

Software Defined Radio for Enabling Design and Innovation

Free workshop by Prof. Alexander M. Wyglinski, Ph.D.

Friday, July 30th, 1 pm – 4 pm
COSMIAC Facility
2350 Alamo Av. SE Suite 100

Data communication networks are a vital component of any modern society. They are extensively used in numerous applications, including financial transactions, social interactions, education, and national security. In particular, both wired and wireless devices are capable of performing a plethora of advanced functions that give support a range of services. With the rapid evolution of microelectronics, wireless transceivers are becoming more versatile, powerful, and portable. This has enabled the development of *software-defined radio* (SDR) technology, where the radio transceivers perform the baseband processing entirely in software.

This workshop will provide an overview of the design and implementation of modern digital communication systems using SDR technology. By understanding the capabilities and limitations of design prototyping and performing real-time experimentation of SDR-based systems, communication technologists will gain additional insights and knowledge on how to fully exploit this powerful research/development tool.

Alexander M. Wyglinski is an Assistant Professor of Electrical and Computer Engineering at Worcester Polytechnic Institute (WPI), Director of the Wireless Innovation Laboratory (<http://www.wireless.wpi.edu>), and Director of the WPI Limerick Project Center. He received his Ph.D. degree from McGill University in 2005, his M.S. degree from Queens University at Kingston in 2000, and his B.Eng. degree from McGill University in 1999, all in electrical engineering. Professor Wyglinski's current research interests are in the areas of wireless communications, wireless networks, cognitive radios, software-defined radios, transceiver optimization algorithms, dynamic spectrum access networks, spectrum sensing techniques, and machine learning techniques for communication systems.

Seating is limited to allow for better interaction. Contact Craig Kief for reservations. For additional information, contact Craig Kief (craig.kief@cosmiac.org)

