

Curriculum Vitae

Wei R. Chen, University of Central Oklahoma

Contact Information: Biomedical Engineering Program, Department of Engineering and Physics, University of Central Oklahoma, Edmond, Oklahoma, OK 73034; Phone: 405-974-5198; Email: wchen@ucok.edu

Education: B.S. in Physics (1982), Shandong University, China; M.S. and Ph.D. in Physics (1984, 1988), University of Oregon; Post-doctoral Fellow (1988), University of Oregon.

Academic Appointments: Dr. Chen joined the faculty of the University of Central Oklahoma (UCO) in 1999 as an Assistant Professor and was promoted to Associate Professor in 2001 and Professor in 2005. Dr. Chen also taught at the Oklahoma School of Science and Mathematics from 1989 to 1999 and St. Louis University from 1988 to 1989. Dr. Chen served as the Director of the Biomedical Engineering (BME) program from 2001 to 2006 and has served as the Assistant Dean (part-time) of the College of Mathematics and Science at UCO since 2006.

Teaching Experience: Dr. Chen started his teaching career when he received his Ph.D. degree in 1988. In 1989, as an inaugural member, he helped establish the Oklahoma School of Science and Mathematics, a top school for gifted and talented Oklahoma high school students, by designing its physics program with a new curriculum and developing all the courses. In 2000, he established the BME program at UCO by designing the new curriculum and new BME courses. Over the past 20 years, Dr. Chen has taught more than 20 different courses, many being courses and laboratories developed by him.

Honors and Awards: Dr. Chen has received almost every top award at UCO, including Faculty Merit Credit Awards for Scholarly Activities (2000, 2002, 2004, 2006), Innovative Teaching (2001, 2003), and Service (2005). At UCO, he also received the prestigious Hauptman Fellowship Award (2001), Sigma Xi UCO Chapter Outstanding Research Award (2002), and Distinguished Scholar Award of UCO Chapter of the American Association of University Professors.

In 1998, as one of the top 100 scholars in the U.S., Dr. Chen received the National Tandy Technology Prize for Science, Mathematics and Computer Science Teaching; in 2006, Dr. Chen received the Oklahoma DaVinci Fellow Award for Creativity among Oklahoma's Higher Education Faculty; in 2007 he received the highest UCO award: Vanderford Faculty Award in Support of Undergraduate Research, Creative and Scholarly Activities. He was elected as a Fellow of the International Society of Optical Engineering (SPIE) in 2007.

Research Activities: Dr. Chen's main research interests include laser-tissue interactions, laser photothermal treatment of cancer, anti-tumor immune responses induced by laser treatment, simulation of light transport in tissues, and monitoring of cancer treatment using CCD-based digital X-ray imaging and other modalities. As the Principal Investigator, Dr. Chen has received more than \$1.5 million in research grants from industry, foundations, and state and federal agencies. He has used such funding to support many undergraduate students.

Dr. Chen and his collaborators have developed a novel method, laser immunotherapy, for treatment of metastatic tumors. This method has been used in treating late-stage, metastatic melanoma in patients, and the outcomes have been far better than all the current methods available for melanoma. Dr. Chen has used his research as an integral part of his undergraduate education. More than 40 undergraduate students have participated in his cancer research.

Publications: Dr. Chen has published 72 refereed papers, 11 of which being co-authored by undergraduate students. In addition, he published 82 conference proceeding papers, 26 of which being co-authored by undergraduate students. Among the 34 posters at different conferences, 22 were presented by undergraduate students. In 2007, one of Dr. Chen's students was selected as the only representative from the State of Oklahoma to present his research at the Posters on the Hill in Washington, DC.

Dr. Chen has given more than 100 research presentations in several different countries, more than half of which were "Invited Talks". Twenty-seven of his undergraduate students in the past have made oral presentations at regional, national, and international conferences.

Professional Service: As an Assistant Dean, Dr. Chen has been actively promoting undergraduate research and scholarly activities in the College of Mathematics and Science at UCO. He serves as the Coordinator for an NSF-funded (\$2M, five-year, five-university) education program to promote education in science, technology, engineering and mathematics. In addition, Dr. Chen serves as a student mentor and advisor in different capacities.

Dr. Chen also promotes education in the community. He has been to many communities in Oklahoma to talk to students. During the past five years, he has spoken more than 30 times at local high schools, community colleges, student clubs, and local news media for science and engineering education.

Dr. Chen also serves as a member of the SPIE Education Committee with responsibilities for high school outreach and American Board of Engineering and Technology accreditation for undergraduate optical engineering programs.