



**NORTHERN MICHIGAN UNIVERSITY**  
FRESHMEN FELLOWSHIP PROGRAM

## **Faculty Research Directory**

This document lists the research interests of many NMU faculty members. Current and prospective students can use this directory to learn about what projects could be available to students interested in undergraduate research opportunities. Prospective graduate students should be aware this list contains faculty from undergraduate as well as graduate programs.

### Contents

Faculty by department \_\_\_\_\_ 2-23

Index by department \_\_\_\_\_ i

(If you have a particular faculty member in mind, use ctrl + F to search the document for their last name.)

## **Art and Design**

### *Taimur Cleary*

Tim plots the course of his artistic direction(s) with references to art history, perception, photography, phenomenology, abstraction, Gerhard Richter, meteorology, memory, Monet, Manet, minimalism, Mark Rothko, Modest Mouse, circadian rhythms, his grandfather, birds, Andrew Bird, cardinal directions, wind, atmosphere, the obliquity of the elliptic, e.e. cummings, Bertolt Brecht, Dana Saulnier, Willem DeKooning, his students, his teachers and travel... to name a few of the nameable.

### *Stephen Hughes*

Research and illustration studio activity centers on the human figure in both formal visual representations and as drivers of narrative compositions. Hughes also regularly practices on-location, or en plein air, oil and watercolor painting around the Upper Peninsula landscape.

### *Steven Leuthold*

Current research interests center upon global issues in the history of modern design. He seeks to increase the inclusivity of design history and to identify patterns of cross-cultural interaction related to modern design's social effects. He is also a practicing artist and musician.

### *Gabrielle McNally*

McNally's scholarly work currently explores the notions of voice, improvisation, memory, performance, autobiography and gender as they relate to nonfiction filmmaking. As a practicing artist, McNally works in experimental autobiographical and essayistic nonfiction video and performance.

### *Peter Pless*

His passion for design, craft and exhibiting his works grows continually. For him, the design process is a delicate balance between the exploration of new conceptual territory while developing refined, expressive and elegant forms.

### *Jason Schneider*

Jason is interested in exploring the beauty and character of corrugated cardboard in both functional and sculptural forms. Study of the fine use and function of this low-status, recyclable, and often overlooked material is what motivates him. The inventive process of creating finely crafted objects with corrugated cardboard is exciting and stimulating challenge, often resulting in a surprisingly elegant form and surface.

## **Biology**

### *Donna Becker*

Research in my lab involves the study of plant-microbe interactions. The overarching theme involves investigating the microbial ecology of plant-associated microbes and applying that knowledge to improve plant growth. Advises- General Biology, Microbiology

*Robert Belton*

I am interested in the communication that occurs between cells during embryonic development, and the miscommunication that results in diseases such as cancer. Advises- Physiology, Microbiology, Biology

*John Bruggink*

Wildlife ecology and management, population ecology. Advises- Wildlife Biology, Ecology, Zoology and General Biology

*Heng-Hsuan Chu*

Plant nutrition and abiotic stress, including the effects of mineral deficiencies and toxic metals upon plants.

*Giuseppe Cortese*

In vitro and in vivo model systems of psychiatric and neurodegenerative disorders to study genetic and environmental links associated with neurodevelopmental and neurobiological abnormalities underlying pathophysiology as well as neuroinflammatory contributions to these diseases.

*Neil Cumberlidge*

Taxonomy, phylogenetic systematics, evolution, physiology, parasitology, conservation, ecology, and biogeography of the freshwater crabs of Africa and Madagascar. Research interests also include the freshwater crabs of Asia, Australia, Europe, and Central and South America. Advises- Pre-Optometry, Physiology, Zoology

*Kurt Galbreath*

Historical biogeography of Holarctic mammals and their parasites, host-parasite co-evolution. Advises- Zoology, Parasitology, Evolutionary Biology

*Brandon Gerig*

Research interests include applied fisheries ecology, and dynamics of fish communities and populations.

*Brent Graves*

Behavioral ecology, life history evolution, herpetology. Advises- General Biology, Ecology, Zoology

*Jennifer Jezylo*

Veterinary medicine. Advises- Human anatomy and physiology, pre-veterinary medicine

*Diana Lafferty*

Wildlife responses to global environmental change, large landscape conservation, human-wildlife conflict mitigation.

*Jill Leonard*

Fish biology, physiological ecology, migration ecological change, fish behavior. Advises- Fish and Fisheries Biology, Marine Biology, Ecology, Physiological Ecology, Zoology.

*Alec Lindsay*

Conservation genetics, ornithology, animal behavior, evolution. Advises- Ecology, General Biology, Zoology

*Erich Ottem*

The role of neurotrophic factors and gonadal steroids in the maintenance of neuromuscular junctions and motoneuron dendritic morphology. The influence of gonadal steroids on the physiological functioning of sexually dimorphic nuclei in the endocrine hypothalamus. Advises- Neuroscience, Neurophysiology, Neuroanatomy, General Physiology, Cell and Molecular Biology, Biotechnology

*John Rebers*

The current focus of my research is the nature of protein/chitin interactions in the arthropod exoskeleton, or cuticle. I am investigating the protein domains required for cuticular proteins to bind to the polysaccharide chitin, using recombinant DNA techniques to modify the proteins and studying the binding of purified proteins in vitro. Advises- General Biology, Cellular or Molecular Biology

*Alan Rebertus*

Ecology of endangered plant flora; roles of disturbances (fire, wind) and large mammals on community and landscape dynamics. Advises- Biology-Ecology Track, General Biology, Zoology

*Josh Sharp*

Gene regulation in bacteria, medical microbiology, RNA degradation, regulators of bacterial virulence gene expression, and toxin secretion systems. Advises- Microbiology, Medically-related Professional Fields.

*Roger Strand*

Stream ecology, ecohydrology, aquatic invertebrate community ecology and bioenergetics, ecology of Lake Superior, upper peninsula stream conservation. Advises- Invertebrate Zoology, Ecology.

*Katherine Teeter*

Population and evolutionary genetics; conservation genetics, particularly of mammals; genomics and bioinformatics.

*Robert Winn*

Chemotherapy resistance in brain tumors, the role of tumor initiating cells in tumor recurrence and the influence of brain tumors on immune function.

## **Business**

*Stacy Boyer-Davis*

Her research interests include the implications of the human-technology interface in the accounting field, high-impact teaching practices (HITP) in accounting programs, and the scholarship of teaching and learning (SoTL) as it relates to synchronous and asynchronous course design and delivery.

*Gary Brunswick*

His research interests include marketing strategy, services marketing and e-commerce.

Advises- Marketing

*Michael Crum*

He is currently working on several research papers focusing on the following research and pedagogical topics: (1) how productive entrepreneurship can manifest itself in economies plagued by corruption and substantial regulatory burdens, (2) how entrepreneurs can be successful when they lack legitimacy, (3) how methods of constructing numerical taxonomies (i.e. cluster analysis) can be applied to answer research questions in the field of entrepreneurship, and (4) how Monte Carlo simulations can be used to enhance entrepreneurial finance courses.

*Jim Marquardson*

His research interests include human-computer interaction, persuasive technology, information security, data analytics, and education.

*Madison Ngafeeson*

His general teaching and research interests are in the areas of the adoption, implementation, diffusion and use of information systems in organizations. His major research focus is health information technology management.

Advises- CIS

*Charles Rayhorn*

Research interests are the pedagogy of using Monte Carlo simulation in finance (with Michael Crum); the proper asset allocation in retirement portfolios; the efficiency of the stock markets through time; and the affect of congress and the executive on stock portfolio returns.

*David Rayome*

I am very interested in trading and investment systems. Stocks, derivatives, foreign exchange, and crypto currencies are all possible subjects.

*Gary Stark*

His research tends to fall into two areas--research on teaching and learning and research at the boundaries of Organizational Behavior and Social Psychology.

Advises- Management

*Jessica Thompson*

Her research is focused on team and organizational communication about complex ecological issues, such as climate change resilience and sustainable development. Recent research projects include working with interdisciplinary teams studying resilience in Mongolia, ecosystem services in the Gulf of Mexico, and building communication capacity for climate change engagement at U.S. National Parks and USFWS Wildlife Refuges across the United States.

## Central Upper Peninsula and NMU Archives

*Catherine Oliver*

Her research interests include authority control issues in archives and libraries, the history of cataloging and indexing, and user search strategies.

*Marcus C. Robyns* (University Archivist)

Research interests include digital preservation and access to historical manuscript collections; undergraduate primary source literacy instruction; and the history of organized labor in the Upper Peninsula.

## Chemistry

*Brandon Canfield*

Environmental/analytical chemistry, separation and analysis of plant secondary metabolites and their response as a function of environmental stressors.

*Tom Getman*

Inorganic chemistry, synthesis and characterization of boron cluster compounds.

*Sebastien Inagaki*

Organic chemistry, organic reactions in water, synthesis of chiral catalysts.

*Yu Liu*

Organic chemistry, synthesis of nano-device based catalytic systems, new cooperative catalysts development and catalytic reaction mechanism studies.

*Don Marquardt*

Organic chemistry, synthesis of novel aromatic compounds/fullerenes.

*Frankie McCormick*

Organic chemistry, synthesis of compounds with novel electronic properties, synthetic methods using radical chemistry.

*Mark Paulsen*

Physical/biochemistry, computer modeling of enzymatic reactions and protein-protein interactions.

*Lesley Williams-Putman*

Biochemistry, plant biochemistry, enzymes involved in phytoremediation bisphenol A, toluene and TCE.

*Lee Roecker*

Inorganic chemistry, synthesis and reactivity of cobalt (III) compounds coordinated by thiourea or thioether ligands.

*Eugene Wickenheiser*

Environmental/analytical chemistry, biotransformation of arsenic, biodiesel fuel production, chelation and transfer of metals.

*Suzanne Williams*

Biochemistry, structure and function of proteins using various analytical techniques such as ELISA, spectrophotometry, and biocalorimetry, and forensic DNA investigations focusing on trace analysis.

*Alex Wilson*

Specialized metabolism of medicinal plants, structural changes in enzymes cause change in function, uridine diphosphate (UDP) dependent glycosyltransferases (UGTs) and shikimate dehydrogenases (SDHs).

*Philip Yangyuoru*

Bioanalytical chemistry. Develop high-throughput methods for probing noncanonical nucleic acid secondary structures especially G-quadruplexes and i-motifs, nucleic acid-base biosensors for biomarkers, and how nucleic acid structures are modulated by proteins and drug molecules.

## **Clinical Sciences**

*Matthew Jennings*

Dr. Jennings' research involves developing diagnostic assays for detection of infectious disease agents and mutational status in human cancers. The CLS (Clinical Laboratory Sciences) molecular laboratory is generating assays for nucleic acid detection of infectious disease agents such as HIV (Human Immunodeficiency Virus) and MRSA (Methicilin Resistant Staphylococcus aureus). He is also a member of the Upper Michigan Brain Tumor Center (UMBTC) which is working towards an intraoperative assay that evaluates the mutational status of the genes responsible for glioblastoma.

*Maryam Khaledi*

Dr. Khaledi's current research aims to clarify the nature of the grammatical disorders in non-fluent as well as fluent aphasia and the factors impacting the spontaneous speech production in individuals with aphasia. The ultimate goal of her research is to develop treatment approaches for individuals with aphasia and enhance their communicative abilities and language recovery.

*Paul Mann*

Molecular characterization of brain tumors and diagnostic molecular microbiology.

## **Communication and Performance Studies**

*James Cantrill*

Research focus on various aspects of environmental communication (i.e., how we communicate about and understand messages related to natural resources and environmental protection). In particular, I examine how people socially and psychologically construct interpretations of and care for places based upon how they have come to see themselves in the environment, or a sense of self-in-place.

*Mark Shevy*

Dr. Shevy plans to work on several projects in the psychology of music and media. In the fall, he will be working one or more of the following: 1. An experiment on the way in which music influences the enjoyment of stories. 2. The role of music in the cognitive processing of television ads. 3. The meanings that listeners associate with pop music genres. 4. The influence of music in dance fitness classes such as Zumba.

## **Criminal Justice**

*Michael Harrington*

His research interests include adjustment to prison, jails, judicial decision making, violent crime and victimology.

## **Earth, Environmental and Geographical Sciences**

*Michael Broadway*

Human Geography, social geography, food studies.

*Norma Froelich*

Forest-atmosphere interactions. Airflow within and above vegetation canopies. Lake climatology. Meteorological/environmental field methods and instrumentation. Numerical modeling of atmospheric process.

*Weronika Kusek*

Human Geography, Cultural Geography, Ethnic Geography, Migration, Diaspora, Digital Diaspora, Globalization, Placemaking, Ethnic neighborhoods.

*Robert Legg*

Professor Legg's interests involve the application of GIS, spatial analysis and remote sensing across the spectrum of geography. His primary focus lies in the integration of geographic information science, cartographic presentation, spatial analysis with a particular interest in geoarchaeology and paleoenvironmental reconstruction. Professor Legg's research involves applied GIS, spatial statistics and the broader fields of GIScience and Geomatics including work with Ground Penetrating Radar (GPR) towards archaeological discovery.

*Sarah Mittlefehldt*

Environmental History, Sustainability, Environmental Policy, Environmental Justice, Public/Private land management, Trails and Corridors

*Robert Regis*

Geology, Glacial Geomorphology, Remote Sensing, geomorphology of the U.P., groundwater hydrology, and Lake Superior shoreline processes.

*Ryan Stock*

Dr. Ryan Stock is a political ecologist and development geographer whose work examines the political economy of environmental change, development interventions, climate justice, gender and intersectional social difference, social power, and agrarian transformation in the Global South. Currently, he is working on various projects related to the gender politics of solar development in India and climate change adaptation policies in South Asia.

*Matthew Van Grinsven*

Physical Geography, Water Resources, Carbon Cycling, Biogeosciences

*Richard Ziegler*

Mr. Richard Ziegler is a geologist interested in metamorphic petrology and hydrogeology. He teaches Introduction to Maps in the EEGS Department.

*Susy Ziegler*

Dr. Susy Ziegler studies changes in the northern forests of eastern North America resulting from human and natural disturbances. She is interested in conservation of the Northern Forest. On campus she oversees the NMU Hoop House, which provides community members a place to grow food sustainably for local consumption.

## **Economics**

*Hsin-Ling Hsieh*

Her fields of research are International Economics, Labor and Demographic Economics, and Economic Development.

*Hugo Eyzaguirre*

He is interested in research on economic education, institutional economics, free market solutions to social problems, and on the rationality assumption in human behavior.

*Gary McDonnell*

Dr. McDonnell's research interests are in regulatory economics and how ideas influence political, social and economic change.

*David Prychitko*

Dr. Prychitko specializes in comparative political economy and the history of economic thought, with a focus on the Austrian School of economics.

## **Education, Leadership and Public Service**

*Derek Anderson*

Derek Anderson's research interests include curriculum and instruction, generally. Lately, he has been studying the political socialization of teens and the role of social media.

*Joe Lubig*

A primary research interest includes studying civic engagement through small group discussions and local engagement through civic activities. An additional area for research is the study of teacher education program outcomes through existing survey and feedback data.

*Mitchell Klett*

Mitch's research focus is on developing specific guidelines for the creation of Social Science database research types for introduction into undergraduate courses. The field of Social Science Research (Sociology, Education, and Psychology) can be categorized as two or three groups analyzed quantitatively or qualitatively. The research will include the essentials of research design; research design historical contexts; and identifying what research studies inform.

*Judy Puncochar*

Reducing vagueness in writing, improving analytical thinking skills, transfer of learning to new contexts, and the assessment of learning.

## **Engineering Technology**

*Robert Marlor*

Some of his recent professional interests include wood-connection research, consulting in structural engineering, and teaching engineering courses in Russia.

*Michael Martin*

Experimental vibrations and computer numerical controlled machining. Product development engineering, and engineering supervisor.

*Glenn Wrate*

His present interests are in transient analysis and nonlinear modeling of power systems.

## **English**

*Jon Billman*

Fiction, magazine journalism, creative nonfiction.

*Gabriel Brahm*

Literary Theory, Psychoanalysis, Ideology Critique, Israel Studies, Jewish Studies, Holocaust Studies, Film, Popular Culture, Mass Media, Great Books, Political Philosophy, Myth and Religion.

*Sandra Burr*

18th- and 19th-century English-language children's literature, 18th- and 19th-century African-American literature, 18th- and 19th-century Anglo-American literature, 18th- and 19th-century American cultural history, including science and family studies

*Lynn Domina*

Poetry, American literature, African American literature, Native American literature, literature & religion.

*Wendy Farkas*

Her research interests include program evaluation, disciplinary literacy, digital literacy, and critical social justice.

*Matthew Frank*

Nonfiction, poetry, lyric essay, and hybrid genre forms.

*Marek Haltof*

Film History, History of Film Theory, Central European Cinema, Authorship in Cinema, Film and Propaganda/Politics/Memory, History of Polish and Australian national cinemas, Australian New Wave Cinema, Politics of remembrance in Central Europe, Film and the Holocaust (Central European context)

*Amy Hamilton*

Early American literature, American Indian literature, Chicana literature, Western American literature, Environmental literature and Ecocriticism, Gender and Sexuality studies.

*Jennifer Howard*

Editor-in-Chief of the literary magazine Passages North, interested in the writing and editing/publishing of creative work.

*Austin Hummell*

Poetry (all of it, Greek to English, and especially prosody), film.

*Patricia Killelea*

Her scholarly research focuses on contemporary experimental Native American poetics and avant-garde literary history.

*Caroline Krzakowski*

Twentieth and twenty-first century British Literature, especially Modernism, British literary responses to World War Two, literature and diplomacy, transnational literature, British literature of the postwar period, women's writing.

*Lesley Larkin*

American literature (1865-present), African American literature, American ethnic literatures, race and gender studies, science and literature, speculative fiction

*Zhuang-Zhong Lehmborg*

Anything language related but specifically Chinese and English, Translation studies, Composition/writing center pedagogy and administration, Teaching English to speakers of other languages (TESOL and ESL)

*Rachel May*

Material Culture Theory, Intersectional Feminism, Critical Race Theory, Quilts & Craft Communities, Creative Nonfiction, Fiction, and hybrid genres.

*James McCommons*

Journalism, Nature and Essay Writing

*Monica McFawn*

Fiction, Screenwriting, Playwriting

*Elizabeth Monske*

With research interests in online education and faculty training, she has published in *Kairos*, *Computers and Composition*, and the *Journal of Educational Technology and Society*.

*Madelyn Pawlowski*

Composition, rhetoric, teacher development, genre studies, and language ideologies, practices, and policies

*Russell Prather*

Prather--British literary and visual culture of the eighteenth, nineteenth and early twentieth centuries, Romanticism, William Blake, contemporary visual art, image/text, image studies, film, history of critical theory.

*Kia Richmond*

Dr. Kia Jane Richmond, Professor of English and Director, English Education at NMU interests are 1. improving the teaching of writing and grammar (K-12) 2. improving the teaching of literature (6-12) 3. young adult literature - especially culturally relevant texts 4. mental illness in young adult literature 5. psychology and teaching English

*Jaspal Singh*

World Literature; Postcolonial Literature and Theory; Gender and Sexuality Studies; Feminist Theory and Literature; Diaspora Studies; Postcolonial Indian Literature and Culture; Apartheid and Post-Apartheid South African Literature; Turkish Literature and South Asian and Asian Literature and culture.

*Robert Whalen*

His current research interests include British Renaissance; textual scholarship; digital humanities.

*David Wood*

English Renaissance drama, poetry, and prose, Shakespeare, Sidney, and Milton, Psychoanalytic, Gender, and Disability Studies.

# Health and Human Performance

*Sarah Breen*

Specific research interests: Anterior Cruciate Ligament Injury prevention, rehabilitation and long term consequences, Sport Injury, Running/Walking Gait, Balance & Coordination at Altitude, Dynamical Systems Theory, Elderly Function.

*Scott Drum*

Specific research interests: trail running and load (e.g., water bottle, pack, fuel belt, new technique?) carrying, the training/eating/racing habits of ultra-runners and successful collegiate running programs, exercise gadgets or fads, performance enhancing nutrition (e.g., studying the effects of “new” sport drinks on time trial performance in runners or cyclists), XC skiing, rock climbing/mountaineering, ice climbing and energy expenditure, hypoxia/altitude training, clinical exercise physiology (i.e., cancer and exercise training), obesity and hypoxia, and in general non- traditional sport studies (e.g., energy cost of paddle boarding, etc.).

*Yuba Gautam*

Specific research interests: emergency care and disease prevention, community health, health communication, sexuality education, cardiovascular disease prevention, international health issues, technology in health education, and health promotion of college students.

*Ryan K. Hines*

Leisure Motivation, Outdoor Leadership Development, Motivation of Outdoor Leadership/Participation, Human Nature Interaction, Outdoor Recreation as Public Health Intervention; Qualitative Inquiry and Constructivist Epistemology

*Randy Jensen*

Specific research interests: Strength conditioning, plyometrics, cycling, swimming, triathlon, kinematic (motion) analysis, kinetic (force) analysis, statistics

*Scott Jordan*

Specific research interests: Most recent research projects have focused on community development and planning in association with outdoor recreation tourism with ambitions of developing a model that focuses on sustainability related to the natural environment, local cultures, and local economies. The outcome of this work is to develop a high quality outdoor recreation product, which adequately reimburse those who work in the field. I also have aided in the development of national safety standards for the challenge course and zip line industry and have produced educational materials for this industry.

*Lanae Joubert*

Sports nutrition, dietary supplements, metabolic aspects of exercise, energy expenditure, heart disease risk factors, education; most familiar with these sports/activities: swimming, rock climbing, mt. biking, yoga, hiking, triathlon.

*Matt Kilgas*

Specific research interests: Exercise for special populations (orthopedic injury, cardiovascular/metabolic diseases, elderly, spinal cord injury, etc.), vascular physiology (blood flow control during exercise, vascular

adaptations to exercise), novel exercise interventions (exercise with blood flow restriction, eccentric exercise training, hypoxia training, single-leg cycling, etc.), non-traditional exercise (rock climbing, mountain/snow biking, yoga, mindfulness, etc.)

*Derek Marr*

Specific Research Interests: Psychosocial Aspects of Peak Performance. Self-talk in Elite and NCAA populations. Self- efficacy and its effect on peak performance in culminating events (Championship Games, Olympic, National Championships, State Championships, Etc.). Endurance athletics, self-talk and its effect on pain tolerance / perception of pain.

*Jacque Medina*

Specific Research Interests: Experiential learning, qualitative research (narrative inquiry, oral histories), sense of place, benefits of time in nature, nature connection, travel education, sustainable living, and the arts as expression, connection, and reflection of outdoor experiences. Background in adventure education, sport psychology, recreational programming, and wilderness travel. Coached collegiate volleyball for five years. Spirit animal: Turtle. Elements: Earth and water.

*Maggy Moore*

Specific research interests: primarily interested in migraine, youth concussion, balance, perceptions of risk or perceptions in AT. I also enjoy anything regarding eating disorders and clinical based research in exercise.

*Julie Rochester*

Specific research interests: Qualitative methods. Particular interest in job/career satisfaction, leadership styles, student perceptions & interactions, impact on learning. Interest in student-athlete mental health. Strong connections to NCAA/NMU student-athletes/coaching staff/administration.

*Elizabeth Wuorinen*

Specific research interests: Hormonal regulation of food intake; exercise effects on the psychophysical aspects of hunger; exercise endocrinology; exercise immunology; exercise and nutritional effects on protein and antioxidant changes in plasma. Previously has been a head track & field and cross country coach.

## **History**

*Chet DeFonso*

Dr. DeFonso's research is focused upon the relationships between the media and political, social, and cultural institutions in Britain from the middle of the Nineteenth Century to World War II. He is especially interested in the public perception of journalists as the unelected "Fourth Estate" of government.

*Nick Dupras*

Dr. Dupras is a medieval historian who focuses on the material culture of pre-modern Europe, especially metalwork and the ways in which society and technology interacted in the Middle Ages. He also researches the history of science and the development of medieval natural philosophy. Both of these interests have led to work in experimental archaeology and practical applications of medieval scientific instruments such as the astrolabe to better understand the working practices of medieval craftsmen and scientists alike.

*Robert Goodrich*

Dr. Goodrich's major research interests lie in Modern German history with a broad, integrative approach to the various sub-fields. In particular, his research and teaching emphasize cultural and social history with an eye on the interplay of various factors such as labor, gender, sexuality, and religion, both in Europe and the U.S.

*Kathryn Johnson*

Finnish American history, labor history, the history of distance education, and practical applications of using digital technologies such as virtual reality to teach history.

*Keith Kendall*

Dr. Kendall investigates the influence of medieval religious beliefs on social and political behavior and decisions, particularly in terms of orthodox responses to dissent. Dr. Kendall specializes in how ideas in the sermons of Pope Innocent III related to movements that he thought threatened the medieval European Christian church.

*Gabe Logan*

Dr. Logan's teaching and research focuses on U.S. sport history, urban history, Gilded Age immigration, and labor history. Of particular interest to Dr. Logan has been the history of labor unions, as well as how soccer helped to assimilate immigrant populations into U.S. mainstream culture.

*Rebecca Mead*

Dr. Mead continues her research on women's political and labor history. Also of interest to Dr. Mead are the metis (mixed Native-White) people of the Southern Great Lakes area.

*Tim O'Neill*

Dr. O'Neill is a specialist in East Asian history particularly focused on Han-era China.

*Alan Willis*

Dr. Willis is particularly interested in exploring the history of ideas about race and ethnicity. He focuses mainly on how these ideas are shaped by religious belief, especially in American history, African American history, and modern African history.

## **Languages, Literatures and International Studies**

*Maria Guadalupe Arenillas*

Contemporary Latin American literature and film, with an emphasis on memory studies in Argentina and Chile. Her current project analyses the relationship between documentary film, ethnograph, science and indigenous people of Southern Patagonia.

*Tim Compton*

Mexican Literature and culture, with a particular focus on Mexican theatre.

*Nelly Kupper*

French literature, russian literature, literature in conjunction with psychology, literature and neuroscience, and literature and visual art. Academic Service Learning is another area of specialty.

*Anna Zimmer*

The intersection between history and stories, forms and functions of memory.

## **Library**

*Krista E. Clumpner*

Research interest currently is on interdisciplinary approaches to the topics of genocide and the Holocaust. Besides the historical facts of these occurrences I am interested in pursuing development of courses in the effect of genocide/holocaust on peoples - economic, political, social, mental, etc as more people flee from and respond to current events.

*Mollie Freier*

Mystery & detective fiction, the portrayal of librarians and libraries in popular culture, and information literacy.

## **Math and Computer Science**

*Carol Bell*

Carol is a math educator. Her research interests include most areas related to math education, but currently researching the use of technology in teaching mathematics and the mathematical preparation of K-12 teachers.

*Jeffrey Horn*

My research focuses on Evolutionary Computation, Evolutionary Robotics, Synthetic Ecologies, Emergent Coevolution, and Artificial Life.

*Michael Kowalczyk*

My current primary research interests are complexity theory and holographic algorithms.

*J.D. Phillips*

Most of my research is in quasigroup, loop theory and automated theorem proving.

*Andy Poe*

Software development and coding.

*Daniel Rowe*

Representation theory

*Hadi Shafei*

Research focus is on different aspects of theoretical computer science, including Computational Complexity Theory, Intuitionistic Type Theory, and Interactive Theorem Proving.

*Joshua Thompson*



## **Philosophy**

*Antony Aumann*

Dr. Aumann's research focuses primarily on the writings of Kierkegaard and Nietzsche. He also works on contemporary issues concerning the philosophy of art and the emotions.

*Mlado Ivanovic*

Dr. Ivanovich studies the moral, political, and environmental challenges tied with the forceful displacement and migration of people, particularly by examining both the sociohistorical and political contexts of human vulnerability and exclusion.

*Sarah Jones*

Dr. Jones researches issues in epistemology, skepticism, modern philosophy, and feminist theory.

## **Physics**

*Dave Donovan*

Dr. Donovan began his career as an experimental condensed matter physicist performing experiments involving structural phase transitions in metals, using x-rays, neutrons, and sound waves. He later spent many years working on space weather conditions using an all-sky imager. Most recently he has been working on sports science applications by using accelerometers to understand motion of human bodies and objects.

*Mark Jacobs*

Dr. Jacobs is currently interested in astronomical observation and imaging, working with the NMU observatory. His background is in gravitational lensing and cosmological applications of general relativity.

*Rick Mengyan*

Research areas: Experimental condensed matter (solid-state) physics; semiconductors; magnetic systems. As an example, some of my work focuses on studying how hydrogen impurities behave in materials that have potential near-future applications (e.g. solar cells, components for electronics, etc). Even trace amounts of hydrogen can affect the optical, electrical and magnetic properties of a host material and so understanding the effect(s) of and role(s) hydrogen plays in modifying the properties of the host are essential for effective development of materials for applications.

*Neil Russell*

Dr. Russell does theoretical research focusing on testing the theory of relativity. The tool for this is the Standard-Model Extension, or SME, a framework that incorporates a variety of minuscule relativity 'violations.' The effects of these violations, if they exist, are measurable in sufficiently sensitive experiments. His recent research involves using the SME to figure out the signals that arise in various experimental systems. He has also worked on other theoretical topics, including quantum-mechanical supersymmetry and superalgebras.

*William Tireman*

Dr. Tireman works in collaboration with scientists using the high-energy electron beam at Jefferson National Laboratory in Virginia. In the past few years, Dr. Tireman's involvement included constructing 18 plastic scintillation detectors with the help of NMU undergraduate students, testing new configurations of detectors at NMU, and the use of computer simulations to predict background rates in the complex systems. He also assisted with experiment setup and data collection. Current projects include simulation analysis, detector installation and checkout, and future data collection analysis. Dr. Tireman is also open to advising students working on a variety of related projects.

## **Political Science**

*Jonathan Allen*

Introduction of Political Science, Politics and Film, Political Theory.

*Brian Cherry*

Dr. Cherry researches organizational behavior, management, and leadership issues in state and local government and higher education.

*David S. Haynes*

Higher Education Administration and Public Administration

*Steve Nelson*

American Government, Introduction to Law, and Research Methods.

*Ruth Watry*

American Government, Constitutional Law, and Women and Politics.

*Carter Wilson*

Public Policy, Civil Rights Policy, Economic Policy, and Public Administration.

## **Psychological Science**

*Paul Andronis*

Experimental analysis of economic contingencies that give rise to and maintain various patterns of social behavior and natural evolution of cooperative relations between laboratory pigeons. Animal models of psychopathology: characteristics of operant headbanging by pigeons, and the clinical implications of normal sources of such pathological patterns. Some adaptive origins of creative behavior and the synthetic effects of the contingencies of reinforcement. Attempted replication of the classic experiment on the formation of conditional reflexes in the control of head-rate in dogs: search for a missing unconditional reflex, and what we found instead was stimulus equivalence learning by humans using different methods of probe presentations. Ability of typical preschool environments to support an internet-based early reading program already proven effective when used in children's own homes.

*Jon Barch*

Experimental social psychology research focuses on intrinsic motivation, interpersonal relationships, internalization of attitudes and values, implicit/explicit race and gender bias, optimism, and moral development. Applied social psychology research is focused on cultivating interest and enjoyment in classrooms, increasing academic motivation, improving student-teacher relationships, understanding family dynamics, developing workplace leadership, and engaging in the scholarship of teaching for online and face-to-face classrooms.

*Jeremy Biesbrouck*

Interests focus on stimulus equivalence training, and formation of stimulus control with compound stimuli. In everyday life, the stimuli we encounter consist of size, shape, texture, color, sound, smells, etc... When stimulus control forms with these compound stimuli, which features of the stimuli are contributing to the discrimination. Do different features/dimensions of the compound stimulus come to control responding independently (complex control), or are all features required for appropriate responding (compound stimulus control). Implications relate to overselectivity and restricted stimulus control in individuals diagnosed on the Autism spectrum.

*Joshua Carlson*

The *Cognitive x Affective Behavior & Integrative Neuroscience (CABIN)* Lab studies how affective and social cues influence or modulate processes and behaviors traditionally thought of as “cognitive” using both behavioral and biological measures including: reaction times, questionnaires, MRI (functional, structural, & diffusion tensor- weighted), EEG/ERP, NIRS, and genetic methods. We are interested in looking at cognitive and affective behaviors and processes at both conscious and nonconscious levels of awareness. This research primarily focuses on the following two content areas: (1) attentional bias to threat and (2) biological correlates of individual variability in affective behavior.

*Jacob Daar*

Areas of research include the development of language acquisition therapies for children with autism and developmental disabilities, the study of complex verbal operants, gambling and risk taking behaviors, organizational behavior management, and invertebrate learning.

*Lin Fang*

Research interests mainly focus on cognitive vulnerabilities to depression and anxiety, from (1) laboratory perspective: such as the interaction between cognition and emotion in depression and anxiety, and information processing in rumination; (2) naturalistic perspective: such as the effectiveness and underlying mechanism of cognitive bias modification in depression and anxiety; dynamic patterns of affect and emotion regulation in daily life.

*Vincent Jeevar*

Current research interest in the potential use of sport and team membership to help manage or reduce mental illness diagnosis and/or effects, through increasing self-esteem, quality of life, and social identity. Qualitative data is preferred in order to understand the lived experiences and perception of people living with mental illness and the influence of sport in their life. Future research interests include examining whether advocacy groups create isolation from out-groups and the wider society, and the motivation influencing decisions made by coaches in player selection before and during games.

*Susan Kapla*

Research interests include the development of effective and empirically sound treatment strategies for problem behavior in domestic dogs, and the translation of basic laboratory-derived principles to the treatment of problem behavior in dogs. I also have an interest in the behavior of livestock such as sheep and the unique role that small or micro-farms might play.

*Amber LaCrosse*

Studies the effect of brain cancer and current therapeutics on cognitive function and quality of life using an integrative research approach that includes behavioral, neurochemical, and neurophysiological methods. Specifically, the goal of our research is to better understand the cognitive challenges that patients with brain cancer face and examine the potential for lifestyle changes such as exercise to minimize those challenges. In parallel with human studies, animal models are used to investigate the neurochemical and physiological changes that underlie reduced cognitive function and evaluate the efficacy of novel treatment strategies.

*Adam Prus*

Psychopharmacology of therapeutic drugs. In particular, we are heavily involved in seeking novel treatments for cognitive symptoms in schizophrenia, depression, and anxiety. Our research involves using preclinical neuroscience techniques, such as microdialysis and optogenetics, as well as behavioral techniques using operant chambers and mazes.

*Ashley Shayter*

Areas of research include improving services for those who have sustained brain injuries, self-control, Acceptance and Commitment Training, enhancing staff performance and safety, pedagogy, and operant learning in octopuses.

## **Social Work**

*Abigail Wyche*

Dr. Wyche's primary scholarship interests center around the professional resilience among helpers--or the process by which human services professionals become and remain committed, healthy, happy and effective in their practice of helping others. Her interest in this topic was first spurned during her career as a child welfare worker, a field of social work in which she directly observed how the high incidence of burnout and turnover seemed to impact the quality of care given to vulnerable children. Over time, with experience and study, she has become aware of how sophisticated the process of resilience is, and the many potential points along their career which a social worker's resilience might be enhanced. She is currently engaged in research about how BSW Education supports resilience in the new and future workforce.

*Ann Crandel-Williams*

Assessing performance and employability factors among BSW students.

*LaMart Hightower*

LaMart's research interest include diversity training for social workers, along with addiction and its impact on families and society and older opioid dependent individuals using methadone for continued treatment.

*Karl Johnson*

Inequality, social stratification and poverty-reduction strategies among working families; history of the welfare state and European social democracy; social investment and asset development; the impact of social expenditures; international differences in child and family policy; participatory democratic theory; and Marxist political economy.

*Sarah Carlson*

Prevention of secondary traumatic stress as well as using the natural environment, relationship and other methodologies to prevent and treat STS

*Caroline Cheng*

Caroline's main research interests include International Social Work, Child Protection and child trafficking, Migration and Well-being (focusing on refugees and asylum seekers), Human Rights Advocacy, and Spirituality Social Work. Currently, she is working on research projects collaborating with international scholars and experts on human rights advocacy for political asylum seekers in London, Toronto, and Philadelphia; child trafficking in the border of Nepal and India, and exploring creative ways to disseminate research findings such as using animated videos to reach a wider audiences online.

## **Sociology and Anthropology**

*Yan Ciupak*

Immigrants, Sociology of Education, Sociology of Religion, Buddhist Studies, Happiness & Well-being.

*Scott Demel*

I am interested in how different ethnic groups have used the Great Lakes throughout prehistory and into the mid 19th century. To fully understand the opportunities available along these inland coasts I also study all aspects of the natural environment and cultural landscape to learn how humans have adapted to this dynamic landscape.

*Sheena Ketchum*

I study the intimate relationship people have with their food and the entanglement between culture, foodways, and cooking through ethnography and archaeology. Food studies, cooking, subsistence, agriculture, material culture, gender, and clay ovens.

*Jeanne Lorentzen*

Research interests focus on medical power relations and gender, specifically issues relating to medicalization and the social construction of the body.

*Alexander Stoner*

Environmental Sociology, Social Theory, and Political Economy. Dr. Stoner's research examines the relationship between modern capitalist society and the natural environment, and the linkages between political-economic drivers of environmental problems and societal responses to these problems. The scope of his work ranges from the development of an environmental critical theory to the social-psychologically embodied consequences of the environment-society relationship for individuals and the moral and ethical implications involved.

*Alan McEvoy*

As an educator and Sociologist I focus on problems of violence and injustice. I have published books and articles on rape, child abuse, youth suicide, domestic violence, bullying, gambling, and violence in schools. I am especially concerned with helping victims of violence heal, and supporting schools and community organizations in preventing violence.

*Rexin Yang*

The Marriage of Poetry and Social Sciences, Globalization and the Modern World System; World Poverty; Climate Change; Effects of Economic Reform on Family Institution and Women in China, Race and Gender Differences in Status Attainment, Mental Health, and the Quality of Life, in the United States, Alienation, Self-esteem, and Depression

*Jane (Wankmiller) Harris*

Dr. (Wankmiller) Harris's dissertation research focused on a bioarchaeological analysis of human remains from the archaeological site of Jícaro, a pre-Colombian village in northwestern Costa Rica that was occupied between AD 800 and 1350. Her Master's thesis involved a study of positive identifications made by comparisons of antemortem and postmortem lumbar spine radiographs. Dr. (Wankmiller) Harris's research continues to focus on topics involving identification of unidentified human remains, and she hopes to return to Costa Rica to continue collaborative research with the archaeologists who conducted the excavations at Jícaro. Dr. (Wankmiller) Harris is excited about her future with NMU and FROST, working with undergraduate students on innovative research projects, and building collaborative relationships with researchers and law enforcement throughout Michigan, the U.S. and abroad.

## Index by Department

<a href="#">Art and Design</a>	<a href="#">Page 2</a>
<a href="#">Biology</a>	<a href="#">Page 2-4</a>
<a href="#">Business</a>	<a href="#">Page 4-5</a>
<a href="#">Central Upper Peninsula and NMU Archives</a>	<a href="#">Page 6</a>
<a href="#">Chemistry</a>	<a href="#">Page 6-7</a>
<a href="#">Clinical Sciences</a>	<a href="#">Page 7</a>
<a href="#">Communication and Performance Studies</a>	<a href="#">Page 7-8</a>
<a href="#">Criminal Justice</a>	<a href="#">Page 8</a>
<a href="#">Earth, Environmental and Geographical Sciences</a>	<a href="#">Page 8-9</a>
<a href="#">Economics</a>	<a href="#">Page 9</a>
<a href="#">Education, Leadership and Public Service</a>	<a href="#">Page 9-10</a>
<a href="#">Engineering Technology</a>	<a href="#">Page 10</a>
<a href="#">English</a>	<a href="#">Page 10-12</a>
<a href="#">Health and Human Performance</a>	<a href="#">Page 13-14</a>
<a href="#">History</a>	<a href="#">Page 14-15</a>
<a href="#">Languages, Literatures, and International Studies</a>	<a href="#">Page 15-16</a>
<a href="#">Library</a>	<a href="#">Page 16</a>
<a href="#">Math and Computer Science</a>	<a href="#">Page 16-17</a>
<a href="#">Native American Studies</a>	<a href="#">Page 17</a>
<a href="#">Nursing</a>	<a href="#">Page 17</a>
<a href="#">Philosophy</a>	<a href="#">Page 18</a>
<a href="#">Physics</a>	<a href="#">Page 18-19</a>
<a href="#">Political Science</a>	<a href="#">Page 19</a>
<a href="#">Psychological Science</a>	<a href="#">Page 19-21</a>
<a href="#">Social Work</a>	<a href="#">Page 21-22</a>
<a href="#">Sociology and Anthropology</a>	<a href="#">Page 22-23</a>