

Tutorial title: Standard-compliant physical layer modeling of LTE and LTE-Advanced Systems in MATLAB

Tutorial Abstract:

In this tutorial, Dr. Houman Zarrinkoub will showcase the use of MATLAB® and its new capabilities for physical layer modeling of LTE standards. The tutorial will introduce the LTE System Toolbox, which provides standard-compliant functions and tools for the design, simulation, and verification of LTE and LTE-Advanced communications systems. Through demonstrations you will learn how the Toolbox can help you measure and analyze the end-to-end performance of LTE and LTE-A communications links, can provide conformance test benches and wave forms to verify your designs and may be used as a golden reference model ensuring that your implementations comply with the LTE standard.

Dr. Zarrinkoub has served as a development manager and now as a senior product manager with MathWorks, based in Natick, MA. Within the 12 years at MathWorks he has been responsible for the development of multiple signal processing and communications software tools. Prior to MathWorks, he was a research scientist in the Wireless Group at Nortel Networks, where he contributed to standardization projects for 3G mobile technologies. He has been awarded numerous patents on topics related to computer simulations. He holds a B.Sc. degree in Electrical Engineering from McGill University and M.Sc. and Ph.D. degrees in Telecommunications from the Institut Nationale de la Recherche Scientifique, in Canada. Dr. Zarrinkoub's new book, **Understanding LTE with MATLAB: From Mathematical Foundation to Simulation, Performance Evaluation and Implementation** (Wiley), will publication in March 2014

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