. Such connections can be especially important for small and solo practitioners in rural communities. Professor Romero also organized a one-day conference held on October 8, 2021, about agricultural estate and tax planning, which was changed to online only because of an increase in active COVID cases at the time.

During the academic year, Professor Romero also continued his work to address the need for rural lawyers in Wyoming by writing and publishing two (2) reports and commentaries: *Assessing and Addressing the Need for Rural Lawyers in Wyoming*, published in the October 2021 issue of Wyoming Lawyer, and *Efforts to Encourage and Support Rural Law Practice in Wyoming*, published in the first 2022 issue of the Wyoming Law Review. Since the last annual report, Professor Romero's article, *Identifying Rural Roads*, was also published in the Indiana Law Review. The article advocates rules that both reduce uncertainty about the status of rural roads and appropriately respond to rural circumstances, and it explains how some state rules fail to do so and even contribute to the problem. He also completed a co-authored article, *Law in Place: On Urban and Rural Paradigms in Legal Scholarship and Law*. The article considers how place characteristics are and should be relevant to law and its application, and how rural and urban scholars can and should learn from each other. The Fordham Urban Law Journal has accepted it for publication and plans it to be the lead article in an entire issue devoted to the theme, for which it is soliciting other articles.

Professor Romero taught Property I and Property II, required courses for all first-year law students; Real Estate Finance, which covers subjects tested on the Wyoming bar exam; and Land Use Law. He also supervised two (2) students writing papers for independent study credit and satisfaction of the law school writing requirement and was a member of a Plan B thesis committee for a joint-degree student.

Sam Kalen, (J.D. Law, Washington University), William T. Schwartz Professor of Law and ***Centennial Distinguished Professor***.

Sam Kalen is the William T. Schwartz Distinguished Professor of Law and teaches and is the Associate Dean at the College of Law. Professor Kalen is a nationally recognized energy, environmental, public land, and natural resources professor. He co-authored one (1) of the most comprehensive histories of the nation's energy policies, Energy Follies (published by Cambridge University Press) along with his co-author who was one of most renowned energy experts in the nation. He is a co-author of one (1) of the principal natural resources casebooks used in law schools across the country. He also is a co-author of one of the principal practice books, published by the American Bar Association, on the Endangered Species Act. He is routinely asked by and quoted in the national news on matters related to energy and public lands, and even recently testified before the U.S. Congress on critical minerals (the second time he has testified before Congress), following the publication of an article of the month on that topic by the Environmental Law Reporter. During the last two (2) decadal anniversaries of the National Environmental Policy Act, he has written or spoken at principal celebratory events, and he is now completing his manuscript on the evolution of ecology and its connection with the development of that Act. Professor Kalen also has authored numerous scholarly articles and book chapters, including publishing in such highly regarded legal law reviews as the Maryland Law Review, Florida Law Review, Colorado Law Review, Marquette Law Review, Rutgers Law Review, Ecology Law Quarterly, NYU Environmental Law Journal, and Duke Environmental Law and Policy. Indeed, one of his early articles was cited and quoted in a U.S. Supreme Court opinion. And along these articles, Professor Kalen also has co-authored chapters on public lands as well as on international deployment of Environmental Assessment (EA) laws in other countries (working in the past, for instance, with several scholars in both the U.S. and China on exploring EA comparisons).

Mr. Kalen's activities and teaching continue to have a direct and relevant benefit to the State of Wyoming. He lectures and speaks on topics ranging from the future our electric grid to resource development on public lands. He gave a talk to an out-of-state bar association on solar development, and he recently presented before the Wyoming Chapter of the Federal Bar Association and the State Bar Association on a matter involving administrative law. Professor Kalen founded and is now the co-Director of the Center for Law and Energy Resources in the Rockies and helps organize the annual CLERR Landscape Discussion on Energy Law and Policy. While serving as the Associate Dean this past academic year he taught Administrative Law and Environmental Law, and he often teaches, as well Energy Law & Policy, and Public Lands. These are all matters of acute interest to Wyoming. He serves as the College of Law's trustee to, and chairs a committee for, The Foundation for Natural Resources and Energy Law (formerly the Rocky Mountain Mineral Law Foundation), and he serves on the book publishing board for the American Bar Association's Section on Environment, Energy & Resources (for which he was a past chair).

Noah Novogrodsky, (J.D. Law, Yale Law School), ***Carl M. Williams Professor of Law and Ethics and the Faculty Director of the Center for International Human Rights Law & Advocacy***.

In the 2021-22 academic year, Professor Novogrodsky taught Civil Procedure, International Law, Transitional Justice and International Human Rights Law. In addition, Professor Novogrodsky has spearheaded study abroad

courses in Santiago, Chile and Cambridge, England. Professor Novogrodsky has been a frequent public commentator on international crises, including Russia's invasion of Ukraine, and the U.S. Supreme Court's jurisprudence in foreign expropriation cases. Professor Novogrodsky's current scholarship is focused on (1) the international water law case of *Chile v. Bolivia* at the International Court of Justice, (2) The New Human Right to Property (with Greg Fox), and (3) an in-depth account of the murder of Jamal Khashoggi and its effect on international legal norms. In the last twelve (12) months, Professor Novogrodsky has served as a consultant to an antitrust suit in Wyoming federal court, as an expert witness in four immigration cases, and as a human rights investigator into modern slavery in the Thai seafood industry. Professor Novogrodsky presented his research at the Northern California International Law Scholars conference at UC Davis and remotely at the American Society of Comparative Law.

Michael R. Smith (J.D. Law, University of Florida), ***Carl M. Williams Professor of Law & Ethics.***

Professor Smith is the Director of the Legal Writing Program and is the Founder and Director of the Center for the Study of Written Advocacy at the University of Wyoming College of Law. Professor Smith is the author of an ongoing column called "Write On!," which appears in the WYOMING LAWYER, a magazine published by the Wyoming State Bar. This column provides instruction for practicing lawyers, judges, and paralegals in Wyoming on how to improve their professional writing. During the 2021-2022 academic year, Professor Smith published the following articles under this column: *The Three Uses of the Accord Signal in Legal Citation, Part 1*, 44 WYOMING LAWYER 38 (August 2021); *The Three Uses of the Accord Signal in Legal Citation, Part 2*, 44 WYOMING LAWYER 42 (December 2021), and *Policy Arguments That Warn of Negative Unintended Consequences, Part 1*, 45 WYOMING LAWYER 52 (April 2022). Also, during 2021, Professor Smith continued his work researching and writing a Criminal Law textbook to be used in first-year Criminal Law courses in law schools nationally. The book will be a casebook setting out foundational materials and practice problems on the general nature of criminal offenses and affirmative defenses. The working title of the textbook is AN INTRODUCTION TO CRIMINAL OFFENSES AND DEFENSES: A PRACTICAL APPROACH. In November of 2021, Professor Smith finished a second draft of the book (300+ pages) and used this draft as the main textbook for his Criminal Law course in Spring 2022. In the near future he plans to submit the textbook for publication. In his role as the Director of Legal Writing, Professor Smith generally administers the legal writing program at the College of Law. During the 2021-2022 academic year, these duties included advising the law school faculty and administration on the legal writing curriculum, working with the Law Library to coordinate the teaching of the first-semester Legal Writing I course and the first-semester Legal Research course, overseeing the hiring of adjunct professors to teach in the first-year writing program, overseeing and mentoring these adjunct professors during the academic year, coordinating the development of the curriculum for the Legal Writing I and Legal Writing II courses, coordinating the development of the Legal Writing II appellate brief problems that are used by the adjunct professors teaching Legal Writing II in the spring semester, overseeing the hiring of student teaching assistants for the first-year legal writing program, overseeing the hiring and performance of a writing specialist from the University Writing Center who provides general writing advice to law students, and generally being the contact person at the law school on issues related to the legal writing program. Also, before the beginning of the Fall 2021 semester, Professor Smith participated in the introduction-to-law-school event for incoming first-year law students. The two (2) day program (held on July 12 & 13, 2021) was called the UW Law School Acclimatization Program. Professor Smith gave two (2) presentations (totaling four (4) hours) to the attendees: *Introduction to the Legal System* (with Deb Person) and *How to Write an Exam Answer* (solo presentation). Professor Smith also participated in the formal Orientation Week for incoming law students at the beginning of Fall 2021. At the orientation, he gave a presentation on the nature and structure of the Legal Writing Program at the College of Law. As for teaching, in Fall 2021, Professor Smith taught two (2) sections of Legal

Writing I. Legal Writing I is a required course that teaches first-semester law students the foundations of legal analysis, legal research, and legal writing. In Spring 2022, he taught the first-year required course Criminal Law and a seminar course on Advanced Persuasive Writing. In terms of student advising, Professor Smith regularly met with students to offer guidance on law school issues, issues regarding job searches, and issues regarding the practice of law generally. Because his first-semester Legal Writing I course is taught in smaller sections than the students' other first-year courses, and because students in that course meet with him regularly to discuss their writing assignments, Professor Smith often develops a close relationship with the students. As a consequence these students often seek him out for general advisement beyond the topics of the course and do so even after the course is over.do

Michael Duff, (J.D. Law, Harvard Law School), ***Winston S. Howard Distinguished Professor of Law.***

Professor Duff has been the Winston S. Howard Distinguished Professor of Law since 2021. He has previously served as Centennial Distinguished Professor of Law. He has taught at the College of Law since 2006. Professor Duff is among the most authoritative labor and employment scholars in the United States. Throughout 2021, he was repeatedly quoted in national publications on the complex interplay between Covid-19 and labor and employment law. Also in 2021, Professor Duff placed an article on SSRN's Top Ten Percent New Downloads List—What Covid Laid Bare: Adventures in Workers' Compensation Causation, 59 San Diego L. Rev. ___ (2022). All time, Professor Duff's downloads place him in the Top Five Percent of SSRN authors. Increasingly, Professor Duff has been receiving accolades for his work in torts and workers' compensation law. In recognition of this rising prominence, Professor Duff was elected in 2021 to the American Law Institute, the leading independent organization in the United States producing scholarly work to clarify, modernize, and otherwise improve the law. In 2021, Professor Duff wrote, or updated, the following: New Labor Viscerality? Work Stoppages in the "New Work," Non-Union Economy, 65 Saint Louis University Law Journal 115 (2021), A Treatise Of Wyoming Workers' Compensation Law (CALI eLangdell Press, 2nd ed. 2021) (the only treatise of Wyoming workers' compensation law ever written), Workers' Compensation Law (Carolina Academic Press, 2nd ed. 2017; 3rd ed. 2021), Challenges for Black Workers After 2020: Antiracism in the Gig Economy?, Employee Rts. & Emp. Pol'y J. (2021), The Functional Operation of Workers' Compensation Covid 19 Presumptions, Workers' First Watch, Workers' Injury Law & Advocacy Group, February 8, 2021 available at https://www.wilg.org/?pg=Publications, All the World's a Platform?: Some Remarks on "Marketplace Platform" Employment Laws (Vol. 50, No. 2, Winter 2021, the Brief, Magazine of the ABA Tort Trial and Insurance Practice Section), Can Workers' Compensation Work in a Mega-Risk World?: The Covid 19 Experiment, 35 ABA Journal Of Labor Of Labor & Employment Law 17 (Winter 2021). During 2021, Professor Duff delivered ten scholarly presentations throughout the United States. He was quoted in national publications thirty-five (35) times. Professor Duff teaches, or has taught, the College of Law course in Administrative Law, Bankruptcy, Employee Benefits Law, Alternative Dispute Resolution, Labor Law, Torts, Workers' Compensation Law, Evidence, and Introduction to Law. He was the original creator of the school's now-defunct academic support program. In 2020—the pandemic onset year—students voted Professor Duff Outstanding Faculty Member. Professor Duff will depart the College of Law in July 2022 to assume a tenured post at the Saint Louis University School of Law.

Vacant - ***E. George Rudolph Distinguished Visiting Chair***