# Colorado School of Mines
# New Faculty
# 2009 – 2010

**CORBY ANDERSON, Ph.D.** – Dr. Anderson joins CSM as the Harrison Western Professor of Metallurgical and Materials Engineering. He has a BS degree from Montana State, a MS from Montana Tech, and a PhD from the University of Idaho. At Mines, he will be teaching and conducting research as a member of the Kroll Institute for Extractive Metallurgy. He has over thirty years experience in the global mining, minerals and metals industries and is an expert in the fields of extractive metallurgy, mineral processing, waste minimization and recycling. Dr. Anderson has an extensive background in industrially oriented research and was responsible for the development and success of the Center for Advanced Mineral and Metallurgical Processing at Montana Tech. In 2008 he received the Milton Wadsworth Award from SME for his contributions to advance the field of chemical metallurgy.

**STEVEN CASTILLO, Ph.D.** – Dr. Castillo joins CSM as Provost and Executive Vice President. He received a BSEE degree from New Mexico State University, Las Cruces and MS. and PhD degrees in Electrical Engineering from the University of Illinois, Urbana, where he conducted research in electromagnetic analysis of high speed digital circuits. Prior to joining Mines, he was on the faculty at New Mexico State University and was an NMSU Regents Professor in the Klipsch School of Electrical and Computer Engineering where he served as Department Head from 1998 until 2004. He was also Dean of Engineering at NMSU from 2004 until 2009. He has also been employed at White Sands Missile Range, NASA Johnson Space Center, and Bell Telephone Laboratories. He has conducted research in computational methods in electromagnetics, electromagnetic theory and the solution of partial differential equations on parallel computers. He currently serves on several boards and external committees including the Advisory Committee for the Engineering Directorate of the National Science Foundation, the board of directors for the Center of Excellence for Hazardous Materials and the Computational Sciences review panel at Sandia National Laboratories, and the Advanced Simulation. He is a past Associate Editor of the IEEE Antennas and Propagation Transactions.

**SAM CRISPIN, P.E.** – Mr. Crispin joined CSM in March 2009 as the Associate Director of Facilities Management and is responsible for utilities engineering and energy management on campus. Prior to joining CSM, he worked as an Energy Engineer for the City of Aurora and Adams 12 School District, as well as a consulting engineer in the utility power industry. He received a BS in Mechanical Engineering from the University of Wyoming and has an MBA from Regis University in Denver. He is a Certified Energy

Manager, LEED Accredited Professional, and is a licensed professional engineer in Colorado.

**ELIZABETH VAN WIE DAVIS, Ph.D.** – Dr. Davis joins Mines as Professor and Division Director of Liberal Arts & International Studies. She holds a BA in Liberal Arts and MA and PhD in International Relations (Foreign Affairs) from the University of Virginia. Before coming to Mines, she worked as a Program Manager and Professor at the Asia Pacific Center for Security Studies in Honolulu, Hawaii, for the US Government in both an academic and applied position. She was previously the Fei Yiming Professor at SAIS, Johns Hopkins University's Center for Chinese and American Studies in Nanjing China as well as having held positions at Illinois State University, the University of Virginia and Mary Baldwin College. Dr. Davis researches in the areas of international politics, security issues, energy and the environment, and Asia. She has published three books, *Islam, Oil and Geopolitics*; *Chinese Perspectives on Sino-American Relations 1950-2000*; and *China and the Law of the Sea Convention: Follow the Sea*. Additionally she has published numerous articles, contributed book chapters, edited journals, led international conferences, and assisted heads of state.

**HOLLY EKLUND, M.S.** – Ms. Eklund joins the CSM faculty as a Lecturer of Mathematical and Computer Sciences. She has been teaching at CSM since 2005 as Adjunct Faculty. Prior to joining CSM, Ms. Eklund taught secondary school in Steamboat Springs and Jefferson County. She earned her BS degree from Marquette University and MS degree from the Colorado School of Mines.

**KATHLEEN HANCOCK, Ph.D.** – Dr. Hancock joins CSM as Assistant Professor of Liberal Arts and International Studies, where she will be teaching in the Masters of the International Political Economy of Resources (MIPER) program. She holds a BA in Sociology from the University of California, Santa Barbara, an MA in Science, Technology, and Public Policy from George Washington University, and a PhD in Political Science at the University of California, San Diego. Before earning her PhD, Dr. Hancock worked in Washington, DC as a lobbyist for the Federation of American Scientists and as a Senior Analyst at the US Government Accountability Office (GAO). She has conducted field research in numerous countries in Europe and Eurasia, including Kazakhstan, Kyrgyzstan, Russia, and Ukraine. Dr. Hancock's book, *Regional Integration: Choosing Plutocracy* (forthcoming, 2009) compares economic integration efforts led by Prussia, South Africa, and Russia. She has published in *Foreign Georgetown Journal of International Affairs.* She is currently working on her second book, tentatively titled *Identity and International Institutions: Regional Integration in Post- Apartheid Southern Africa.*

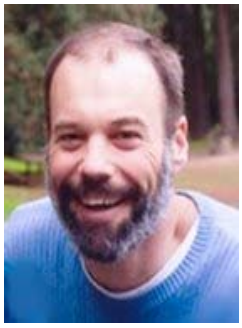
**KEITH HELLMAN, M.S.** – Mr. Hellman joins CSM as a Lecturer in Computer Science in the Department of Mathematical and Computer Sciences. He received a BS from the University of Chicago and a MS from the Colorado School of Mines. He began programming in clinical labs for The University of Chicago Hospitals, and for the next decade wrote research oriented analysis software, clinical databases, back-end databases for electronic publishing, and completed statistical analyses for journal papers. He went on to develop software and testing protocols for several different medical devices, as well as in-home automation systems. Mr. Hellman will continue pursuing a PhD at Mines in the area of efficient implementations of genetic algorithms for materials engineering. He has been teaching CSCI261 (Introduction to Programming with C++) since the summer of 2007, and will be coordinating the course. He will also be involved in Computer Science outreach and hopes to develop a new Introduction to Computer Science course.


**AMANDA HERING, Ph.D.** – Dr. Hering joins the CSM faculty as Assistant Professor of Mathematical and Computer Science. She holds a BS in Mathematics from Baylor University, an MS in Statistics from Montana State University, and a PhD in Statistics from Texas A&M University. During her graduate work, she was awarded the P.E.O. Scholar Award as well as numerous travel awards to present her research on wind forecasting at scientific conferences. She is interested in spatial and space-time models, forecasting, model validation, multivariate time series, and applications of statistics to the environment. Her research includes evaluating dependencies in wildfire point processes, building statistical space-time models for wind speed forecasting, and developing hypothesis tests for comparing the accuracy of forecasts from competing spatial models

**CHRISTOPHER HIGGINS, Ph.D.** – Dr. Higgins joined Mines as Assistant Professor of Environmental Science and Engineering in January 2009. He received his AB from Harvard University and MS and PhD from Stanford University. His dissertation focused on the role of sediments in the fate, transport, and bioaccumulation of perfluorochemicals (PFCs). Prior to joining CSM, he worked as an Analyst for three years with The Cadmus Group, Inc., providing science and engineering research support for U.S. EPA and was an NIEHS postdoctoral fellow at the Johns Hopkins Bloomberg School of Public Health where he investigated the *in vitro* bio-uptake of organic contaminants as well as the bioaccumulation of antimicrobials from sediments and soils. Dr. Higgins' research and teaching interests encompass environmental chemistry and bioaccumulation processes governing the fate and transport of chemical contaminants in natural and engineered aquatic systems. He is particularly interested in evaluating and modeling the fate and bioaccumulation of ionogenic organic contaminants.

**SAMANTHA KEMP, M.S.** – Ms. Kemp joined CSM in March 2009 as the Conference Coordinator for Student Life. She received her BA from Dickinson College and MS in Tourism Administration (Event & Meeting Management) from The George Washington University School of Business. She began her career in Washington, DC before moving to Montana in 1996 to serve as the Meeting and Event Coordinator for an insurance company in Missoula. Prior to joining Mines, Ms. Kemp was the Membership Coordinator/Board Liaison for The University of Montana Alumni Association and the Director of Campus Events and Conference Services at Carroll College in Helena, Montana. She started Kemp Events, LLC in 2008 and has over 17 years experience coordinating and executing corporate, private and social events of all types.

**JEFFREY KING, Ph.D.** – Dr. King joins CSM as Assistant Professor of Metallurgical and Materials Engineering. He is CSM's first tenure-track faculty hire in the Nuclear Science and Engineering Program. He received his BS from the New Mexico Institute of Mining and Technology and MS and PhD from the University of New Mexico. Prior to joining Mines, he worked as a Facility Representative at the Department of Energy's Savannah River Operations Office and served on the faculty at the Missouri Institute of Science and Technology. Dr. King's graduate work focused on space nuclear power and reactor design issues. His recent research efforts have included digital neutron radiography, finite element modeling of nuclear fuel microstructures, and the post irradiation analysis and computational modeling of nuclear fuel and reactor structural materials. He is a member of the Tau Beta Pi, the American Nuclear Society, and the American Institute of Aeronautics and Astronautics.



**REED MAXWELL, Ph.D.** – Dr. Maxwell joined the CSM faculty as Assistant Professor of Geology and Geological Engineering in January 2009. He received his BS from the University of Miami, his MS in Mechanical Engineering from UCLA, and a PhD in Civil and Environmental Engineering from the University of California - Berkeley. Before coming to Mines, Dr. Maxwell held several positions at Lawrence Livermore National Laboratory, including Deputy Director of the Hydrologic Sciences Group. He also had a post-doctoral appointment and was an assistant research professor in the School of Environmental Sciences at Drexel University. His research interests are mainly in numerical modeling and groundwater applications, and he has recently worked on surface/ground water interaction at the watershed scale, in particular with the influence of atmospheric conditions and climate change on subsurface water storage.

**DAN MILLER, Ph.D.** – Dr. Miller joined the CSM faculty as Lecturer of Liberal Arts and International Studies in January 2009. There, he serves as Coordinator of Nature and Human Values. He holds a BA from the University of Colorado-Boulder and a PhD from the University of Iowa. Before coming to CSM, he taught at Iowa State University, the North Carolina State University, and the University of Northern Colorado. At CSM, Dr. Miller will teach courses in British literature, as well as Nature and Human Values.

**THOMAS MONECKE, Ph.D.** – Dr. Monecke joined CSM as Assistant Professor of Geology and Geological Engineering in September 2008. He received his B. and MS in Mineralogy and PhD in Economic Geology from the Technical University Bergakademie Freiberg, Germany. Following his PhD, he remained at Freiberg in a research capacity before accepting a research position at the University of Ottawa. Before coming to Mines, Dr. Monecke held a Research Associate position at the Geological Survey of Canada. His areas of research involve aspects of economic geology, and specifically hydrothermal systems and how they relate to precious and base metal deposits. He also has interests in uranium and rare earth element geochemistry. Dr. Monecke's work earned him the Waldemar Lindgren Award of the Society of Economic Geologists, annually given to the young scientist whose published research work represents an outstanding contribution to economic geology.

**JILL ROBERTSON, M.Ed.** – Ms Robertson joined CSM in August 2009 as Director of Financial Aid. She holds a BS and ME from Northern Arizona University. Ms. Robertson comes to Mines from College of Santa Fe where she served in a similar role for the past four years as the Director of Student Financial Services. She brings twelve years experience as a financial aid administrator and more than 20 years experience as an educational professional.

**JEFF SCHOWALTER, Ph.D.** – Dr. Schowalter joins CSM as Lecturer in Engineering. He received a BA degree in General Studies from the University of WI-Milwaukee, BSEE and MSEE degrees from the Air Force Institute of Technology, and a PhD in Electrical Engineering from the University of WI-Madison. Before joining CSM, he was a controls engineer for Tyco Fire and Building Products. Previous to that, he worked as a faculty associate for the University of WI-Madison, as a technical specialist for McDonnell Douglas Space Systems at Kennedy Space Center, and as an active duty engineering officer in the U.S. Air Force. His primary teaching interests and expertise are in the areas of biomedical instrumentation, analog and digital electronics and computer control and instrumentation. His research interests include the areas of biomedical sensors and instrumentation, home and remote healthcare monitoring and virtual laboratory experiences.

**JONATHAN SHARP, Ph.D.** – Dr. Sharp joined CSM as Assistant Professor of Environmental Science and Engineering in January 2009. He earned his BA from Princeton and PhD from the University of California at Berkeley. His dissertation focused on the role of bacteria in the attenuation of a water micropollutant, *n*-nitrosodimethylamine. Dr. Sharp conducted his postdoctoral research at the École Polytechnic Federal in Lausanne, Switzerland where he investigated biogeochemical questions associated with uranium immobilization in the subsurface. He then worked as a Petroleum Field Engineer for Schlumberger International and a Staff Hydrologist for the U.S. Geological Survey. Dr. Sharp's research and teaching interests address applied microbiology and biotechnology for *in-situ* degradation of emerging organic chemicals and the bioattenuation of metals and radionuclides.

**JENNIFER STRONG, M.S.** – Ms. Strong continues with CSM as a Mathematics Lecturer. She earned both her BS and MS in Mathematical and Computer Sciences from CSM. She has since worked as an adjunct instructor in the CSM Mathematical and Computer Sciences Department, where she has taught Calculus I-III and Differential Equations, and coordinated multiple courses. As a Lecturer, she is excited to continue her teaching and coordination duties in the mathematics core, and to assist her department in its administrative and outreach goals.

**ARNOLD TAMAYO**, **Ph.D.** - Dr. Tamayo joins CSM as Assistant Professor of Chemistry and Geochemistry. He received his BS degree from the University of the Philippines – Diliman (UPD), his MS degree from the Georgia Institute of Technology (GeorgiaTECH), and his PhD degree from the University of Southern California (USC). After obtaining his doctoral degree, Dr Tamayo worked briefly as a Process TD Engineer at INTEL's Flash Memory Group. He then worked as a postdoctoral researcher in the Center for Polymers and Organic Solids at the University of California at Santa Barbara (UCSB). His graduate and post-doctoral research focuses on the design, synthesis and characterization of organic/metallo-organic materials with applications in optical and electronic devices.

**JENNY TROESTLER** – Ms. Troestler has been an employee of the Controller's Office for three years and has been promoted to Assistant Controller. She is a Certified Public Accountant licensed in the State of Colorado. Prior to joining CSM, Ms. Troestler served in various roles as Director or Accounting Manager for private and non-profit organizations. In addition, she has years of experience as an auditor for non-profit and governmental entities. In her new role at Mines, she will supervise Accounts Payable, Travel, Fixed Assets, Capital Project Accounting, Cash Reconciliation, and Bond Accounting.

**CAMERON TURNER, Ph.D., P.E.** – Dr. Turner, a mechanical engineer, joined CSM in January 2009 as Assistant Professor of Engineering. He has a BSME degree from the University of Wyoming and MSE and PhD degrees from The University of Texas at Austin. He has more than a decade of experience at Los Alamos National Laboratory, where he developed finite element models of dynamic ductile fracture and designed and integrated robotic systems to disassemble and process former nuclear weapons components into forms safe for long-term storage, disposal, inspection and reuse. His Design, Innovation and Computational Engineering (DICE) Laboratory at Mines focuses on the intersection of computational capabilities with engineering design, including Computational Design Methodologies, Computer-Aided Design and Engineering, Design Optimization and Computer-Aided Manufacturing including Robotics and Prognostic Health Management. Dr. Turner has more than 20 refereed publications to his credit and recently received research grants from the National Science Foundation and U.S. Department of Energy. He is a member of ASME, ASEE, NSPE, and ACM, and is currently the Vice-Chair (and will become the Chair in September 2009) of the ASME Computer Aided Product and Process Design Committee.

**WILLIAM VAUGHAN, Ph.D.** – Dr. Vaughan joined CSM as Director of Technology Transfer in September 2008. In this role he coordinates partnerships between CSM and the business, venture capital, entrepreneurial and governmental communities to transfer and commercialize CSM inventions. He received a BS in Chemistry from Marietta College, a MS in Organic Chemistry from Ohio University, and a Ph.D. in Science Education at The Ohio State University. Before coming to CSM, he was the Business Development Manager for Ohio State University's Office of Technology Licensing. He has also served as the Executive Assistant for Science and Technology under Governors Taft and Voinovich of Ohio, as a polymer chemist with responsibilities in experimental design and commercial applications at Franklin International, and he has taught Chemistry at Ohio State and Ohio University and conducted research on the properties of organometallic complexes. He is currently a member of the Association of University Technology Managers, State Science and Technology Institute and the Licensing Executive Society.

**CHARLES (CHUCK) VESTAL, Ph.D. –** Dr. Vestal joins CSM as Lecturer of Chemical Engineering. He received his PhD in Chemical and Petroleum Refining Engineering from CSM. His work experience includes being a Process Design Engineer for Continental Oil, a Research Engineer for the U.S. Army and Manager of Computing Technology for Marathon Oil Company. He has worked for CSM as an Adjunct Professor for Chemical Engineering since 1998.

**BRENT WALLER, MBA** – Mr. Waller joins CSM as Associate Director of Housing for Residence Life. He received his BS in Business Administration from Regis University. After graduating he worked in the business environment and came back to higher education. He earned his MBA from Regis University and then worked professionally in residence life at Regis for the past six years.

**ZHIGANG (MICHAEL) WU, Ph.D.** – Dr. Wu joins the CSM faculty as Assistant Professor of Physics. He holds a PhD from the College of William and Mary, where he studied complex ferroelectric materials. He has completed postdoctoral appointments at the Carnegie Institution of Science while investigating phase transitions under high pressure, and the University of California, Berkeley, where he was affiliated with the Berkeley Nanosciences and Nanoengineering Institute. His area of research involves first-principles calculations of the electronic properties of materials and atomistic model simulations using high-performance computing. His recent work has focused on self-assembly of inorganic nanowires, the characteristics of the interface between inorganic and organic systems, and metal hydride nanocrystals. At Mines, Dr. Wu will be applying his knowledge of state-of-the-art density functional methods to identify materials and structures for efficient energy conversion.

**XIAOLONG YIN, Ph.D.** – Dr. Yin joined CSM in January 2009 as Assistant Professor of Petroleum Engineering. He received a BS from Beijing University, China, a MS from Lehigh University and a PhD from Cornell University where he received an outstanding graduate research award. Before joining Mines, he worked as a Postdoctoral Research Associate in the Chemical Engineering Department at Princeton University. Dr. Yin's research area is multiphase flow of suspensions and in porous media, transport and reaction.