A Jewel in the Crown II
Carlos R. Stroud, Gina A. Kern

Published by University of Rochester Press

Project MUSE. muse.jhu.edu/book/83172.

For additional information about this book
https://muse.jhu.edu/book/83172

For content related to this chapter
https://muse.jhu.edu/related_content?type=book&id=2834937
4. The Directorship of Xi-Cheng Zhang, 2012–2017

Gary W. Wicks

Xi-Cheng Zhang served as director of The Institute of Optics for five and a half years, from January 2012 to July 2017. He was hired after an international director search to replace former director Wayne Knox, who had become associate dean of education and new initiatives in UR’s Hajim School of Engineering.

Prior to taking on the director position at The Institute, Xi-Cheng held an academic leadership position as the acting head of the Department of Physics, Applied Physics, and Astronomy, and founding director of the Center for Terahertz Research at Rensselaer Polytechnic Institute. He brought to The Institute of Optics an international reputation as a leader in the field of THz science and technology, especially regarding THz generation with nonlinear optical processes involving ultrafast lasers. His Rochester appointment included the M. Parker Givens Professorship.

Professor Zhang’s directorship was characterized by further strengthening an already strong Institute, and by national and international extension of its connections and collaborations. A significant development was the expansion of the undergraduate and master’s programs, which occurred under Xi-Cheng. At the beginning of Zhang’s term, the numbers of students enrolled in the BS and MS programs were lower than the

Figure 4.1. Xi-Cheng Zhang, M. Parker Givens Professor of Optics and director of The Institute of Optics 2012–17.
department’s preferences. Intentional growth in these two programs was accomplished with substantial recruitment efforts.

Prior to Zhang’s term, the undergraduate numbers had been fairly constant for a decade or so, at around eighty students in the program. By the completion of his term, this number had increased to two hundred. A good share of this success was due to the hiring of undergraduate coordinator Dan Smith. Similar success was achieved in the MS program, which tripled its enrollment to fifty students in 2017. The PhD program was in good shape at the beginning of the Zhang years and remained stable at around fifteen students admitted per year.

The growth in the undergraduate and master’s programs produced immediate benefits. More graduates produce more impact and attention. The Industrial Associates program became more attractive to member companies, who now had access to a larger number of students. The department’s finances were improved with larger student enrollment.

Significant expansion of The Institute’s faculty occurred during the Zhang years. Three new hires to tenure-track positions were made: Profs. Nick Vamivakas, Jaime Cardenas, and William Renninger. Jennifer Kruschwitz was hired as assistant professor (teaching), and The Institute’s intrauniversity collaborators were expanded with six new secondary faculty appointments: Jonathon Zuegel, Jake Bromage, Brian Kruschwitz, John Howell, Jennifer Hunter, and Benjamin Miller.

The Institute’s Industrial Associates program experienced major growth during Zhang’s directorship, in part due to Xi-Cheng’s extensive international connections. Between 2015 and 2017, the number of IA member companies nearly tripled, rising to just short of fifty. A large amount of the credit for the strengthened IA program goes to its development manager, Ellen Buck.

Nine endowed graduate scholarships and three graduate student prizes were created during the Zhang years. The scholarships are named in honor of Institute faculty and alumni.

Figure 4.2. Students Mark Ordway (’17), Jane (Zhenzhi) Xia (’16), Pedro Vallejo Ramirez (’16), Chris Marsh (’15), and Ching (huiquing) Zhu (’16) participate in STEM family night (2014).
Figure 4.3. A large group of grad students attended the IODC-2014 meeting in Kona, HI. Back row: James Corsetti, Peter McCarthy, Qun Yuan, Yang Zhao, Jacob Reimers, Kyle Fuerschbach, Aaron Bauer, Eric Schiesser; front row: Margaret Dominguez, Joelle McCarthy, Anthony Visconti, Anthony Yee, Michael Theisen.

Figure 4.4. Team IA: Ellen Buck, Xi-Cheng Zhang, Brian Thompson, Jay Eastman, and Gina Kern.
The Institute’s faculty was very productive during the Zhang period, raising about $7 million of annual research funding. Nine faculty (Govind Agrawal, Miguel Alonso, Julie Bentley, Andrew Berger, Thomas Brown, John Marcian, Duncan Moore, Jannick Rolland, and Nick Vamivakas) won ten UR and Hajim School ...
prizes during 2013–17. This is likely the highest number of teaching awards in a single department in the recent history of UR.

Two professors also transitioned to emeritus status in 2015: Kenneth Teegarden was named professor emeritus after teaching for sixty years and serving as director of The Institute from 1981 until 1987; Nicholas George served as the Marie C. Wilson and Joseph C. Wilson Professor of Electronic Imaging, professor of optics, and professor of electrical and computer engineering at the university for almost thirty-eight years. In addition, George was the founding director of the university’s Center for Electronic Imaging Systems. From 1977 until 1981, he served as director of The Institute of Optics, significantly expanding the Industrial Associates program.

The Institute broadened its interactions and collaborations with other parts of the University of Rochester by extending several secondary appointments to UR faculty and scientists. Three scientists of the Laboratory for Laser Energetics received Optics faculty secondary appointments, Assoc. Prof. Jake Bromage, Assoc. Prof. Brian Kruschwitz, and Prof. Jonathon Zuegel. Secondary appointments in the Medical School were made to Asst. Prof. Jennifer Hunter (Ophthalmology) and Prof. Benjamin Miller (Dermatology).

Professor Zhang used his extensive global connections to increase the international footprint of The Institute. Nine international companies were added to the Industrial Associates program during his directorship. A large fraction of the increase in the number of MS students achieved during his directorship were international students. Several international memos of understanding were established.

At the conclusion of Director Zhang’s term, The Institute was healthy and strong. All three degree programs were flourishing. The total number of faculty was thirty-five, with eighteen tenured and tenure-track faculty (fourteen full professors, two associate professors, and two assistant professors). Seven of The Institute’s professorships were endowed. Three of The Institute’s faculty were members of the National Academies of Science, Engineering, and Medicine. Institute faculty and alumni had served as presidents of the OSA twenty-four times and of SPIE nine times. The Institute had granted about half of all optics degrees awarded in the United States.