NMU Faculty & Staff Research Directory

Updated Winter 2024 Semester

Art & Design

Steven Hughes - sthughes@nmu.edu

Plein Air Painting, Figurative Art, Life Drawing, Acrylic Painting, Illustration, Landscape Painting, Figure Drawing, Still Life Drawing

Gabrielle McNally - gmcnally@nmu.edu

Post-sabbatical work on feature-length documentary film "Nos Disparus"

Emily M Lanctot - elanctot@nmu.edu

Play, Pedagogy and Creative Practice; Object-based Learning; Place as Practice; Rural Arts Networks

Biology

Dr. Diana Lafferty - dlaffert@nmu.edu

Wildlife Microbial Ecology: Identifying drivers of gut microbiome variation in African Herbivores; Characterizing gut microbiome diversity and community structure in African carnivores; Assessing the impact of tourism on brown bear stress physiology; Snapshot USA wildlife distribution via camera trapping; African wildlife gut microbiome ecology; American carnivore gut microbiome ecology

Dr. Josh Sharp - jsharp@nmu.edu

Microbiology, infectious disease, forensic microbiology

Dr. Danny LeBert - dlebert@nmu.edu

My lab uses advanced microscopy to look at inflammation and wound healing in zebrafish that have been modified in terms of their gene expression.

Dr. Elizabeth Mandeville - lmandevi@nmu.edu

Fish conservation genomics projects concerning hybridization, anthropogenic disturbance, and the evolution of sex determination

Dr. John Bruggink - jbruggin@nmu.edu

Summer ecology of gray wolves

Dr. Jill Leonard - jileonar@nmu.edu

Burbot early life history ecology, behavior, physiology; Salamander ecology and citizen science; Wellness spaces

Dr. Sylvain Giroud - sgiroud@nmu.edu

Effect of global warming on energy-saving efficiency and protein metabolism in hibernating species / Effects of climate change on early-life development and future survival of heterothermic species / Thermoregulatory and metabolic adaptations in hibernators

Dr. Heng-Hsuan Chu - hchu@nmu.edu

Discover genes involved in plant nutrition. Monitor metal mobilization/accumulation in crops.

Dr. Kurt Galbreath - kgalbrea@nmu.edu

Field collections of mammals and parasites across the Northern Hemisphere (Asia and North America; recently active in Mongolia). Evolutionary/biogeographic study of mammal/parasite diversity using genome sequencing.

Dr. Kate Teeter - kteeter@nmu.edu

Population genetics of blue wildebeest, evolutionary genomics of American pikas, use of eDNA for community profiling

Dr. Robert James Belton Jr. - rbelton@nmu.edu

Cell surface receptor functions

Dr. Josh Pletcher - jpletche@nmu.edu

Evolution of jerboa fleas (graduate research)

Broadcast & Audio Visual Services

Patrick Lakenen - plakenen@nmu.edu

We have submitted a grant for the Next Generation Warning System with FEMA that is administered through the Corporation for Public Broadcasting.

Business

Dr. Michael Crum - mcrum@nmu.edu

1. Using agent-based modeling to examine entrepreneurial overconfidence and its possible impact on entrepreneurial entry (starting a business).

2. The impact religion (both individual and dominant religion in the country) have on the likelihood of entering self-employment.

Dr. Jessica Thompson - jessitho@nmu.edu

1. Climate Change Awareness & Attitudes Surveys at U.S. National Parks & U.S. National Wildlife Refuges

2. Sustainability attitudes and values among college students, faculty and staff at NMU

3. Sustainability audits & B Corp certification for local businesses – participatory action research with small businesses in the Upper Peninsula.

Dr. Steven A. Edelson - sedelson@nmu.edu

working on some SoTL research, including one that was just accepted for publication, also looking to write some case studies for classroom use. Looking to conduct some research on subconscious biases in recruitment (hiring).

Dr. Jim Marquardson - jimarqua@nmu.edu

Department of Defense Cybersecurity Scholarship Program

GenCyber Summer Camp has been awarded for 2024, but we'll be applying for 2025 in ~5 months

Center for Rural Health

Elise Marie Bur - ebur@nmu.edu

1) Food distribution analysis throughout U.P., 2) oral health needs assessment including but not limited to access to services, available services and workforce needs, 3) assessment of data collected throughout U.P. regarding social determinants of health

Chemistry

Dr. Philip Yangyuoru - pyangyuo@nmu.edu

Bioanalytical chemistry, chemical separations, forensic biochemistry, and biosensors.; Develop high-throughput methods for probing noncanonical nucleic acid secondary structures especially G-quadruplexes i-motifs.; Design nucleic acid-based bios

Dr. Kathryn Newton - kanewton@nmu.edu

microwave-assisted synthesis of metal oxide nanomaterials; photocatalytic degradation of PFAS; characterization of PFAS breakdown products

Dr. Lesley Putman - lputman@nmu.edu

Phytoremediation of PFAS using hemp

Dr. Yu Liu - liuyu@nmu.edu

Supramolecular catalysis, asymmetric catalysis. self-assembly

Dr. Evan Pratt - evpratt@nmu.edu

Interplay of Mg2+ and ATP in cells; Detection of oncometabolite D-2-HG in cells/tissue; Skeletal muscle protein degradation to determine PMI

Dr. Robin Bond - robond@nmu.edu

Analyzing airborne metals using bioindicators; Measuring reactive oxygen species in Lake Superior

Dr. Alex Wilson - alexawil@nmu.edu

Radula Fractionation and Anticancer Activity Testing

Liverwort Botany and Ecology

Liverwort Endophytic Bacteria

Liverwort Chemical Ecology

Glycosylation of Liverwort and Nightshade Metabolites

Dr. Brandon Canfield - bcanfiel@nmu.edu

cannabinoid decarboxylation kinetics, metabolomic survey of Monotropa uniflora (ghost pipe)

Dr. Maris Cinelli - macinell@nmu.edu

Using instrumental analysis tools (mostly mass spectrometry) to discover new drug-like molecules in plants, and to study the chemistry of plant-insect interactions.

Clinical Sciences

Dr. Matthew Jennings - majennin@nmu.edu

Development of diagnostic tools for glioma biomarkers

Dr. Paul Mann - pmann@nmu.edu

Developing novel biomarker assays for glioma. Investigating methods to reduce glioma invasiveness

Criminal Justice

Bryan Bubolz - bbubolz@nmu.edu

Mental health assessments of current and/or former gang members - mainly focused on PTSD

Earth, Environmental & Geographical Sciences

Dr. Ryan Stock - rystock@nmu.edu

1) gender and racial dimensions of solar development (India, Ghana); 2) environmental injustices of solar e-waste (India); 3) antiracist solar interventions (USA)

Dr. Susy Svatek Ziegler - suziegle@nmu.edu

Initiatives and projects in the NMU Hoop House and the Outdoor Learning Area

Dr. Jelili Adebiyi - jadebiyi@nmu.edu

Waste to organic conversation; waste recycling and sorting behavior of NMU students; sustainability of school and community gardens; motivations for the implementation of Individual gardens in Marquette; gender roles in wetland rice cultivation; food security; food waste management

Dr. Sarah Mittlefehldt - smittlef@nmu.edu

Bioenergy, specifically, the history of wood-based biofuel development and Cliffs Dow Chemical Company

Dr. Robert Legg - rlegg@nmu.edu

Faculty Research Grant, at this time

Dr. Matthew J. Van Grinsven - mvangrin@nmu.edu

Currently I am working on four primary research projects, including:

1) Assessing influence of alternative tillage and cover crop techniques on greenhouse gas emissions, soil health and organic vegetable production at the Michigan State University Extension Upper Peninsula Research and Extension Center.

2) Examining hydrology and vegetation conditions in several mitigation wetlands in Marquette, MI.

3) Testing heavy metal concentrations in fruit and vegetable produce using inductively coupled plasma mass spectrometry.

4) Evaluating soil, plant and hydrological responses to simulated emerald ash borer infestations in black ash wetlands.

Dr. Adam T Naito - anaito@nmu.edu

Rangeland management in southern Arizona, fire history of the Eastern United States, carbon storage and composition of hemi-boreal forests

Economics

Dr. Darryl Obasuyi - dobasuyi@nmu.edu

Evaluate the Effectiveness of Economic Policies and Reforms: This entails assessing the impact and outcomes of various economic policies and reforms implemented by governments or institutions. To conduct such an analysis, you would typically:

-Collect relevant data on the policy or reform in question.

-Measure its intended effects, such as economic growth, employment, inflation, or income distribution.

-Compare the actual outcomes to the intended goals to determine the policy's success or failure.

-Consider both short-term and long-term effects.

Dr. Hsin-Ling Hsieh - hhsieh@nmu.edu

Virtue-based education in economics courses and other courses

Education, Leadership & Public Service

Laura Kennedy - lkennedy@nmu.edu

I research the new teacher experience. Currently, I am taking an arts-based approach to research the emotional work of learning to teach. A colleague and I are also currently conducting interviews regarding relational bullying among student teachers and their mentor teachers.

Dr. Christi Edge - cedge@nmu.edu

Grounded theory related to making meaning from classroom events

Multimodal meaning making in online teaching and learning

Phenomenology

Transitioning from student to teacher

Critical Events in the context of teaching

Care and Rigor in Online Learning

English

Dr. Kel Sassi - ksassi@nmu.edu

Survey of NMU English education alumni; Current preparation of English education students; Native American writing; Indigenous pedagogy; Writing assessment and social justice; Innovative preparation of future teachers

Dr. Caroline Krzakowski - ckrzakow@nmu.edu

I am now working on a new project entitled The Modern English Garden: Literature, Horticulture and Empire as well as a memoir about my family's work in the Resistance during World War II and their persecution and displacements in the war's aftermath.

Dr. Kia Jane Richmond - krichmon@nmu.edu

Alumni of English Ed and methods (Teacher Practices in English Education); mental health and teacher prep in English Ed; mental illness in young adult literature; relationships between professors and students in English Education

Matthew Frank - mfrank@nmu.edu

THE SCHINDLER OF JAPAN: A NEW CHAPTER IN A HYBRID BOOK-IN-PROGRESS OF POETRY AND MICRO LYRIC ESSAYS

Dr. Robert Whalen - rwhalen@nmu.edu

All my research pertains to a multi-volume edition of the works of a seventeenth-century English writer: analysis and compiling of manuscripts and early editions; textual scholarship; critical annotations

Dr. Lynn Domina - ldomina@nmu.edu

A collection of poetry focused on copper and iron mining; a collection of essays focused on sites and individuals with ambivalent cultural associations, e.g. Harpers Ferry, WV, Calumet, MI.

Health & Human Performance

Dr. Lukus Klawitter - lklawitt@nmu.edu

Various measures of handgrip strength to determine muscle function in aging endurance athletes.

Dr. Lanae Joubert - ljoubert@nmu.edu

Relative Energy Deficiency in Sport for female collegiate wrestlers

Nutrition/Diet of sport climbers (rock climb)

Food system comparisons for urban and rural communities

Dr. Marguerite Moore - mmoore@nmu.edu

Concussion research.

Dr. Matt Kilgas - mkilgas@nmu.edu

The effect of Exercise with Blood Flow Restriction on individuals with Diabetes

History

Dr. Nickolas Dupras - ndupras@nmu.edu

Studying the manufacture of armor in late medieval Europe

Dr. Alan Scot Willis - awillis@nmu.edu

Religion and childhood in the 1950s; Women's liberation movement

Institutional Effectiveness

Ellen Koski - ellkoski@nmu.edu

Organizational planning and change management, alumni outcomes

Languages, Literatures & International Studies

Dr. Michael Joy - mjoy@nmu.edu

For the past five years I've been researching games and gambling in the literature and culture of Renaissance Spain/Europe.

Dr. Maria G. Arenillas - marenill@nmu.edu

Southern Patagonia documentary film research

Library & Instructional Support

Dr. Marcus C. Robyns - mrobyns@nmu.edu

I am developing an interdisciplinary course on the digitization and curation of historical manuscript collections. The course will involve English, History, and Geography, particularly CIS. The Freshman Fellow will conduct research in the use of primary sources in instruction.

Mathematics & Computer Science

Dr. Carol Bell - cbell@nmu.edu

Developing Good Questions in Teaching Online Mathematics Courses

I am a math educator so I am interested in the teaching and learning of mathematics (K-12, College). I am currently researching and working in the area of "good questioning" in mathematics teaching.

Music

Dr. Theresa Camilli - tcamilli@nmu.edu

Dyslexia and music reading (notation); measuring student confidence (implications on approaching long-term goals)

Native American Studies

Dr. April E. Lindala - alindala@nmu.edu

Ancestral Knowledge Towards Sustainable Computing | Great Lakes Indigenous Art, Education, and Healing | National Writing Project | Indigenous Storywork and Contemporary Indigenous Documentary | Women of color Navigating Higher Education | Indigenous Representational Sovereignty in Media, Indigenous Arts, Expression, and Activism | Anishinaabe Language and Community Resilience.

Nursing

Sarah Jennings - sajennin@nmu.edu

Accommodations for students with disabilities in Nursing

Dr. Katie Menard - kmenard@nmu.edu

Accommodations for nursing students with disabilities

Philosophy

Dr. Antony Aumann - aaumann@nmu.edu

First, I am currently working on a mongraph, under contract with Bloomsbury Publishing, on the transformative power of art. Second, I am also organizing a conference to be hosted by NMU in July 2024 devoted to existential aesthetics. A selection of the papers presented at this conference

will be collected into an anthology that I will edit. Third, I am finishing a paper on Kierkegaard's nature aesthetics to be published in an anthology by Bloomsbury.

Physics

Dr. Neil Russell - nrussell@nmu.edu

Lorentz Symmetry Studies, Finsler Geometry

Rick (P.W.) Mengyan (https://orcid.org/0000-0002-1306-2126) - pmengyan@nmu.edu

I study isolated hydrogen in semiconductors in addition to develop new experimental techniques to do so; activities/projects include studies such as: "Microwave study of muonium states in BeO", "Photoionisation spectroscopy on negatively charged muonium in GaAs"; "Acceptor hydrogen state in ZnSe probed by photoexcited muon spin spectroscopy"; "Neutral and diamagnetic muonium as an analogue to isolated hydrogen in Beta-Ga2O3"; "Investigating the Mu/H-like states in rutile, anatase and brookite Titanium Dioxide"; "Probing magnetism, the metal to semiconductor transition and properties of H in VO2 compounds"; "Study Hydrogen dynamics and stability in transparent conducting oxides"; "Role and behavior of hydrogen impurities in CIGS and CZTS compounds (next-generation solar cell materials)"; "Characterize the early time history of H impurities in SiGe alloys"; "Develop Muon Spectroscopy of Excited States (MuSES) technique for use on semiconductors"; "Study Mu (H-like) states including stopping sites, dynamics as well as donor and acceptor levels in Silicon Carbide"; "Muonium-photocarrier interactions in Ge"; "Muonium-photoionization and muonium-photocarrier interactions in GaAs"; "Survey of spin polaron candidate materials"

Political Science

Dr. Jongeun You - jyou@nmu.edu

One of my research areas is in hydropower. I had my first paper published at Northern Michigan University, and this paper on GERD in Ethiopia was recently featured in Northern Today: https://news.nmu.edu/nmu-professor-researches-nile-river-conflict.

Psychology

Dr. Jon Craig Barch - jbarch@nmu.edu

Nature-Wellness Connection, Intrinsic Motivation Neuroscience, Implicit Race/Gender Bias Reduction, Psychological Need Satisfaction and Wellness

Dr. Josh Carlson - joshcarl@nmu.edu

Our lab is conducting research on the following projects: (a) neural correlates of cognitive biases using structural MRI and functional MRI measures, (b) eye tracking measures of emotion regulation and how these relate to symptoms of rumination and depression as well as the use of emotion regulation in daily life, (c) neural correlates of climate change anxiety, (d) neural correlates of individual differences in sustainability related attitudes, (e) brain activity associated with the processing of climate change related images and videos, (f) causal effect of brain activity on attention to climate change, (g) behavioral measures of attentional control when processing climate change images, (h) eye tracking measures of mood effects on attention to climate change information, and a number of additional collaborative projects

Dr. Forrest Toegel - ftoegel@nmu.edu

Randomized clinical trials to promote abstinence from cigarettes, promote employment, and help people escape poverty.

Dr. Cory Toegel - ctoegel@nmu.edu

Behavioral/psychological research with animal (rat) models on the following topics: self-control/impulsivity, choice, environmental influence, disruptions in behavior, drug effects

Behavioral/psychological laboratory research with human subjects on the following topics: relapse/recovery, avoidance, disruptions in behavior

Behavioral clinical research with human subjects on the following topics: staff training, clinical skills learning, ABA treatment, substance abuse treatment

More information on my lab website: www.toegellaboratory.com

Dr. Lin Fang - lfang@nmu.edu

Emotion regulation eye-tracking study; Attention bias and personality behavioral study; Impact of cognitive training on depression and anxiety (eye-tracking & EEG)

Dr. Adam Prus - aprus@nmu.edu

Evaluate sigma1 receptor mechanisms as a novel pharmacologic strategy for obsessive compulsive disorder

Seaborg Center/MiStem/Education

Chris Standerford - cstander@nmu.edu

Activities (w/ minor research opportunities) connected to Science, Technology, Engineering, and Mathematics Education. Activities can include pk-12 students, teachers, and pre-service teacher candidates.

Social Work

Dr. Suk Yin Caroline Cheng - ccheng@nmu.edu

My research agenda are mainly related to migrant wellbeing. I am currently working on the challenges and coping mechanisms of Covid-19 on marginalized populations.

Dr. Vikash Kumar - vkumar@nmu.edu

Research activities and projects:

1. Health Service Delivery in Rural Areas: My research focuses on addressing the challenges faced in providing healthcare services to rural communities. This includes studying the barriers to access, identifying effective strategies for improving healthcare delivery, and proposing innovative solutions to bridge the gap between urban and rural areas.

2. Prevention from Non-Communicable Diseases (NCDs): aims to raise awareness and develop strategies to prevent NCDs such as diabetes, cardiovascular diseases, and cancer. This involves studying risk factors, promoting healthy lifestyles, and advocating for policies that support prevention and early detection of NCDs.

3. Improving Mental Health and Wellbeing: focuses on understanding mental health issues and developing interventions to improve mental wellbeing. This includes studying the impact of social, economic, and environmental factors on mental health, developing preventive measures, and advocating for improved access to mental health services.

4. Policy Advocacy for Social Justice: research explores ways to advocate for social justice through policy interventions. This includes studying existing policies, identifying gaps and inequalities, and proposing evidence-based policy recommendations to address social injustices in areas such as healthcare, education, and socioeconomic disparities.

Sarah Carlson - sarahcar@nmu.edu

Training students in tribal victim services internships; developing culturally grounded practice skills; decolonizing social work education

Sociology & Anthropology

Dr. Malorie Albee - malbee@nmu.edu

The effects of sedentism, concrete, and Western shoes on the human foot skeleton

Technical & Occupational Sciences

Kate Havel - khavel@nmu.edu

Encouraging women and girls to explore opportunities in the construction industry through outreach events.

Nathan Joyal - njoyal@nmu.edu

Sustainable farming, cannabis/hemp extraction and storage methods, CB1/CB2 receptor research

Kari Farkas-Lasich - kfarkas@nmu.edu

Hydroponic indoor farming sustainability

Theatre & Dance

Jimmy Ludwig - jiludwig@nmu.edu

A Face in the Rock as a multi-part miniseries