



Máster en Ingeniería de Sistemas y Servicios Accesibles para la Sociedad de la Información

E.U.I.T. Telecomunicación

Curso 2010-2011

Fall activities seminar

Performance Evaluation of Digital Transmission Schemes



Professor

Prof. Dr.-Ing. Andreas Ahrens (Hochschule Wismar, University of Technology, Business and Design, Faculty of Engineering, Department of Electrical Engineering and Computer Science, Germany)

Andreas Ahrens was born in Wismar, Germany, in January 1971. He received the Dipl.-Ing. degree in electrical engineering from the University of Rostock in 1996. From 1996 to 2008, he was with the Institute of Communications Engineering of the University of Rostock, from which he received the Dr.-Ing. and Dr.-Ing. habil. degree in 2000 and 2003, respectively. In 2008, he became a Professor for Signal and System theory at the Hochschule Wismar, University of Technology, Business and Design, Germany. His main field of interest are error correcting codes, multiple-input multiple-output systems and iterative detection for both wireline and wireless communication.

Dates:

September 14th – 15th 2010, Room: 3004

Workload:

1 ECTS

Tuesday, September 14th: 14:30h - 15:30h

Wednesday, September 15th: 15:30h - 17:30h

Contents:

Part 1: Introduction

Part 2: Digital Data Transmission

(Introduction, Modelling and Quality criteria, Wireless Transmission)

Part 3: MIMO Transmission

(Quality Criteria and Performance Results, Multiple Input Multiple Output (MIMO) System, Singular Value Decomposition, Bit Allocation, Power Allocation)

Part 4: Error-detecting and error-correcting strategies in digital transmission schemes

(Fundamentals of linear block codes and convolutional codes (Encoding and Decoding))