

Johns Hopkins University School of Medicine

Location: 600 N. Wolfe Street, Phipps 198, Baltimore, MD 21287

<https://www.hopkinsmedicine.org/physical-medicine-rehabilitation>

RREMS Mentors:

- Ryan Roemmich, PhD, Associate Professor
- Preeti Raghavan, MD, Professor
- Stacy Suskauer, MD, Professor
- Jan Stenum, PhD, Assistant Professor

Research Areas:

- Gait and movement analysis
- Artificial intelligence and computer vision in rehabilitation
- Electronic health record research in rehabilitation
- Pediatric rehabilitation
- Concussion rehabilitation
- Stroke rehabilitation

Mass General Brigham/Spaulding Rehabilitation

Location: 300 First Ave, Charlestown, MA 02129

<https://www.massgeneralbrigham.org/en/about/spaulding-rehabilitation>

RREMS Mentors:

- Daniel H. Daneshvar, MD, PhD; Associate Professor of PM&R
- Shanti Pinto, MD, MSCS; Assistant Professor of PM&R

Research Areas:

1. Cardiovascular health after TBI; autonomic nervous system dysfunction after TBI
2. The HealthSpan Lab is committed to advancing our understanding of how lifelong health is maintained, disrupted, and restored through a systems-level approach. Our research examines the dynamic interplay of biological, behavioral, and environmental factors that shape long-term health, with the goals of identifying early markers of decline, understanding mechanisms of resilience and recovery, and characterizing risk for chronic disease and disability.

Current research efforts span diverse populations, including service members, veterans, and athletes, with a particular focus on the short- and long-term effects of traumatic brain injury (TBI), repetitive head impacts (RHI), and other occupational and environmental exposures. Areas of investigation include chronic traumatic encephalopathy (CTE), amyotrophic lateral sclerosis (ALS), brain aging and other neurodegenerative diseases, functional impairment and recovery, chronic disease, and quality of life. Projects range from investigating biological markers to analyzing clinical

and population-level health outcomes, with the goal of informing prevention, early detection, rehabilitation, and interventions that promote lifelong health.

Summer externship projects can be tailored to a student's interests and may involve analysis of existing clinical or research datasets, literature review, statistical analysis, interpretation of findings, and manuscript development. Students would work closely with members of the research team and have the opportunity to contribute meaningfully to an ongoing project from study development and analysis through dissemination.

Ohio State University

Location: 480 Medica Center Drive, Columbus OH 43210

<https://medicine.osu.edu/departments/physical-medicine-rehabilitation>

RREMS Mentors:

- Ceren Yazar-Fisher, PhD, Associate Professor, Vice Chair of Research
- Jennifer Bogner, PhD, Professor, Director of OSU TBI Model System
- Lise Worthen-Chaudhari, PhD, Assistant Professor
- Cynthia Beaulieu, PhD, Associate Professor

Research Areas: The Department of Physical Medicine and Rehabilitation at The Ohio State University offers a diverse range of research opportunities ideal for a summer externship. Faculty are engaged in cutting-edge investigations into neurorehabilitation, musculoskeletal disorders, spasticity management, and brain injury and spina cord injury recovery. Ongoing projects integrate clinical trials, functional outcome assessments, and rehabilitation technologies such as neuromodulation, cognitive behavioral therapy, nutrition, and dance. These efforts align with RREMS goals by offering hands-on exposure to translational research that directly impacts patient care in rehabilitation medicine.

Shirley Ryan AbilityLab/ Northwestern University

Location: 355 E. Erie St, Chicago, IL 60611

<https://www.sralab.org/>

RREMS Mentors:

We have many mentors available, some include:

- Prakash S Jayabalan, MD, PhD, Associate Professor, Physical Medicine and Rehabilitation
- R James Cotton MD, PhD, Assistant Professor, Physical Medicine and Rehabilitation, Assistant Professor, McCormick School of Engineering
- Ishan Roy, MD, PhD, Assistant Professor, Physical Medicine and Rehabilitation
- Colin K Franz, MD, PhD Associate Professor, Physical Medicine and Rehabilitation, Medicine (Pulmonary and Critical Care), Neurology - Ken and Ruth Davee Department, Physical Therapy and Human Movement Sciences
- Mary E. Dubon, MD, Assistant Professor, Physical Medicine and Rehabilitation (pediatric focus)

Research Areas: Visit the Research web page for information on current projects and mentors,

<https://www.sralab.org/research>.

University of Alabama at Birmingham

Location: 1717 6th Ave. S., Birmingham, AL 35233

<https://www.uab.edu/medicine/physicalmedicine/>

RREMS Mentors:

- Yuying Chen, MD, PhD, Professor
- Jennifer Coker, PhD, MPH, Associate Professor

Research Areas:

In order to ensure applicants, have a strong opportunity to generate a manuscript submission during or shortly after the 8-week program, applicants will primarily work with existing data generated by the UAB Spinal Cord Injury Model Systems over its 50+ year history and/or by data held by the National Spinal Cord Injury Statistical Center (subsequent to approval by all SCIM centers).

Projects can focus on, but are not limited to the following topics: Oral health status and behaviors after SCI, psychosocial health outcomes, physical health outcomes, and functional outcomes.

University of Michigan

Location: University of Michigan Dept. of PM&R, 325 E Eisenhower Pkwy, Ann Arbor, MI 48108

<https://medschool.umich.edu/departments/physical-medicine-rehabilitation>

RREMS Mentors:

- James T. Eckner, MD MS, Professor
- Jonathan Lifshitz, PhD, Professor
- Amy Jak, PHD, Professor
- Katharine Seagly, PhD, Associate Professor
- Jane Huggins, PhD, Associate Professor
- Nitin B. Jain, MD MSPH, Professor
- Ravi Prakash, PhD, Assistant Professor

Research Areas:

Concussion (Eckner/Lifshitz/Jak/Seagly): In collaboration with the Michigan Concussion Center, there are opportunities for students to participate in a number of research projects addressing concussion prevention, assessment, management, and outcomes. Projects may involve systematic literature reviews, collection and/or analysis of clinical data, bench research lab activities, and/or results dissemination. There may be additional opportunities to participate in clinical shadowing, baseline concussion testing in athletes, and other tasks/events.

Brain-Computer Interface (Huggins): There are opportunities for students to participate in a research project relating to brain-computer interfaces (BCIs) that involves data analysis and manuscript preparation for data from a survey of BCI researchers regarding how research participants are described and what factors are considered relevant to BCI effectiveness.

Musculoskeletal Sports Medicine (Jain, Prakash): Under mentorship from a team of investigators with expertise in sports

medicine, physiatry, genetics, statistics, and data analytics, there are opportunities for students to participate in research projects addressing various aspects of musculoskeletal medicine/shoulder pain (including epidemiology, genetics, clinical trials, and public policy).

University of Missouri

Location: 1030 Hitt Street, Columbia, MO 65202

<https://medicine.missouri.edu/departments/physical-medicine-and-rehabilitation>

RREMS Mentor:

W. David Arnold, MD, Professor Department of PM&R, University of Missouri

Research Areas: Translational research in the context of Neuromuscular Health and Aging, Neurodegeneration, and rare/ultra-rare neurogenetic disease. <https://www.n-mlabs.com>

University of Pennsylvania, Perelman School of Medicine

Location: 1800 Lombard St, 1st Fl, Dept. of PM&R, Philadelphia, PA 19146

<https://departments.med.upenn.edu/academic-departments/departments-of-physical-medicine-and-rehabilitation/research/penn-pmr-principal-investigators>

RREMS Mentors:

Options include: Timothy Dillingham, MD (professor and chair); Kimberly Waddell, PhD (assistant professor); Randel Swanson, DO, PhD (associate professor); Michelle Johnson, PhD (Professor); Flavia Vitale, PhD (associate professor); Quinn Tate, MD, MS (assistant professor); Kelly Sloane, MD (assistant professor); Roy Hamilton, MD (Professor), and Sarah Gullbrand, PhD (assistant professor).

Research Areas: Research opportunities span from basic science to clinical research, and from musculoskeletal to neurological rehabilitation. Options depend on matching the potential students background and interests with a Penn PM&R-based mentor.

University of Pittsburgh

Location: 3471 5th Avenue, Suite 910, Pittsburgh, PA 15213

www.rehabmedicine.pitt.edu

RREMS Mentors: Please see website for a full list of all research faculty and their projects/interests.

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