

PROMOTION RECOMMENDATION
THE UNIVERSITY OF MICHIGAN
MEDICAL SCHOOL
DEPARTMENT OF PSYCHIATRY

Benjamin M. Hampstead, Ph.D., associate professor of psychiatry, without tenure, Department of Psychiatry, Medical School, is recommended for the granting of tenure to be held with his title of associate professor of psychiatry, Department of Psychiatry, Medical School.

Academic Degrees:

Ph.D.	2006	Drexel University
M.S.	2004	Drexel University
B.A.	1999	Macalester College, St. Paul, Minnesota

Professional Record:

2014-present	Associate Professor of Psychiatry, University of Michigan
2008-2014	Assistant Professor of Rehabilitation Medicine, Emory University

Summary of Evaluation:

Teaching: In a relatively short period of time at Michigan, Dr. Hampstead established an active teaching laboratory focusing on translational research and enhancing the teaching environment both at the University of Michigan and VA Ann Arbor Healthcare System. He has served as primary mentor for five post-doctoral fellows, co-mentored two post-doctoral fellows, one M.D./Ph.D. student, and two undergraduate summer students. He also supervises neuropsychological evaluations for post-doctoral fellows at the University of Michigan and began supervising fellows at the VA Ann Arbor in the fall of 2016. As part of the Michigan Alzheimer's Disease Research and Education Core Center, Dr. Hampstead is developing a course consisting of multiple sessions on neuropsychological evaluation in those with dementia. Together with Dr. Ken Adams, Dr. Hampstead organized a neuroimaging workshop for post-doctoral fellows and other trainees with the central goal of providing a basic understanding about the various techniques used in research and clinical practice. Feedback from the initial workshop in 2015 has led to increasing the program to a full day and extending the talks.

Research: Dr. Hampstead is a board-certified clinical neuropsychologist, who has a unique understanding of brain-behavior relationships and the impact that cognitive deficits can have on everyday functioning. His primary research objectives are to identify and characterize the cognitive and neuroanatomic changes that arise from neurologic disease/injury, especially those affecting learning and memory; and identify and implement methods that promote adaptive neuroplastic change to enhance cognitive and everyday functioning. Through grant funding obtained since joining the faculty in 2014, and with some institutional support, he has built the infrastructure necessary to conduct this novel two-part line of prospective research. His distinct focus on the mechanisms underlying cognitive impairment and the (neuro) rehabilitation thereof

not only differentiates his scholarly activities from those of his contemporaries but also fills a critical gap in the current research portfolio at UM and the VA Ann Arbor.

Dr. Hampstead's background in experimental psychology and cognitive neuroscience with animal models has provided critical insight into translational research and rigorous experimental design. He has a strong background in brain-behavior relationships as evidenced by work with excitotoxic lesion studies in animals, structural and functional magnetic resonance imaging (fMRI) in humans, and his clinical work with diverse patient populations. Well-versed in cognitive rehabilitation, he is able to move beyond the traditional diagnostic model of neuropsychology by intervening to mitigate the impact of neuropsychological deficits. He has developed expertise in non-invasive brain stimulation, especially transcranial direct current stimulation (tDCS), since such techniques hold particular promise for enhancing cognition.

Dr. Hampstead's academic contributions have important implications in several related fields (e.g., Neuropsychology, Neurology, Psychiatry, Gerontology, Rehabilitative Medicine, Cognitive Neuroscience, brain stimulation). His co-edited book entitled, Cognitive Plasticity in Neurological Populations, was the first to comprehensively examine both the adaptive and maladaptive neuroplastic changes affecting cognition in those with neurologic disease and injury. He is co-authoring multiple chapters for a book entitled Practical Guide to tDCS. He has applied his understanding of brain-behavior relationships and disease processes to develop ecologically relevant memory tests that may prove more sensitive than traditional memory tests to underlying pathology (e.g., Alzheimer's disease). One such measure is the primary memory test for two large-scale longitudinal studies at Emory as well as in a cognitive rehabilitation study in the Netherlands.

Dr. Hampstead is the clinical core leader for the NIA-funded Michigan Alzheimer's Disease Core Center (MADCC). Under Drs. Henry Paulson and Bruno Giordani's leadership, the MADCC has been reconfigured into a forward-looking, collaborative center that provides critical multi-disciplinary infrastructure to both support and enhance the study of Alzheimer's disease and related dementias, locally, nationally, and internationally. Dr. Hampstead is responsible for the recruitment and comprehensive characterization of older adults throughout the spectrum from healthy to advanced dementia. Their characterization methods include, or will include, neuropsychological, genetic, neuroimaging, and biomarkers (cerebrospinal fluid, novel blood/plasma analyses like lipidomics). He will lead consensus conferences in which all research and clinical data are considered by neurologists, neuropsychologists, social workers, and other relevant professionals in order to arrive at a diagnosis for each participant. Since the MADCC is a three-institution entity (University of Michigan, Michigan State University and Wayne State University), Dr. Hampstead will also oversee coordination of data collection across these sites

Recent and Significant Publications:

England HB, Fyock C, Gillis MM, Hampstead BM: Transcranial direct current stimulation modulates spatial memory in cognitively intact adults. *Behavioural Brain Research* 283:191-195, 2015.

Gillis MM, Hampstead BM: A two-part preliminary investigation of encoding-related activation changes after moderate to severe traumatic brain injury: hyperactivation, repetition suppression, and the role of the prefrontal cortex. *Brain Imaging and Behavior* 9:801-820, 2015.

Krishnamurthy V, Kaundinya G, Brown GS, Hampstead BM: Resting-state fMRI reveals enhanced functional connectivity in spatial navigation networks after transcranial direct current stimulation. *Neuroscience Letters* 604:80-85, 2015.

Hampstead BM, Khoshnoodi M, Yan W, Deshpande G, Sathian K: Patterns of effective connectivity during memory encoding and retrieval differ between patients with mild cognitive impairment and healthy older adults. *NeuroImage* 124 (Part A):997-1008, 2016.

Gillis MM, Garcia S, Hampstead BM: Working memory contributes to the encoding of object location associations: support for a 3-part model of object location memory. *Behavioural Brain Research* 311:192-200, 2016.

Service: Dr. Hampstead developed a course on non-pharmacologic approaches for maintaining and enhancing cognition throughout the spectrum from normal aging through dementia for the National Academy of Neuropsychology Education Committee. He has served on international and international study sections (ad hoc). He is the program chair for the 2017 annual meeting of the International Neuropsychological Society. He was an Education Committee member for the National Academy of Neuropsychology (2010-2016) and is the clinical core leader of the Michigan Alzheimer's Disease Core Center. He is an editorial board member for the *Journal of the International Neuropsychological Society*, *Alzheimer's and Dementia: Diagnosis, Assessment and Disease Monitoring* and *Journal of Alzheimer's Disease*.

External Reviewers:

Reviewer A: "...Dr. Hampstead received the 2016 Early Career Award from the International Neuropsychological Society based upon his significant impact on our understanding of rehabilitation strategies in brain damaged patients... His work on the impact of cognitive rehabilitation on cognition, and more recent interest in using tDCS to further enhance impact is very carefully done and innovative... I would rank the impact of Dr. Hampstead's work easily in the top 5%, and I expect him to have an even greater impact in the future as evidenced by his recent success obtaining federal funding... He has already shown impressive productivity and impact, and I expect to see Dr. Hampstead as one of the leaders in our field in the future. He clearly stands out relative to other early career neuropsychologists at this point."

Reviewer B: "Dr. Hampstead is clearly a successful neuropsychologist who is an influential scholar and leader in the field... Dr. Hampstead's scholarly ideas and proposals have consistently been funded by the VA and NIH through scientific peer review... Clearly he has been and will continue to be in national service roles where he makes tangible contributions to the field through his thoughtful leadership and perspective... His multiple national awards are consistent with my very positive sentiments and further attest to his capability as a scientist. Dr. Hampstead would certainly without any doubt whatsoever be granted tenure at my institution... I have no doubt that

his academic success and scholarly impact will grow and he will continue to be a wonderful asset to your institution and to our field.”

Reviewer C: “His work is extremely innovative, theoretically and empirically grounded and has an important impact on clinical neuropsychology, aging and Alzheimer’s disease and other neurological and neuropsychiatric disorders.”

Reviewer D: “I have been impressed by the novelty of his approach as well as the integrative nature of using technologies to identify cognitive and rehabilitative constructs. Dr. Hampstead is one of only a few researchers attempting to provide empirical data to cognitive rehabilitation interventions. His work is clearly ahead of many others, and it will have a large impact in terms of research progression and direct impact to funding metrics.”

Reviewer E: “...he is a creative and rigorous scientist who has effectively leveraged new neuroimaging technologies to better understand the ability of the human brain to respond to acquired injuries... Dr. Hampstead demonstrates a high level of academic excellence, scientific accomplishment, productivity, and effectiveness as a teacher and mentor... His record of productivity and success in securing extramural funding for impactful science easily meets the standards for the same rank at my own institution.”

Summary of Recommendation:

Dr. Hampstead has established a successful, well-funded and cutting-edge research program that has been well received by both the scientific and lay communities. He has been recognized by national and international society awards for his work. His activities hold promise for intra- and inter-institutional collaborations, exceptional training opportunities and, ultimately, translation to novel clinical services. His ongoing local, national and international collaborations will extend the reach and enhance the impact of this line of work while also providing fertile training ground for the next generation of researcher-clinicians. I, therefore, enthusiastically recommend Benjamin M. Hampstead, Ph.D. for the granting of tenure to be held with his title of associate professor of psychiatry, Department of Psychiatry, Medical School.



Marschall S. Runge, M.D., Ph.D.
Executive Vice President for Medical Affairs
Dean, Medical School

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