



## News Release

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### **Winners of 2016 CGS/ProQuest® Distinguished Dissertation Awards Announced**

*Awards recognize outstanding research by graduates in  
the fields of Mathematics, Physical Sciences, and Engineering & Social Sciences*

Washington, DC – The Council of Graduate Schools / ProQuest Distinguished Dissertation Awards, the nation’s most prestigious honors for doctoral dissertations, were presented to Scott Cushing and Michael Muthukrishna at an awards ceremony during the Council’s 56th Annual Meeting. Dr. Cushing completed his PhD in 2015 at West Virginia University in Physics, and Dr. Muthukrishna received his PhD in 2015 from the University of British Columbia in Psychology.

Bestowed annually since 1982, the awards recognize recent doctoral recipients who have already made unusually significant and original contributions to their fields. ProQuest, an international leader in dissertation archiving, discovery, and access, sponsors the awards and an independent committee from the Council of Graduate Schools selects the winners. Two awards are given each year, rotating among four general areas of scholarship. The winners receive a certificate, a \$2,000 honorarium, and funds for travel to the awards ceremony.

“The Distinguished Dissertation Awards demonstrate the dramatic impact young scholars have on their fields,” said CGS President Suzanne T. Ortega. “It’s a testament to the vitality and value of graduate education when recently minted PhDs contribute and expand upon knowledge to raise the level of understanding in their fields.”

Austin McLean, director, ProQuest Scholarly Communication and Dissertations Publishing said, “ProQuest is passionate about the impact dissertations make in advancing both research and learning through their fresh insights and innovative thinking. Dr. Cushing and Dr. Muthukrishna have produced works that will be of tremendous value for generations to come. We’re very proud to partner with CGS in honoring them.”

The 2016 Award in Mathematics, Physical Sciences, and Engineering was presented to Dr. Cushing for his dissertation, *Plasmonic Enhancement Mechanisms in Solar Energy Harvesting*. Plasmonics, the study of the interaction between electromagnetic field and free electrons in a metal, appear to offer advancement in the efficiencies of solar energy conversion. Cushing’s thesis investigates why plasmonics rarely appear in top performing solar architectures given their potential. Using his findings,

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Cushing developed a theoretical framework to optimize the application of plasmonics in solar energy conversion. Cushing notes that, “Based on this framework, several top performing solar-to-fuel devices were created which use sunlight to split water into hydrogen and oxygen. Additionally, the developed plasmonics technology is being incorporated into a commercial photovoltaic panel for turning sunlight into electricity.” Dr. Cushing is currently a postdoctoral fellow in the Leone Group at the University of California, Berkeley.

Dr. Muthukrishna received the 2016 Award in Social Sciences for his dissertation, *The Cultural Brain Hypothesis and the Transmission and Evolution of Culture*. His project introduced two theories: the Cultural Brain Hypothesis and the Cumulative Cultural Brain Hypothesis. The first theory “explains the increase in brain size across taxonomic groups. In doing so, the theory makes predications about the relationships between brain size, knowledge, group size, social learning, and the length of the juvenile period, which are consistent with existing empirical literature.” The second theory, Cumulative Cultural Brain Hypothesis, makes predications about the conditions under which these evolutionary processes lead to a positive feedback loop between brain size and knowledge. Muthukrishna argues that these conditions are the key to what makes the human pathway unique and explains various aspects of our psychology and our large brains. Dr. Muthukrishna is currently an assistant professor of economic psychology at the London School of Economics.

This year the following scholars received honorable mentions: Adam Behrens, nominated by the University of Maryland; and Deblina Sarkar, nominated by the University of California at Santa Barbara.

More information about the CGS / ProQuest Distinguished Dissertation Award is available at [www.proquest.com/go/scholars](http://www.proquest.com/go/scholars) or at [www.cgsnet.org](http://www.cgsnet.org).

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The Council of Graduate Schools (CGS) is an organization of approximately 500 institutions of higher education in the United States and Canada engaged in graduate education, research, and the preparation of candidates for advanced degrees. The organization’s mission is to improve and advance graduate education, which it accomplishes through advocacy in the federal policy arena, research, and the development and dissemination of best practices.

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