Introducing Dr. Sarah Clarke; Assistant Professor in the School of Health & Human Performance.

Please join us in welcoming Dr. Clarke back to our school. Dr. Clarke (previously Sarah Breen), completed her doctoral studies at the University of Limerick in Ireland. Her Ph.D. research involved the investigation of lower limb biomechanics in those at risk of anterior cruciate ligament injuries of the knee. Dr. Clarke has joined us from Leeds Beckett University in the UK where she was a Senior Lecturer in Sport & Exercise Biomechanics. Prior to this, Dr. Clarke was an assistant professor at NMU from 2012-2013.

Dr. Clarke acts as Vice President (Publications) for the International Society of Biomechanics in Sport (ISBS). As part of her role, she manages the society, bi-annual newsletter and social media. She also oversees the paper review and publication process for the annual conference. Dr. Clarke will attend the ISBS conference next year in Cologne, Germany with NMU Dr. Randall Jensen (ISBS Secretary General) and several NMU Exercise Science graduate students.

Dr. Clarke currently teaches our undergraduate and graduate level biomechanics classes and enjoys supervising research students in a variety of areas. She also has a keen interest in performance support within elite sport and will teach a course preparing students to support athletes and coaches with performance analysis services in the upcoming winter semester. Dr. Clarke has completed a graduate diploma in academic practice and enjoys integrating novel teaching methods in her classroom. She will utilize a problem based learning model in her graduate biomechanics class this winter semester. This model utilizes real cases/scenarios that students work on in groups. This use of real data and case studies from the fields of sport and health allows students to immerse themselves in the advanced topics they will be covering and translate them to real world contexts.
Dr. Elizabeth (Liz) Wuorinen

Dr. Wuorinen joins the SHHP as the new Associate Dean/Director. She is excited to be back in the U.P. She grew up in Baraga and then went on to obtain an undergraduate degree in Health Fitness/Health Promotion from Central Michigan University, returned back to the U.P. to earn a Master's degree from NMU in Exercise Science, and rounded out her tour of Michigan schools with a Ph.D. in Exercise Physiology, emphasis in Exercise Endocrinology, from The University of Michigan. Dr. Wuorinen comes to NMU from Norwich University in Vermont, the oldest Military College in the U.S., where she taught and conducted research for the past 11 years. Her early research focused on the exercise effects on hormonal changes and hunger/food intake in postmenopausal and middle-aged, overweight women. More recently, her interests have expanded to molecular aspects and immunological responses of exercise physiology, particularly in the inflammatory conditions related to obesity and cancer. She is married to Jeff Wuorinen and they have three awesome children, Stefan—age 26, Sienna—age 19, and Guinnevere—age 14. They also have two canine boys, Puck and Louis. When not in the office, Dr. Wuorinen likes to be active with her children and husband, running and hiking the trails, biking, skiing, hanging out at the lake and reading a good book.

Cancer Survivorship and Exercise Research Center (CS-ERC)

CS-ERC will bring together health care providers (e.g., physicians, sports medicine specialists, physical therapists, athletic trainers, registered nurses, exercise physiologists) from around the Marquette community and Upper Peninsula (UP) Region to provide research-focused exercise training and active lifestyle sustainability programs before, during, and after cancer diagnoses and therapies. This includes center-based group and individual exercise training programming along with guided exercise routines during cancer treatments in the hospital or home as part of broad research investigations. We will endeavor to utilize novel, research-based UP exercise modality groups, such as fat biking, trail running, and Nordic skiing cohorts. Therefore, our vision is to promote and implement active, outdoor lifestyles for all cancer survivors as they go through the highly variable and life changing cancer survivorship process.

The primary beneficiaries will be cancer survivors looking for physically active lifestyle support in the form of group or individual, research-oriented exercise/functional fitness training and healthy lifestyle education sessions. NMU SHHP students and faculty across disciplines in the SHHP will benefit. Additionally, all of NMU potentially benefits, including Neuroscience, Brain Tumor Center, School of Nursing, and Biological Sciences, among others. The center will provide academically rigorous and real world applied experiences (study/research development sessions, data collection participation, individualized exercise prescription routines, exercise testing activities) in the form of internships, directed studies, BSN clinical/transition involvement, and/or thesis projects, among other potential ideas, such as community health care provider networking/team building for students and faculty.
“After 38.5 years in academia at NMU, I changed my email signature to ‘… Professor and Exercise Physiologist, Retired’. Annette and I seized the opportunity to do a 3800-mile circuit with camping in the Black Hills of South Dakota and at Devil’s Tower National Monument in Wyoming; a couple nights in the Denver area for the 25th Anniversary Summit of the Access Fund, a national climbing advocacy organization; and several days of log cabin life in the Ozarks of northwest Arkansas for some hiking, banjo picking and climbing. Whew! All in all, it was better than Concur! We are continuing our musical explorations with the old time string band All Strings Considered and are lining up dances and concerts for winter and spring. We just purchased some nice snowshoes and my skis are ready for the snow any day now. All seriousness aside, I am going to miss the daily fix of academia … curious students, faculty with great ideas and the hallway conversations. Concur, not so much.”

Dr. Mary Jane (MJ) Tremethick

SHHP’s fearless leader, MJ, retired this past summer. She graduated from NMU’s nursing program and earned her Master’s in Community Teaching. While working on her Master’s, she also taught in the Practical Nursing program from 1990-94. MJ went on to get her Ph.D. from the University of Tennessee, after which she returned back to NMU in the SHHP. She rose through the tenure ranks and eventually accepted the position of the Department Head in 2011. MJ was instrumental in the transition of the SHHP from a Department to a School (2013). Her tireless dedication and support of the SHHP, its faculty, staff and students was recognized by all. We all wish her lots of happiness in her retirement.
Athletic Training

to the NATA Great Lakes Athletic Trainers Association meeting in Wheeling, Ill., on March 9. Four students had poster presentations at the meeting and NMU’s Quiz Bowl Team won the Michigan Athletic Trainers’ Association’s (MATS) Student Quiz Bowl and represented Michigan at the conference. (Added note: The NMU team, which consisted of juniors, Avery Rochester, Duane Bair, and Tyler Hillstead, competed for the title of MATS Quiz Bowl champs at the annual student conference on the campus of Michigan State University against students from 12 other athletic training programs across the state of Michigan and won for the second year in a row. They will represent Michigan again this coming spring in the Quiz Bowl.

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Dr. Maggy Moore attended the NATA Conference in Baltimore, Md., this summer with students Hannah Hawkins and Nicole Cornell, where they presented the results of their research projects.

Senior Ryan Schiller (Traverse City, Mich.) was recently accepted into one of only two doctoral programs in athletic training, at the University of Idaho. She will start her studies in the fall of 2017.

For the past two years, senior Athletic Training Student Halie Marimalick (Gladstone, Mich.) has served as the Michigan representative to the Great Lakes Athletic Trainers Associations’ (GLATA) Student Senate. GLATA is the regional association of athletic trainers made up of over 7,000 athletic trainers and athletic training students in the states of Michigan, Minnesota, Indiana, Illinois, Wisconsin & Ohio. Halie will graduate, with honors, in the spring of 2017. She plans to pursue an athletic training position in the Gladstone/Escanaba area.

The Student Athletic Training Organization of NMU (SATO) was selected as the September 2016 Student Organization of the Month by the NMU Student Leadership Office!! THESE GUYS ROCK!
Our students contributed more than 500 hours of community service in 2016 to local agencies such as Marquette County YMCA, Upper Peninsula Health Plan, Michigan State University Extension Marquette, Area Health Education Office, Care Clinic, U.P. Health Systems Marquette. NMU Community Health students are providing outstanding contribution to the university and Marquette Community by doing internships and volunteer service advocating health education, promotion, and prevention. In collaboration with NMU SHHP and local health agencies.

Under the supervision of faculty leader Dr. Yuba Gautam, some community health students participated on collecting data for The Northern Progressive Research and Innovative Mutual Exploration (PRIME) grant. A faculty led study abroad Interdisciplinary Global Health class to Belize is one of our popular study abroad programs led by Dr. Gautam, where more than 80 NMU students travelled thus far. Our Community Health undergraduate students get national recognition by passing the Certified Health Education Specialist (CHES) exam and have a successful passing rate.
Management of Health and Fitness continues to offer classes that allow students to get certifications: HL 275 for personal training (NSCA CPT) and, HL 495 strength and conditioning programming with Olympic Lifts (USAW – Olympic Lift Sports Performance Coach) by the USOEC Olympic Coach, Vance Newgard. Students are able to get their certifications in their sophomore and senior year. Many of our Management of Health and Fitness Students are lucky to get local internships in their areas of interest (strength and conditioning, personal training, yoga, health promotion, etc.) due to the number of clubs and centers in our local areas, and many of our majors go on to own and/or work at these agencies. Embedded within this website is an illustration of the many agencies in the immediate area: http://phoga7.wix.com/hl368fall2015#!page-5

The faculty have been very busy working together across programs with publications and presentations this past year.


Patricia Hogan, Chris Kirk and Bree Carlson. Beyond Traditional Pedagogy Toward True Outcome-Central Education: Using Presnks’s Framework to Guide Pedagogy has been accepted as a 40-minute concurrent presentation at the Lilly Conference – Traverse City, MI, October 20-22, 2016.

Patricia Hogan, Bree Carlson, and Brian Myers. The Way You See the Problem, May be the Problem: Educators as Problem Solvers. Michigan-SHAPE Conference, Mackinac Island, MI, October 7-9, 2016.


Dr. Lanae Joubert, School of HHP Assistant Professor, presented and attended the Food and Nutrition Conference and Expo held by the Academy of Nutrition and Dietetics in Boston, October 2016. She presented an innovative poster titled “The Salad Assignment Reinforces the Nutrient Density Concept In a University Human Nutrition Course”.

Dr. Joubert was part of a two person, Expert Panel Keynote Session related to climbing nutrition and titled: Nutrition for Rock Climbing Performance and Health at the 3rd International Rock Congress in Colorado this past summer. Lanae expertly told the tale of when and what to eat to fuel rock climbers during bouldering, top rope sessions at the crag, lead climbing in the back country, and multi-pitch climbing outings. The talk was well received as she and her co-speaker, Dr. Abigail Larson, an NMU Exercise Science alumni, were asked a wide variety of questions.
Recently, students from the PE 346 Adaptive Physical Education class celebrated another successful semester of working with local Marquette Area Public School students with Exceptionalities by sponsoring a field trip to the local bowling alley. Our NMU students are preparing to meet the needs of students with exceptionalities within a physical education setting, and/or within an independent classroom like that of the Sandy Knoll Functional Skills program. Our goal is to give the NMU students the necessary knowledge and pedagogical skills to physically educate students regardless of their level of ability, physical/mental/emotional functionality, or disabling condition.

During the semester, students researched the various categories of IDEA conditions, and learned basic methods of modifying equipment, lessons, and delivery methods to allow all students to participate. This was learned in the classroom, but applied in the field at the two sites where they worked in actual classrooms with students. They were to apply the knowledge and methods of adapted physical skill acquisition, and effectively instruct and assess their students’ participation. This is a win-win for all involved…NMU students gain great experience and knowledge directly working with the practitioners and teachers in the field, and MAPS students have an opportunity to get one-on-one teaching and learning experiences with our future teacher candidates.

To celebrate and to say thank you for the partnership with our Marquette Area School friends, we sponsored an Adaptive Bowling trip at Superior Lanes Entertainment. A big thank you to Nancy Brainerd, Special Education Teacher at Marquette High School, and Dawn Kruhak of Sandy Knoll Elementary for allowing our NMU students into your classrooms! The smiles tell the whole story!

Some of our Physical Education Methods students and members of the Physical Education Student Organization (PESO) combined forces recently and volunteered to run some after-school physical activities for local students. NMU physical education majors met with organizers of the Lake Superior Village community after-school program to provide some fun and physically active opportunities for students. The Lake Superior Village Community Center offers a program for elementary to middle school aged students during the important after-school hours. Our NMU students came in with a goal of inspiring healthful living, physical activity, and social-interaction during the after-school hours as an alternative to more sedentary activities such as TV, video games, and other independent technological devices. We want to get the students active, have fun, and develop positive relationships within the community.

PESO president Adam Exelby heard comments from students, LSV directors, and community members such as “It’s rare for these kids to work well together.” “I have never had this much fun at LSV.” “I’m sweating!” These were just some of the positive remarks while our students were there.

Great job NMU PE Majors!
Former ORLM student Kelly Allen participated as a USA Olympic Athlete in the 2016 Paralympics. Kelly was born with a rare, non-hereditary birth defect called Proximal Femoral Focal Deficiency (PFFD) type D. The “type D” classification of PFFD means Kelly is completely missing her left femur, patella, and fibula, along with a fully developed hip socket – or, as she puts it, “It looks like I only have one half of a leg.” Doctors told her parents she would not be able to sit or stand, let alone participate in any sports. Today though, Kelly is more active than ever, having adapted to everyday life with a prosthetic leg. She took home fourth place at the 2012 ICF Sprint World Cup in Poznan, Poland, for kayaking. Kelly is now considered an elite athlete in the Paralympic Canoe discipline. Last June in Rio, despite choppy conditions, Kelly earned 6th place in the women’s paracanoe/kayak 200m sprint.

Kelly was an ORLM student Fall 2015 and Winter 2016. She moved to Oklahoma City, Okla., this past May to train at the USA Olympic Training Center.

On Thursday, October 13, the Outdoor Recreation Leadership & Management program hosted a Roundtable event featuring six filmmakers, outdoor athletes and environmental thinkers participating in the Fresh Coast Film Festival. The Roundtable provided NMU students and faculty the opportunity to interact with professionals working in the outdoor industry and to learn more about the possibilities of merging passions for filmmaking, outdoor recreation, and nature.

Speakers in attendance:
- Nate Ptacek (videographer at Patagonia, director of the film “Bear Witness” about the Freemans)
- Colin McCarthy (filmmaker of “Great Lakes, Bad Lines”)
- Aaron Peterson (filmmaker of “Michigan Ice Film”)
- Brenda Piekarski of Adventure Minnesota Films (Twin Cities)
- Josh Whalen and Chris Zuker of Bigfoot Media (Chicago)

Artwork and students of the ORLM program at their pop-up art show held at the Peter White Library.
On Dec. 1 the ORLM students in RE 410 Leisure through the Ages participated in the 2nd ORLM Pop-Up Art Show. The students’ work was displayed during the Winter Art Exhibits Artist Reception at the Marquette Arts and Culture Center at the Peter White Library from 6-8pm. Over 100 community members strolled through the galleries viewing art, talking to the artists and listening to music and lyrics performed by ORLM students.

In the RE 410 course, students explored in-depth the humanities of literature, art, music, and/or dance in relation to leisure, outdoor recreation, and/or nature. Their final creative products express each student's connection, experience, or perspective on or with nature, leisure, and/or outdoor recreation.
The 3rd Rock Congress turned into a tribute to retired, as of August 2016, Exercise & Sports Science Professor, Dr. Phil Watts, the rock climbing physiology world’s pioneering researcher over many decades and a true friend to his eclectic colleagues. The IRCRA’s 3rd International Rock Congress was held in a high altitude, slope side ski village above Telluride, Colorado. The fearless Rock Congress co-directors and NMU School of Health and Human Performance faculty, including Drs. Phil Watts, Lanae Joubert, and Scott Drum, led the organizing committee, dedicating about a year to the planning process. See http://www.ircra.rocks/ for additional information about the rock climbing organization. The next conference is 2018 in Chamonix, France.

Two former NMU Exercise Science graduate students, Matt Kilgas and Kevin Phillips, (seen at right, respectively, at the Rock Congress) presented on Magnesium Carbonate (Chalk) Increases Hang-Time Until Failure in Rock Climbing and The Effect of Cold Ambient Temperatures on Climbing-Specific Finger Flexor Performance. Both Matt and Kevin are now Kinesiology Ph.D. students in their second year at Michigan Technological University and remain avid climbers and fat bikers!

NMU current Sports Science undergraduate student, Allyssa VanHorn, a native of Ishpeming, Mich., attended the conference as part of her McNair Scholar experience and gave a stellar presentation on Hang Board Performance Time Across Multiple Hangs in Normoxia and Normobaric Hypoxia. Her talk was excellent. Her McNair Scholar mentor was Dr. Scott Drum, who encouraged her to attend and was super proud of her work. Drs. Watts and Joubert also greatly supported Allyssa during her journey to the Rock Congress conference. All three School of HHP faculty, Watts, Joubert, and Drum, pride themselves on student involvement in- and out-side the classroom.

Dr. Scott Drum, presented on Heart Rate, Perceived Effort, and Anxiety during Top Rope (TR) & Lead (LD) Rock Climbing, which was part of a research project involving undergraduate Sports Science students in the Exercise Science Laboratory at NMU. The young researchers, along with Scott and Lanae leading the way, conducted testing in the hypoxic chamber, a new “toy” as of 2013. At the conference, Scott’s talk went well and a few great questions concerning rating of perceived exertion and rock climbing were expressed.
Dr. Randy Jensen and Dr. Sarah Clarke and three graduate students of the SHHP are conducting a research study funded by an NMU PRIME grant. In the study, Mindie Clark, Ryan Meidinger and Dan Szuba are testing the claims (http://www.speedmakerathletics.com/) that SpeedMaker’s inventors say the harness device achieves. This harness device adds resistance to the hip when the athlete extends their leg and hip. The inventors of the harness claim that the harness will increase muscle size and nervous system adaptations that improve sprinting and jumping performance, over a short and long period of time. Mindie is using motion analysis to examine the changes in joint angles that may occur from the use of the SpeedMaker device. Ryan is using electromyography to test the adaptations that occur in the nervous system throughout the process of this study. Dan is using force plates to measure changes in forces, rate of force development, and jump heights. When the study (https://www.youtube.com/watch?v=Gvm229naYkc&feature=youtu.be) is finished it is the group’s goal to publish articles on this device and present in Cologne, Germany at the International Society of Biomechanics in Sport conference.

Cool videos on Youtube of our students and their research.

https://www.youtube.com/watch?v=cxoPOR3eo8&feature=youtu.be
https://www.youtube.com/watch?v=8WpP8p2Kkyg
https://www.youtube.com/watch?v=2BKUJ8uAIAQ
https://www.youtube.com/watch?v=26brEgV3G8E
https://www.youtube.com/watch?v=O_64wbweggw

Exercise Science graduate student Jessica Coullard is currently working on her thesis, Changes in Ground Reaction Forces in Runners after Acclimation to Highly Cushioned Shoes, with NMU professors Dr. Scott Drum, Dr. Sarah Clarke, Dr. Mike Stoolmiller from Michigan State University, and Dr. Mike Bohne from Utah Valley University. Despite technological advances in running shoes, the incidence of running-related injuries has remained high over the last several decades. Recently, highly cushioned shoes (HCS) entered the running market, and manufacturers suggest that extra cushioning potentially reduces injury rates through superior shock absorption, implying less impact upon foot strike in comparison to other shoes. There are no prior studies in which participants wear HCS for an extended period of time, and prior research on short bouts of wearing HCS has shown potential altered shock attenuation and no difference in peak impact forces when compared to standard cushioned shoes. Jessica and her research committee speculate that long term usage of shoes, such as HCS, may promote increased limb loading (or rate of force development) rates and could lead to greater chance of injury.

Jessica successfully recruited 45 participants, half of which wore HCS for four weeks and the other half who wore their current standard running shoes. A College of Health Sciences and Professional Studies Internal Grant funded the cost of the HCS. Pretests were conducted in October, and posttests in November, both consisting of ten to fifteen trials of running across a force plate in each pair of shoes. Jessica is currently working on analyzing the data.
Additional Happenings at the SHHP

Why attend NMU’s SHHP?

Wow. A lot of reviews on here are from folks who have never attended Northern and are providing commentary on a policy that doesn’t even currently exist. In contrast to these misleading reviews, my experience at NMU was spectacular. I’ll allow many of the other reviews speak to Marquette’s gorgeous outdoor opportunities and inviting culture and instead concentrate on the academics. The academic opportunities that Northern provides are, without a doubt, spectacular. The classes and the instructors are great, but more importantly the faculty connects closely with the student body in ways that larger universities are incapable of.

This direct connection between students and faculty foster academic development in ways that truly nurture the pursuits of both ideas and their application. Particularly for folks seeking graduate school, this gives you a leg up in comparison to your larger-university competition. Case in point: my faculty mentor facilitated me publishing peer-reviewed research as an undergrad, multiple times. Furthermore, we continue to collaborate on research and have maintained a spectacular friendship (to the point that we make sure to visit twice a year when I’m back in MI).

In no way did NMU hinder my academic growth and development. Instead, it provided the foundation that I have subsequently built a successful academic career on. After graduating, I was recruited by multiple top-tier schools for a Masters program, and had the same experience in my doctoral program. I attribute this success entirely on that foundation that I built with the opportunities that those at NMU provided me.

Attend NMU. Invest your time and energy in your academic pursuits. I promise, you won’t regret it (unless you don’t like snow, but then why are you looking to go to a school in the UP)?

Travel Abroad in a Faculty Led Study Abroad (FLSA)

Belize

Dr. Yuba Gautam will be leading a FLSA to Belize in conjunction with the School of Nursing. Students will depart in May for a course where they will get to interact with the people of Belize and engage in Community Health of the region.

Costa Rica

Dr. Scott Jordan will be leading a Study Abroad to engage students in the evolving field of eco-tourism during the semester break. Students will get a hands-on opportunity to plan for sustainable programs.

Bonaire

SCUBA instructor Scott Thomas is leading a FLSA to Bonaire over spring break, 2017. Students will obtain seven certifications during the course.
Dr. Scott Drum and Dr. Lanae Joubert provided a rousing discussion on food and training at the Ore Dock—Science on Tap!

Dr. Sarah Clarke's ES 476 class presentations at the YMCA

Northern Michigan University Exercise & Sport Science Students presented a symposium on Exercise is Medicine at Marquette’s YMCA, covering a range of chronic conditions.

The Symposium Schedule:
0800 Arthritis
0900 Coronary Arterial Disease
0930 Obesity
1000 Asthma & COPD
1030 Parkinson’s Disease
1100 Cardiac Arrhythmias
1200 Lower Back Pain
1230 Dementia & Alzheimer's

Considered a good read—BY MANY. Alumni Dr. Bill Ebben and Dr. Phil Watts hit a major milestone

Congratulations! The Complex Training review article of a “few” years ago has reached 3500 downloads from Research Gate... And that is just from Research Gate. It is often listed as the “most read” from NMU for a given week. Good mileage from that one!


We are always happy to hear from our alumni and what they are up to. Please drop us a line and let us know how you are doing and what is happening.

If you are interested in donating to the SHHP, here is some information to help you do so:

Checks should be made to: NMU Foundation
Please indicate where you would like your gift designated on the Memo line (SHHP).

NMU Foundation
1401 Presque Isle Ave.
Marquette, MI 49855

OR GIVE ONLINE