



Chris B. Schaffer

Associate Professor
Meinig School of Biomedical Engineering
Cornell University

Candidate for Associate Dean of Faculty

Statement:

I have served in the Faculty Senate for the last three years and on the University Faculty Committee for the last two. In these roles, I have tried to help improve decision making at Cornell by engaging in substantive discussions about the issues and concerns that arise, while pushing back against turf wars over domains of authority between the faculty and the administration as much as possible. I firmly believe that the best decisions are made at a large, complex place like Cornell when a diverse group of engaged individuals who are committed to the success of the institution are involved. This is a time of undeniable friction between the faculty and the administration and we need to find a better path forward. I would like to see us working to highlight the places where we agree and clearly delineate the substantive issues where we disagree, and then striving for consensus and compromise as much as possible. I have been concerned about the lack of transparency and faculty engagement in some decisions made by the administration, but I believe the path forward is for the faculty to reach out to provide ideas and to constructively contribute to decisions moving forward. It is my sincere hope that this spirit of constructive engagement will be welcomed and reciprocated by the administration. Working toward such true cooperative governance of this university would be my highest priority as Associate Dean of the Faculty.

I have had experience as a scientist running a successful research lab, as an instructor teaching large and small classes at the graduate and undergraduate level, as the director of a PhD program, as a faculty-in-residence on North Campus, as the leader of large outreach programs, as a science policy advisor in the US Congress, and as a participant in faculty governance at Cornell. I hope to bring the perspective of these diverse experiences to the Associate Dean of the Faculty position in order to help Cornell continue to succeed in its important missions of education, research, and public engagement.

Biography:

Chris B. Schaffer is an Associate Professor and Director of Graduate Studies in the Meinig School of Biomedical Engineering at Cornell. He received his undergraduate degree from the University of Florida and his PhD from Harvard University, both in physics. As a post-doc at the University of California at San Diego, he cross-trained as a neuroscientist.

Chris's lab develops and uses advanced optical techniques to observe and manipulate cells in the brain of living mice, with the goal of identifying cellular interactions that drive the development of disease in the brain. The group studies a variety of neurological disorders, including Alzheimer's disease, microvascular stroke, spinal cord injury, and epilepsy. For example, a current focus is on elucidating the mechanisms that lead to reduced brain blood flow in Alzheimer's disease. This decreased blood flow both contributes to the cognitive decline and accelerates the progression of disease, so the lab's recent discovery of the responsible mechanisms could lead to new therapies. Chris's research has been reported in 60 peer-reviewed articles with over 3,500 citations and is supported by Federal funding agencies (including NIH,

NSF, and DARPA), New York State, and private foundations. Chris jointly runs his group with his partner, Prof. Nozomi Nishimura, who is also in Biomedical Engineering. Their lab currently has two post-docs, 12 PhD students, five Master's students, and 15 undergraduate researchers, with annual research expenditures of around \$2M. Chris is dedicated to providing meaningful research experiences for young scientists and has had more than 60 undergraduates work in his lab in his ten years at Cornell, with nearly all staying with the research group for three or more years.

Chris is active in developing novel educational strategies to teach science as a dynamic process for discovery. These approaches are used in outreach settings in middle and high-school science classes as well as in his undergraduate and graduate level courses. He has further helped other faculty adopt best-practice pedagogical techniques, both by running education workshops and through one-on-one mentoring. For five years, he also ran a large, NSF-funded outreach program that pairs graduate students with local-area middle and high school science teachers to improve the science knowledge of the teachers, the teaching ability of the graduate students, and to provide a "resident scientist" in the classroom for the students. This program impacted about 5,000 school children, 40 local area teachers, and 50 PhD students. He is currently PI on a graduate student training grant from the Department of Education that aims to improve the teaching skills of PhD students.

Chris also has a strong interest in policy and recently spent a one-year sabbatical in Washington, DC working as a science policy advisor for Senator Edward Markey. He has brought this policy interest back to Cornell and is one of the leaders of Cornell's NIH-funded Broadening Experiences in Scientific Training program, which aims to help graduate students and post-doctoral fellows in STEM fields to learn about the broad range of careers their research training prepares them for and to help them gain credibility and experience in a career of interest. Chris leads the science policy track of this program and he teaches a novel course on policy for scientists. He has also worked to promote the success of students from underrepresented groups. For example, as Director of Graduate Studies for Biomedical Engineering he has led that program to matriculate incoming PhD classes with a demographic makeup that is reflective of the US population. Chris is the current Faculty-in-Residence at Mary Donlon Hall, a residence hall for first-year college students on North Campus. In this role, he provides informal mentoring and runs intellectual, cultural, and social programs for first-year college students that aim to promote a "learning where you live" culture.

Since returning from his sabbatical in DC, Chris has become increasingly involved in faculty governance at Cornell, including serving on the Faculty Senate, the University Faculty Committee, and recently on the College of Business Steering Committee.