

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

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

Academic Degrees:

Ph.D.	1992	University of Illinois, Urbana-Champaign
A.B.	1985	Augustana College

Professional Record:

2004 – present	Arthur F. Thurnau Professor, University of Michigan
2003 – present	Research Associate Professor, Center for Human Growth and Development (CHGD), University of Michigan
2002 – present	Associate Professor, Department of Psychology, University of Michigan
1995 – 2002	Assistant Professor, Department of Psychology, University of Michigan
1992 – 1994	Postdoctoral Fellow, Center for Neuroscience, University of California, Davis

Summary of Evaluations:

Teaching – Professor Gehring is a Thurnau Professor because of his creative, engaged, and unique approach to teaching a large lecture course on cognitive psychology. He is equally good with first year students in a small seminar class and graduate students in advanced classes. Students describe his courses as both demanding and entertaining. He makes it easy for them to grasp complex concepts and makes them remember these concepts because he demonstrates their value in the students' lives. Professor Gehring's teaching and mentoring skills are also lauded by the undergraduates who work in his laboratory, and by the graduate students who are engaged in collaborative research or who learn how to teach by modeling his courses. In each case, they describe a faculty member who is willing to spend as much time as it takes to help them master difficult research skills and complex theoretical ideas.

Research – Professor Gehring's research is recognized nationally and internationally. Not many scientists can say that they changed the direction of a field, but he did so as a graduate student. Subsequent to his initial findings, he has explored more deeply the mechanisms underlying the executive control systems that allow us to detect and correct errors, he has modeled how the system works, and tested these principles in a variety of conditions that include healthy controls or patient populations with executive control disorders. He has broadened his research to include decision making tasks, language use, and children's reasoning about mental states. His work continues to make a major impact on the field of cognitive neuroscience.

#### Recent and Significant Publications:

- “The error-related negativity (ERN/Ne),” with Y. Liu, et al., in *Oxford Handbook of Event-Related Potential Components*, S. J. Luck and E. Kappenman (eds.), Oxford University Press, forthcoming.
- “Changes in performance monitoring during sensorimotor adaptation,” with J. A. Anguera and R. D. Seidler, *Journal of Neurophysiology*, 102, 2009, pp. 1868-1879.
- “More attention must be paid: The neurobiology of attentional effort,” with M. Sarter and R. Kozak, *Brain Research Reviews*, 51, 2006, pp. 145-160.
- “Are all medial frontal negativities created equal? Toward a richer empirical basis for theories of action monitoring,” with A. R. Willoughby, in *Errors, Conflicts, and the Brain. Current Opinions on Performance Monitoring*, M. Ullsperger and M. Falkenstein (eds.), Leipzig: Max Planck Institute of Cognitive Neuroscience, 2004, pp. 14-20.

Service – Professor Gehring’s service record has been broad and important, and he has provided exemplary leadership. At the university level, he has served on the Provost’s Council on Student Honors (Rhodes & Marshall Scholarship Nominations, 2006-present) and on the Arthur F. Thurnau Professorship Steering Committee (2009). He has played a leadership role in the University of Michigan Center for Research on Learning and Teaching, serving on their advisory board from 2004 to 2006, and on their Carnegie Academy on the Scholarship of Teaching and Learning Large Lecture Initiative, and its program advisory committee. He has also served on numerous committees within the department. At the national level, Professor Gehring has served as an associate editor for three major scientific journals: *Psychophysiology* (2002-2005), *Cognitive, Affective, and Behavioral Neuroscience* (CABN, 2005-2007), and the *International Journal of Psychophysiology* (2009- present). He is serving as consulting editor for *CABN* (2007-present) and on the editorial board for *Psychological Science* (2008-present). He has served continuously on review panels for the National Institute of Mental Health, including the Special Emphasis Panel on Cognitive Neuroscience. He has also served as an ad hoc reviewer for the National Science Foundation and two international science foundations.

#### External Reviews:

##### Reviewer (A)

“I consider Bill Gehring to be one of the world’s foremost investigators of executive control mechanisms in the brain. His research is published in top-ranked journals...and his stature in this field is evident by his serving on the editorial boards of several of its key journals.”

##### Reviewer (B)

“...[Gehring] has an impressive record of accomplishment since his tenure and promotion to associate professor, and has clearly demonstrated his worthiness. ...[his] work is theoretically motivated, meticulously executed and beautifully written.”

##### Reviewer (C)

“...Bill has been very active in the field of executive control and its neural underpinnings. In the last 20 years, he published a total of 35 articles in peer-reviewed journals, including seminal contributions on action monitoring and frontal/cingulate cortex in *Science*, *Nature Neuroscience* and *Journal of Neuroscience*. The original report on ERN [error-related negativity], published in *Psychological Science* (1993), is a classic (~700 citations). ... In his recent work, Bill has

applied his intimate knowledge of the neural systems...in the context of ...obsessive-compulsive disorders... This work holds great promise for furthering our understanding of the pathophysiology of this debilitating condition.”

Reviewer (D)

“Gehring is a real cognitive neuroscientist. ... This field is an important one... It might be close to the center of the field of psychological research these days. ... Gehring is well known and respected... I think Gehring’s basic and applied work and important discoveries would make him close to the top of those about to enter the full professor ranks. His multiple grants, appointment to editorial positions and teaching awards speak to the high esteem in which he is held...”

Reviewer (E)

“I regard Bill as a major figure in this field, not just because he is the (co)discoverer of the ERN. As described in his research statement, Bill’s work has been framed largely by the goal of resolving the computational meaning and neural origin of the ERN. ... Bill’s experiments are models of the strong inference approach whereby alternative hypotheses are tested and ruled out creatively, rigorously and often decisively. ... Bill has achieved national and international recognition in his field as gauged by publication numbers and citations, journal editorial assignments, grant review assignments, extramural funding, and invitations for seminars.”

Reviewer (F)

“It is unusual that a graduate student makes a discovery that launches a subspecialty of a discipline... ...[he] made a truly original discovery. ...[his] contributions have remained pivotal in the evolution of this topic area over the last 2 decades. ... The papers from his laboratory in recent years have provided important insights... The students in...[his] laboratory are fortunate to be directed not only by an expert methodologist, but an insightful psychologist.”

Summary of Recommendation:

Professor Gehring is an internationally recognized researcher, a superb teacher and mentor. His service contributions within the university and on the national scene are significant. The Executive Committee of the College of Literature, Science, and the Arts and I recommend that Associate Professor William J. Gehring be promoted to the rank of professor of psychology, with tenure, in the College of Literature, Science, and the Arts.



Terrence J. McDonald  
Arthur F. Thurnau Professor,  
Professor of History and Dean  
College of Literature, Science, and the Arts

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