

UPMC Sports Medicine Concussion Program

Fellowship Opportunities

Established in 2000, the UPMC Sports Medicine Concussion Program has grown to include seven attending clinical neuropsychologists who work within a multidisciplinary team to assess, diagnose, and treat concussions. This team includes primary care sports medicine, physical medicine and rehabilitation, neurovestibular rehabilitation, neurosurgery, neuro-radiology, behavioral neuro-optometry, and physical therapy, including both musculoskeletal evaluations and sport-specific exertion therapy.



Under the guidance of **Michael “Micky” Collins, PhD, clinical and executive director**, the UPMC Sports Medicine Concussion Program sees over 17,000 patient visits, involving between 6,000-7,000 unique patients, each year. The clinical team is involved in the evaluation and management of concussions for athletes at all levels of sports participation, including professional, collegiate, high school, and youth athletes.

Neuropsychology fellow duties primarily consist of brief neuropsychological evaluations of pediatric and adult athletes, along with extended batteries as needed. In addition to serving athletes, the program also receives referrals for neuropsychological evaluations of patients with non-sports related mild traumatic brain injury (mTBI), as well as other neurologic and psychiatric disorders. There is opportunity for forensic and medico-legal consulting work as well.

The program is based within the University of Pittsburgh Department of Orthopaedic Surgery and is housed within clinical space at the UPMC Rooney Sports Complex. The state-of-the-art facility is home to UPMC Sports Medicine and includes a training and rehabilitation gym with a plyometric training floor, a therapeutic pool, and a specialized performance training center. Next door is the UPMC Indoor Training Center, which features a quarter-mile, four-lane running track and full-size practice football field. The climate controlled facility is utilized by the Pittsburgh Steelers and the University of Pittsburgh Panthers, who also occupy the Sports Training Center, which includes team meeting and film viewing rooms, weight training rooms, hydrotherapy facilities, and four 80-yard outdoor fields with observation towers.

In addition to this primary location, there are currently five satellite clinics located throughout the Greater Pittsburgh area including UPMC Lemieux Sports Complex in Cranberry, UPMC Monroeville, UPMC Bethel Park, UPMC Children’s Hospital of Pittsburgh at Pine Township, and UPMC Children’s Hospital of Pittsburgh South in Bridgeville.

Clinical Training Model

Fellows begin with a one month training intensive working closely with Dr. Collins. Alongside current fellows, new fellows will learn competence with the clinical interview, administration of the vestibular/ocular-motor screening (VOMS), and interpretation of computer-based neurocognitive testing, as well as more traditional neuro-psychological evaluation tools. After the first month, fellows will enter into the regular clinical rotation, in which they will work in some capacity with all faculty members and rotate amongst the satellite clinics. Fellow offices are located at the UPMC Rooney Sports Complex, where all fellows have access to a computer, telephone, and other necessary equipment and resources.

The educational philosophy of the program is one of scientist-practitioner. The fellowship program emphasizes a patient-centered orientation to recovery, and recognizes that each patient will have a unique clinical presentation and course of recovery. Fellows are expected to spend 80 percent of their time on clinical work and 20 percent of their time focusing on research. The UPMC Sports Medicine Concussion Fellowship Program is a member of APPIC (Member Code #9139).

Clinical Experiences

While fellows spend the majority of their time in clinic, there are a number of additional clinical learning experiences available. Clinical opportunities within the Department of Neurosurgery include weekly teaching case conferences, didactic lectures, and morbidity and mortality conferences. In addition, David Okonkwo, MD, PhD, clinical director of the Brain Trauma Research Center and director of the neurotrauma program in the Department of Neurosurgery, invites all fellows to join him and his team, along with members of rehabilitation medicine, for weekly Rehab Rounds at the Neurotrauma ICU. Weekly brain cuttings are also offered through the Department of Neuropathology.

Overview of Concussion Research Lab and Projects

The concussion research laboratory is led by research director Anthony P. Kontos, PhD. The lab is located close to the main clinic at UPMC Sports Medicine, and includes over 2,500 square feet of research and office space. Research staff includes research coordinators, research assistants, and postdoctoral research fellows.

Research equipment includes electroencephalography (EEG) imaging equipment, Near-Infrared Spectroscopy (NIRS) imaging equipment, retinal scanning, neurocognitive tests, vestibular and ocular testing equipment, force plate and accelerometers, as well as research computers and a full host of research-oriented software. Many of our studies also involve use of advanced neuroimaging tools such as diffusion tensor imaging (DTI), high-definition fiber tracking (HDFT), and magnetic resonance spectroscopic imaging (MRSI) located at UPMC Presbyterian Hospital.

An exciting aspect of the research lab is the Concussion Research Registry, a clinical research database that provides access to data on thousands of patients for clinical research projects. With the registry, there are many opportunities to collaborate with the University of Pittsburgh MRI Research Center, the Departments of Neurosurgery, Otolaryngology, Psychology, and Physical Therapy, and the Eye and Ear Institute.

Our research has been funded by the *National Institutes for Health (NIH)*, *Department of Defense (DoD)*, *General Electric (GE)*/*National Football League (NFL) Head Health Initiative*, *National Collegiate Athletic Association (NCAA)* and other corporate sponsors. Our faculty publish on average 35+ impactful and innovative research articles each year in high-impact journals including *JAMA Pediatrics*, *Pediatrics*, *American Journal of Sports Medicine*, and *British Journal of Sports Medicine*. Our neuropsychology fellows are actively involved in grant funded research and are encouraged and mentored to pursue their own research interests.

Learning Experiences

The following experiences are available to all postdoctoral fellows, who are encouraged to be active and engaged in the research process, and take advantage of available opportunities.

Monthly Grand Rounds - Presentations by nationally recognized speakers in the area of concussion and mTBI. Previous speakers have included: Kevin Guskiewicz, PhD; Bill Meehan, MD; Jeff Bazarian, MD; Chris Giza, MD; and Steven Broglio, PhD.

Monthly Clinical Didactic/Case Conference - Variety of topics related to clinical care, as well as case presentations with round table case conceptualization discussion.

Monthly Research Meeting - Fellows share research ideas and current projects, receiving feedback from both peers and supervisors. Participation in research didactics including statistics, experimental design, and IRB protocols.

Monthly Journal Club - Discussion of timely articles and topics related to the clinical care of patients with concussion and cutting-edge research on concussion and TBI.

Mentored Research Opportunities in the Concussion Research Lab - Participation in mentored research activities, including subject recruitment and consent, data collection, entry and analysis, study design, and development of papers and presentations.

CITI IRB and COI Training - All fellows will complete CITI human subjects IRB and COI training modules..

Clinical Translational Science Institute (CTSI) - Fellows will have the opportunity to attend training, seminars, and courses in clinical and translational research.

Professional Presentations - Fellows are encouraged to participate in the development and delivery of professional research presentations at national, regional, and local conferences. As a goal, fellows are encouraged to participate in two to four presentations per year, with at least one as the primary presenter.

Professional Publications - Fellows are encouraged to participate in the development of professional research papers, chapters, and review articles. As a goal, fellows are encouraged to participate in two to four papers per year, with at least one as the first author.

Community Outreach

All neuropsychology fellows are encouraged to participate in ongoing community outreach. UPMC Sports Medicine partners with over 45 area high schools and universities to offer both on-field and in-office management of sports injuries including concussion. As such, neuropsychology fellows are often asked to educate school professionals, coaches, student-athletes, and parent groups on concussion basics and the importance of proper post-injury management.

In addition to education, the UPMC Sports Medicine Concussion Program is proud to partner with the Pittsburgh Penguins Foundation to offer the Heads UP Pittsburgh program. Heads UP Pittsburgh provides free neurocognitive baseline testing for athletes ages 7 to 14 in western Pennsylvania. Athletes 15 and older are offered baseline testing for a nominal fee as well. Neuropsychology fellows are welcome to learn more about and become involved with this program.

The UPMC Sports Medicine Concussion Program's website, ReThinkConcussions.com provides information for patients, visitors, and the general public, regarding basic concussion education, myths and misconceptions, and heightens awareness about concussions through frequently updated, user-friendly multimedia.

Please visit ReThinkConcussions.com for a closer look at the UPMC Sports Medicine Concussion Program's treatment approach, multidisciplinary team, research updates, and patient stories.

Fellowship Application and Selection Procedures

The UPMC Sports Medicine Concussion Program seeks qualified applicants from both clinical and counseling doctoral training programs in psychology. The fellowship exclusively seeks applicants interested in a career specializing in the evaluation and management of sports-related concussion. Applicants to the two-year clinical neuropsychology specialty program are required to demonstrate academic and clinical experience in neuropsychology, conveyed through formal coursework, clinical experience, and letters of recommendation.

Applicants must have completed all requirements for their doctoral degree, which includes the successful defense of their dissertation prior to starting the postdoctoral fellowship.

In order for the program to make an offer to an applicant who has not yet completed their dissertation defense, a letter from the chair attesting that the dissertation will be completed prior to the start of the fellowship is required. In addition, preference is given to candidates in which both doctoral degree and internship have been completed from programs that are accredited by the American Psychological Association.



Postdoctoral fellows are selected on the basis of academic excellence, clinical experience, research experience, recommendations of professors and supervisors, interview, and interests. Given the work environment and primary population served, consideration is given to certain aspects of life experience, particularly experience with sports. There are currently two anticipated openings for 2020-2022.

Application deadline is January 3, 2020. Applications are reviewed once complete, and a select number of prospective applicants are invited for an interview day in mid-January. In-person interviews are mandatory.

Application Procedure

All application materials are to be submitted by January 3, 2020. Materials must be submitted via the UPMC Careers website at <http://careers.upmc.com> (Job Title: Neuropsychology Fellow). If there are any difficulties with the online submission, please contact Dr. Nathan Kegel via email, at kegelne@upmc.edu, and alternative arrangements can be made.

The following materials are required:

1. Statement of goals and interests
2. CV
3. Three letters of recommendation (at least one from an internship supervisor). If submitting electronically, please scan all three signed letters into one PDF document.

For application questions:

Dr. Nathan Kegel
kegelne@upmc.edu

Local Information

The UPMC Sports Medicine Concussion Program is affiliated with the University of Pittsburgh. Founded in 1787, the university is one of the oldest higher education institutions in the United States and one of the most respected and productive research centers. Pitt's main campus is in Oakland, only 5 minutes from the UPMC Center for Sports Medicine, opening much of the city to affordable living options and plentiful cultural opportunities. Pittsburgh boasts a number of museums, including the Carnegie Museums of Art, Natural History, and Science; the Andy Warhol Museum; the Mattress Factory Art Museum; Phipps Conservatory and Botanical Gardens; Senator John Heinz Pittsburgh Regional History Center; and the Soldiers and Sailors Memorial Hall and Museum. Pittsburgh's theater district is a short bus ride away and includes a number of active theaters with top acts in musical theater. In addition, Pittsburgh is home to a vibrant sports scene, including professional football, baseball, and hockey teams, as well as a full range of collegiate athletics through Pitt and other local universities. Please visit the following links for more information regarding moving to Pittsburgh and exploring the city:

www.coolpgh.pitt.edu

www.visitpittsburgh.com

UPMC Sports Medicine Concussion Program Faculty



Michael "Micky" Collins, PhD Executive and Clinical Director

Michael "Micky" Collins, PhD, is an internationally renowned expert in sports-related concussion. A leading clinician and researcher, Dr. Collins serves as director and a founding member of the UPMC Sports Medicine Concussion Program. Established

in 2000, it was the first program of its kind; more than a decade later, it remains the largest research and clinical program focused on the assessment, treatment, rehabilitation, research, and education of sports-related mild traumatic brain injury in athletes of all levels. Dr. Collins' expertise attracts elite and professional athletes from around the world seeking the comprehensive care he provides and the multidisciplinary approach he helped to introduce. The program has roughly 17,000 patient visits annually at six different locations across Pittsburgh. Dr. Collins and his UPMC program colleagues attract patients embodying youth, high-school, collegiate and pro athletes with concerns about safe return to play and clinical management and treatment of sports concussion.

Besides his extensive clinical experience, Dr. Collins also has been a lead author and investigator on numerous groundbreaking studies of high-school and college athletes published in *JAMA*, *Neurosurgery*, and the *American Journal of Sports Medicine and Pediatrics*, among many others. He has been the lead author or co-author on more than 100 peer-reviewed research articles, and has delivered more than 350 presentations at national and international scientific meetings. Dr. Collins currently has upward of \$6 million in funding for his research efforts from entities including the NFL-GE Head Health Challenge, National Institute of Health, Major League Baseball, and the United State Army Special Operations Command. National and local media frequently interview him as an expert source.

Dr. Collins has been an instrumental source across the nation in developing concussion-management policy in youth sports, state legislation on youth safety, the Centers for Disease Control's concussion toolkit, and pioneering targeted treatment pathways for his patients. He is a co-founder of ImPACT (Immediate Post-Concussion Assessment and Cognitive Testing), the most widely used computerized sports-concussion evaluation system that has become a standard of care in nearly all organized sports at all levels. As a result, he is a leader in educating and implementing the proper usage of such baseline and post-injury neurocognitive testing as one tool to help determine an injury's severity and recovery for safe return to play. More recently, Dr. Collins was the Meeting Chairman for the Targeted Evaluation and Active Management (TEAM) Approach to Treating Concussion. This meeting was held in Pittsburgh in October, 2015 and was the first focused meeting regarding treatment of sports-related concussion. Underwritten by the NFL, this meeting resulted in the first published white paper on treatment of concussion, published in *Neurosurgery*.

In addition to training thousands of physicians and certified athletic trainers in the diagnosis, management, and treatment of sports-related concussion, he advises and is a consultant to numerous athletic organizations and teams - including the NFL Steelers, the NHL Penguins, other NFL teams, numerous MLB clubs, several NCAA programs, USA Rugby and also many international sports affiliations. He serves as an Associate Editor of the *Journal of Neurosurgery* and the *Journal of Sports Neurology*. Dr. Collins is also on the editorial board of such publications as *Brain Injury Professional* and the *Journal of Athletic Training*.

A graduate of the University of Southern Maine with a bachelor's degree in psychology and biology in 1991, Dr. Collins earned a master's degree in psychology in 1995 and doctorate degree in clinical psychology in 1998 at Michigan State University.

Among numerous national and international honors over the past decade, Dr. Collins was named an Irish-America Healthcare and Life Sciences Top 50 Honoree in 2014. In 2010, he received the National Council on Brain Injury annual award for outstanding research and advocacy. In 2009, he was bestowed the Kenneth L. Knight Award for outstanding research. In 2007, the National Academy of Neuropsychology honored him with the Annual Butters Award. An athlete himself, Dr. Collins played in the 1989 NCAA Baseball College World Series.



Anthony Kontos, PhD Research Director

Dr. Kontos is Director of Research for the UPMC Sports Medicine Concussion Program and associate professor in the Department of Orthopaedic Surgery and the Department of Sports Medicine and Rehabilitation at the University of Pittsburgh. He received his

doctoral degree in kinesiology/sport psychology from Michigan State University where he received master's degrees in counseling psychology and exercise science and completed an internship in counseling psychology. He completed his B.A. in psychology at Adrian College, where he was a four-year starter on the men's soccer team.

Dr. Kontos has specialized in concussion/mild traumatic brain injury (mTBI) research for the past 15 years, has 237 professional publications and 312 professional presentations, and has received research funding as a principal investigator from external sources including the *Centers for Disease Control and Prevention (CDC)*, *National Institutes of Health (NIH)*, Department of Defense (DoD), U.S. Special Operations Command, National Collegiate Athletic Association (NCAA), National Football League (NFL)/GE Head Health Challenge, National Operating Committee of Standards for Athletic Equipment, and the NFL Charities. His research focuses on concussion including risk factors; neurocognitive and neuromotor effects;

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psychological issues; treatment; and concussion in military, pediatric, and sport populations. Dr. Kontos is a reviewer for journals including the *New England Journal of Medicine*, *Journal of the American Medical Association*, *American Journal of Sports Medicine*, *Pediatrics*, and *Neurosurgery*; as well as an invited reviewer of grants for the NIH, NCAA Grand Challenge, National Athletic Trainers Association, Walter Reed Army Institute for Research, and U.S. Army Medical Research, and Materiel Command. He served as chair of the sub-acute subgroup on the NIH Sports Concussion Common Data Elements working group and was member and co-author of the 2019 American Medical Society for Sports Medicine's (AMSSM) position statement on concussion in sport.

He is also a fellow and past-president of the *American Psychological Association's Division 47- Society for Sport, Exercise & Performance Psychology*, and a fellow of the *National Academy of Kinesiology*, the *Association for Applied Sport Psychology*, and the *Eastern Psychological Association*. In 2014, Dr. Kontos participated in the White House Healthy Kids & Safe Sports Concussion Summit, and co-directed the 2015 Targeted Evaluation & Active Management Approach to Treating Concussion meeting in Pittsburgh, PA. He is also co-author (with Dr. Michael Collins) of *Concussion: A Clinical Profiles Based Approach to Assessment and Treatment*.



**Nathan Kegel, PhD
Fellowship Director**

Dr. Kegel is a clinical neuropsychologist with the UPMC Sports Medicine Concussion Program and assistant professor in the Department of Orthopaedic Surgery at the University of Pittsburgh. He earned a bachelor's degree in psychology from the University of Pittsburgh and a master's degree in Child Psychology from Duquesne University. He completed an APA-accredited doctoral program in school psychology at Duquesne University, as well as an APA-accredited internship in pediatric neuropsychology at The Watson Institute in Sewickley, Pa. Dr. Kegel has been a part of the UPMC Sports Medicine Concussion Program since 2009, first completing a two-year fellowship program in sports neuropsychology. He was hired as full-time clinical faculty in 2011.

Dr. Kegel has been fellowship director for the UPMC Sports Medicine Concussion Program since 2017. He is responsible for nationwide recruitment of post-doctoral fellowship candidates, and development of training material for current fellows. He has taught several semester-long child neuropsychology classes as an adjunct professor at Duquesne University, and frequently conducts lectures and workshops related to sports concussion on a local and national level. Dr. Kegel's current research interests center around assessment and management of pediatric concussion.



Vanessa Fazio-Sumrok, PhD

Dr. Fazio-Sumrok is a clinical neuropsychologist with the UPMC Sports Medicine Concussion Program and assistant professor in the Department of Orthopaedic Surgery. Dr. Fazio-Sumrok earned a doctoral degree in clinical psychology from Suffolk University, with a concentration in neuropsychology. She

completed an APA-accredited clinical internship in neuropsychology at Allegheny General Hospital in Pittsburgh. Dr. Fazio-Sumrok joined the faculty in 2008 after completing a two-year postdoctoral fellowship with the UPMC Sports Medicine Concussion Program, and her clinical specialty is pediatric concussion.



Jonathan French, PsyD

Dr. French is a clinical neuropsychologist with the UPMC Sports Concussion Program and assistant professor in the Department of Orthopaedic Surgery. He graduated from Widener University in 2010 with his doctorate in clinical psychology and concentrations in forensic and neuropsychology. He completed

his internship in the neuropsychology division of Delaware Youth and Family Services. Dr. French focused his research at Widener on traumatic brain injury, as well as the evaluation of malingering in neuropsychological testing. His dissertation examined personality characteristics of individuals engaging in malingering during neuropsychology assessment. Upon completion of his doctorate, Dr. French completed a postdoctoral fellowship at the UPMC Sports Medicine Concussion Program. His current clinical interests include working with school districts in the area to provide the proper accommodations to individuals who have suffered a concussion.



Alicia Puskar, PsyD

Dr. Puskar is a clinical neuropsychologist with the UPMC Sports Concussion Program and assistant professor in the Department of Orthopaedic Surgery. She earned a bachelor's degree in psychology and neuroscience from Allegheny College, and a master's degree in clinical psychology

from Edinboro University of Pennsylvania. Dr. Puskar received a doctoral degree in clinical psychology from the Indiana University of Pennsylvania, with an emphasis on neuropsychological assessment. She completed an internship in neuropsychology at Allegheny General Hospital in Pittsburgh, and fellowships with the UPMC Sports Medicine Concussion Program and Kreinbrook Psychological Services. Dr. Puskar specializes in adult and geriatric populations and works primarily with non-sport related mild traumatic brain injury.



Natalie Sherry, PsyD, MBA

Dr. Sherry is a clinical neuropsychologist with the UPMC Sports Medicine Concussion Program and clinical instructor in the Department of Orthopaedic Surgery.

Dr. Sherry completed her bachelor's degree in neuroscience from the University of Pittsburgh graduating summa cum laude. She earned a

doctorate in clinical psychology with a specialization in neuropsychology, and her master's degree in business administration at Widener University. Dr. Sherry completed predoctoral training at multiple medical hospitals including Temple University Hospital, the Hospital of the University of Pennsylvania, and the Children's Hospital of Philadelphia. She also completed a two-year postdoctoral fellowship in neuropsychology at the UPMC Sports Medicine Concussion Program prior to being hired as faculty. Her current research interests include the utility of concussion assessment tools and the influence of posttraumatic vision changes on academic achievement after concussion. Her clinical interests include the evaluation of mild traumatic brain injury and sport-related concussion across the lifespan.



Alicia Trbovich, PhD

Dr. Trbovich is a clinical neuropsychologist with the UPMC Sports Medicine Concussion Program and clinical instructor in the Department of Orthopaedic Surgery.

She is a Wisconsin native, completing her bachelor's degree at Marquette University with concentration in psychology and

biological sciences. She then earned a doctorate in clinical health psychology with an emphasis in neuropsychology at East Carolina University. Dr. Trbovich completed her predoctoral internship in neuropsychology at the University of Florida/Shands Hospital and a two-year postdoctoral fellowship with the UPMC Sports Concussion Program. Dr. Trbovich's clinical interests include assessment and management of sports-related concussions within pediatric and adolescent populations. Her current research interests include the role of sleep in recovery from concussion, and identifying risk factors for injury and poor outcomes following concussion.

Current Fellows

Nathan Ernst, PsyD

Dr. Ernst joined the UPMC Sports Medicine Concussion Program as a postdoctoral fellow in August 2018. He earned his doctoral degree in clinical psychology from Chestnut Hill College with a focus in psychological assessment and completed an APA-accredited internship at the University of Kansas (Department of Neuropsychology). Previously, he earned his bachelor's degree in clinical psychology from Southern Adventist University. Dr. Ernst's clinical and research interests include the assessment and management of sport-related concussion, with particular interest in resiliency and recovery trajectory in athletes. When he is not working, he enjoys playing tennis, watching sports, hiking, and kayaking.

Sabrina Jennings, PhD

Dr. Jennings joined the UPMC Sports Medicine Concussion Program as a postdoctoral fellow in September 2018. She earned her bachelor's degree in psychology from the University of Pittsburgh in 2009, and her master's degree in forensic psychology from CUNY John Jay College of Criminal Justice in 2012. Dr. Jennings went on to earn her doctoral degree in clinical psychology from Fairleigh Dickinson University and completed her pre-doctoral, APA-accredited internship in the neuropsychology track at James J. Peters VA Medical Center in 2018. Her clinical work has focused on the assessment and treatment of brain injury and neurodegenerative diseases. Additionally, Dr. Jennings represented the University of Pittsburgh as an athlete in both Gymnastics (2005-2006), and Swimming & Diving (2006-2009). Her prior experience as an athlete, pre-doctoral training in sport psychology, and work with professional sports teams has shaped her professional interest in the evaluation and management of sports-related concussions. When she is not working, she can be found coaching gymnastics, as well as competing in both Olympic weightlifting and CrossFit.

Alicia Kissinger-Knox, PsyD

Dr. Kissinger-Knox joined the UPMC Sports Medicine Concussion Program as a postdoctoral fellow in September 2019. She earned her doctoral degree in clinical psychology from Florida Institute of Technology with a concentration in neuropsychology and completed an APA-accredited internship in neuropsychology at the University of Florida Health Science Center. Previously, she earned her bachelor's degree in psychology from Florida State University and a master's degree in general psychology from the University of North Florida. Dr. Kissinger-Knox's clinical and research interests include the assessment and management of sport-related concussion, with particular interest in symptom reporting. When she is not working, she enjoys watching football, traveling, exploring new restaurants, and reading.

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Abigail Feder, PhD

Dr. Feder joined the UPMC Sports Medicine Concussion Program as a postdoctoral fellow in August 2019. She earned her doctoral degree in clinical psychology from Central Michigan University with a focus in clinical neuropsychology and completed an APA-accredited internship at the Salem VA Medical Center in 2019. Previously, she earned her bachelor's degree in psychology and biology at Marquette University. Dr. Feder's clinical and research interests include the assessment and management of concussion, particularly the roles of rest and exertion in recovery from concussion. When she is not working, she enjoys playing/coaching soccer, hiking with her dog, and reading.

Medical Co-Directors



Freddie H. Fu, MD

Internationally acclaimed for his work as a knee surgery pioneer, researcher, and educator, Freddie H. Fu, MD, is a distinguished service professor and chair of the Department of Orthopaedic Surgery at the University of Pittsburgh School of Medicine. Dr. Fu earned undergraduate and

postgraduate degrees from Dartmouth College and Dartmouth Medical School, before receiving his medical degree from the University of Pittsburgh. He is known for his trailblazing surgical techniques, education, and research; as a result receiving the highest honors and awards from orthopaedic organizations in the United States and across the globe — more than 200 total.

Dr. Fu is the editor of 29 major orthopaedic textbooks, the author of 122 book chapters, co-author of more than 500 published research papers, and a presenter at more than 1,000 worldwide conferences and meetings. He also has been recognized nationally and internationally for compiling an accomplished, deep, and diverse Orthopaedic faculty and fellowship program. A civic leader, Dr. Fu was named by *Pittsburgh Magazine* as one of the 100 most influential Pittsburghers of the 20th Century and has served on various charitable and medical boards on the local, state, national, and international levels.



Joseph C. Maroon, MD

Dr. Maroon is clinical professor of neurological surgery and the Heindl Scholar in Neuroscience at the University of Pittsburgh School of Medicine. He received his medical and neurosurgical training at Indiana University, Georgetown University, Oxford University in England, and the University of Vermont.

He is board-certified in neurological surgery.

Dr. Maroon's clinical and research interests are in the development of minimally invasive surgical procedures for the brain and spine; the prevention and treatment of traumatic injuries to the central nervous system; innovative approaches to pituitary and brain tumors; and complementary approaches to inflammatory diseases of aging. A lifelong athlete, Dr. Maroon has served as team neurosurgeon for the Pittsburgh Steelers for more than 25 years.

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