Mechanical & Industrial Engineering Department

This list of MIE faculty with active research includes a very general description of their research focus. For more information about the details of faculty research please go to each faculty webpage. You are encouraged to talk to the faculty members whose research aligns with your interests.

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| **ME Faculty** |  | **Office** | **E-mail** | **Research Focus** |
| Amende | Kevin | ROBH 320 | [kamende@montana.edu](mailto:kamende@montana.edu) | HVAC equipment performance testing using an environmental chamber to simulate indoor and outdoor temperature and humidity.  R&D of HVAC components using CFD, additive and subtractive manufacturing processes. |
| Amendola | Roberta | ROBH 120 | [roberta.amendola@montana.edu](mailto:roberta.amendola@montana.edu) | Oxidation and corrosion of metallic alloys, high temperature protective coating development and high temperature corrosive gases and water vapor interactions with metals and ceramics |
| Amin | Ruhul | ROBH 102C | [ramin@montana.edu](mailto:ramin@montana.edu) | Computational heat transfer and fluid flow |
| Bajwa | Dilpreet | ROBH 220 | dilpreet.bajwa@montana.edu | Nanoscale Materials Synthesis and Applications, Biobased Polymers, Processing and Characterization, Polymer Recycling, Durability Engineering, Engineered Building Products |
| Cairns | Doug | ROBH 315 | [dcairns@montana.edu](mailto:dcairns@montana.edu) | Advanced materials as applied to primary structure and understanding the materials, manufacturing, and structural performance link for new engineering systems |
| Codd | Sarah | ROBH 314 | [scodd@montana.edu](mailto:scodd@montana.edu) | NMR/MRI technique development, spatially resolved studies of gas in ceramics, flow and diffusion studies in porous media, and investigation of fluid dynamics in hydrogels, biofilms, cellular suspensions and polymer electrolyte membranes |
| Cox | Lewis | ROBH 201F | [lewis.cox@montana.edu](mailto:lewis.cox@montana.edu) | Polymer Science, Scanning Probe Microscopy, Additive Manufacturing, Stimuli Responsive Polymers, Photopolymerization, Surface Engineering |
| Heveran | Chelsea | ROBH 201E | [chelsea.heveran@montana.edu](mailto:chelsea.heveran@montana.edu) | Orthopedic tissue biomechanics, nanomechanics, biomimetic biomaterials |
| Jankauski | Mark | ROBH 201B | [mark.jankauski@montana.edu](mailto:mark.jankauski@montana.edu) | Dynamics & vibration, biological and bioinspired systems, nonlinear mechanics, aerodynamics, control theory, system identification, flapping wing flight |
| Johnson | Erick | ROBH 302 | [erick.johnson@montana.edu](mailto:erick.johnson@montana.edu) | Computational Engineering |
| June | Ron | ROBH 411 | [rjune@montana.edu](mailto:rjune@montana.edu) | Novel treatment strategies for osteoarthritis. Current programs involve (1) understanding how chondrocytes and all cells respond to mechanical loads, (2) using systems biology and metabolomics to understand regulation of central metabolism, and (3) expanding our understanding of osteoarthritis |
| Kinkaid | Jeff | ROBH 306B | [jeffrey.kinkaid@montana.edu](mailto:jeffrey.kinkaid@montana.edu) | Measurement instruments for biological materials |
| Miller | David | ROBH 306C | [davidmiller@montana.edu](mailto:davidmiller@montana.edu) | Composite materials, experimental mechanics, mechanical system design, active materials and structures |
| Monfort | Scott | ROBH 303 | [scott.monfort@montana.edu](mailto:scott.monfort@montana.edu) | Musculoskeletal Biomechanics, postural and gait stability, neurological influence on human movement, sport injury prevention, and fall prevention |
| Morris | Sarah | ROBH 119 | [sarah.morris14@montana.edu](mailto:sarah.morris14@montana.edu) | Experimental fluid dynamics, ranging in applications including airplane trailing vortices, sailing aerodynamics, rotor wings, and COVID-19 |
| Owkes | Mark | ROBH 201A | [mark.owkes@montana.edu](mailto:mark.owkes@montana.edu) | Computational fluid dynamics, multiphase flows, fuel injection, atomization, uncertainty quantification, physics extraction techniques |
| Pew | Corey | ROBH 112 | corey.pew@montana.edu | Biomechanics, Lower-Limb Prosthetics, Running Performance |
| Ryan | Cecily | ROBH 310 | [cecily.ryan@montana.edu](mailto:cecily.ryan@montana.edu) | Biodegradable and bio-derived polymers and composites, materials properties of composites (including interfacial compatibilization), sustainable material and energy product lifecycles, incorporation/reuse of waste materials, environment-material interaction, multi-functional materials, nanocomposites |
| Schiebel | Perrin | ROBH 322 | [perrin.schiebel@montana.edu](mailto:perrin.schiebel@montana.edu) | Bio-inspired robotics, animal biomechanics and neuromechanics, locomotion in complex terrain. |
| Sofie | Stephen | ROBH 318 | [ssofie@montana.edu](mailto:ssofie@montana.edu) | Advanced Ceramics, Ceramic Processing, Engineered Porosity, Nano-materials, Catalysts, Amorphous Alloys |
| Warnat | Stephan | ROBH 304 | [stephan.warnat@montana.edu](mailto:stephan.warnat@montana.edu) | MEMS, Environmental science, Sensors and actuators |

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| **IMSE Faculty** |  | **Office** | **E-mail** | **Research Focus** |
| Cao | Yang | NAH 253F | yang.cao1@montana.edu | Advanced manufacturing and additive manufacturing, fabrication of flexible/stretchable electronics, soft actuators and robotics, machine learning in manufacturing |
| Dadgostari | Faraz | NAH 253H | [faraz.dadgostari@montana.edu](mailto:faraz.dadgostari@montana.edu) | Adaptive decision-making, systemic risk in financial markets, market design for renewable energy resources. AI-Assisted sequential decision modeling in network systems, learning to learn in competitive environments, Multi-agent inverse learning for behavior modeling. |
| Kittelman | Sage | NAH 253G | sage.kittelman@montana.edu | General system theory, systems engineering, systems dynamics, engineering education, and communication theory; primary focus is on the meaning, behavior, structure, and processes of purposeful human activity systems. |
| McCrory | Bernadette | NAH 253E | bernadette.mccrory@montana.edu | Biomedical engineering, healthcare systems, human factors/ergonomics, biomechanics, user experience, applied statistics |
| Yalcin | Ali | NAH 253J | ali.yalcin@montana.edu | Data Analytics, Ambient Intelligence, Internet of Things, Time-series Data Mining and Analytics Applications in Healthcare, and Engineering Education Research. |