Approved by the Regents
May 18, 2017

PROMOTION RECOMMENDATION
The University of Michigan
College of Literature, Science, and the Arts

Ioulia Kovelman, assistant professor of psychology, College of Literature, Science, and the Arts, is recommended for promotion to associate professor of psychology, with tenure, College of Literature, Science, and the Arts [also being recommended for promotion to research associate professor, Center for Human Growth and Development].

Academic Degrees:

Ph.D.	2006	Dartmouth College
B.A.	2000	Queen's University

Professional Record:

2009 – present	Assistant Professor, Department of Psychology, and Research Assistant Professor, Center for Human Growth and Development, University of Michigan
2006 - 2009	Post-doctoral Researcher, Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology

Summary of Evaluation:

Teaching – Professor Kovelman is an exceptional teacher who fills a critical need in her department and whose courses are highly regarded by her students. She has taught a full range from large lectures to small laboratory-based courses and seminars. Student evaluations are in the upper quartile across the board. Her own laboratory-based graduate course, "Child Brain Development Laboratory," provides valuable training in neuroimaging technologies. Taught only once to-date, she received commendable scores in this technically challenging class. Professor Kovelman is a generous, enthusiastic, and engaged mentor, who currently chairs two dissertation committees, serves on numerous others, and has mentored at least six additional graduate students on neuroimaging technologies and language development. She regularly supervises several undergraduate honors theses, along with numerous independent studies, Summer Research Opportunity Program and Undergraduate Research Opportunity Program students, averaging up to 25 per year.

Research – Professor Kovelman investigates bilingual language acquisition in early childhood, and the neural mechanisms at work in the developing bilingual brain. Her research program is deeply informed by linguistic, developmental, and neurocognitive theory, and she skillfully integrates behavioral and brain imaging methods, including fNIRS which is a cutting-edge method that Professor Kovelman has pioneered for use in young children. She has shown that bilingual language acquisition modifies how the brain becomes specialized for language and other cognitive abilities. Moreover, she has shown that exposure to structurally distinct languages (e.g., Spanish versus Chinese) leads to different, language-specific impacts on the brain and has important consequences for learning to read English. Professor Kovelman has published 27 articles in a range of outlets that include some of the best in her field, and she has a very full pipeline of papers under review.

Recent and Significant Publications:

"Brain bases of morphological processing in Chinese-English bilingual children," with K. Ip, et al., *Developmental Science*, 2016, doi: 10.1111/desc.12449 (in press; published online ahead of print).

"Bilingualism alters children's frontal lobe functioning for attentional control," with M. M. Arredondo, et al., *Developmental Science*, 2016, doi: 10.1111/desc.12377.

"Words in the bilingual brain: An fNIRS brain imaging investigation of lexical processing in sign-speech bimodal bilinguals,' with M. H. Shalinsky, et al., *Frontiers in Human Neuroscience*, 8, 2014, p. 606.

"Brain bases of phonological awareness for spoken language in children and its disruption in dyslexia," with E. S. Norton, et al., *Cerebral Cortex*, *2*(4), 2012, pp. 754-764.

Service – Professor Kovelman has contributed the exceptional service of establishing functional near infrared spectroscopy (fNIRS) methodology at the University of Michigan. As a relatively new methodology, fNIRS posed technical challenges that required substantial foundational work to establish its validity and reliability in children. Professor Kovelman acquired the funding to set up the first fNIRS facility at Michigan, spearheaded this essential groundwork testing of the methodology, organized and led several local workshops to train other faculty and students in fNIRS, and has continuously directed the fNIRS laboratory that is used regularly by researchers in at least seven other departments across campus. She has also served on several key departmental committees, including the Diversity Committee, and does extensive editorial work for some of the top journals in language, cognitive neuroscience, and developmental science.

External Reviewers:

Reviewer (A)

"Her paper [Arredondo et al., *Developmental Science*, 2016] combines the literature on language and cognitive consequences of bilingualism, a surprisingly rare approach, to make specific predictions about brain organization that are then tested in a study using fNIRS with monolingual and bilingual children. Thus it is a theoretically motivated, carefully designed study that makes a real contribution to a crucial gap in the literature. Few researchers have the interdisciplinary and multi-methodological expertise to conduct research of this type, yet it is the only way that scholarship will move forward."

Reviewer (B)

"She is a force in the fNIRS community in terms of her leadership in guiding others in the adoption of the technology and in her cutting edge research to learn more about bilingualism. I am confident that she will grow to become an international leading expert in the field."

Reviewer (C)

"The use of fNIRS is also important in that it is very child-friendly and as such represents a method that has the potential to add significantly to the literature. Very few studies have used this to study bilingual children. It requires considerable expertise to be able to gain reasonable data using this method. The fact that Dr. Kovelman was able to publish work using this method should not be considered lightly. … Dr. Kovelman has an excellent record of productivity and is in the position to emerge as one of the leading scientists in the neural bases of language."

Reviewer (D)
"…Dr. Kovelman has made real contributions to scientific understanding of how the experience of learning two languages in childhood shapes the developing brain and the consequences of those experiences and brain organization for language, literacy, and cognitive functioning. Her newest direction, exploring brain organization in children with reading and language impairments, has great potential as an externally fundable research program."

Reviewer (E)
"Her research is substantial and significant, and she brings a great deal of breadth of theoretical and technical knowledge to bear on research topics that are important and timely. Just as importantly, she publishes in top journals in the field, and has shown promise in securing external funds to support…her research. I would expect her to continue to rise in prominence in our field…"

Reviewer (F)
"Ioulia is addressing a number of very important and timely problems in cognitive-linguistic science; her interest in the neural bases of bilingualism, in particular, stands out as particularly interesting. And, unlike others working in this space, Ioulia is not wed to one method – she has done some very nice work using fMRI and more recently, fNIRS (here she is rather unique)."

Reviewer (G)
"I can say that without a doubt, Dr. Kovelman's standing is at the very top of the persons whose work I have reviewed. I would consider her to be in the top two or three (if not *the* top one) emerging experts in bilingualism among those at comparable stages of their careers. …
Dr. Kovelman's research is very strong and synergistic as it bridges multiple fields and approaches. It is both theoretically and clinically informative."

Summary of Recommendation:
Professor Kovelman's research has provided important new insights and she has published a large number of rigorous studies. She is an excellent teacher both inside and outside the classroom, and she has been an extraordinarily generous citizen. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Assistant Professor Ioulia Kovelman be promoted to the rank of associate professor of psychology, with tenure, College of Literature, Science, and the Arts.

Andrew D. Martin, Dean
Professor of Political Science and Statistics
College of Literature, Science, and the Arts

May 2017