



Universität Karlsruhe (TH)
Forschungsuniversität • gegründet 1825

Fakultät für Elektrotechnik und
Informationstechnik

Certificate of the Master Examination

Ankit Kaushik

born on June 7, 1984 in Dehli (India)

has passed the Master Examination in

**European Master of Research on Information and
Communications Technologies (MERIT)**

of the English postgraduate master programme

Electrical Engineering and Information Technologies

Field of Specialisation
Information and Communications Engineering

with the overall score

„VERY GOOD“ (1,4)

and the individual scores specified on the insides.

Karlsruhe, July 9, 2007



Dean

G. Trummer

MASTER THESIS:

Topic: „Performance Analysis of Mac Protocol for OFDM based Overlay Systems in Ad Hoc Mode“

Referent: Marina Mondì
Politecnico di Torino, Italy

Submission date: July 9, 2007
Politecnico di Torino, Italy

Grade: 30 L
Politecnico di Torino, Italy

Examination courses	University, where the examination has been passed	Grade, assigned by the university	ECTS-Credit Points of the respective university
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Compulsory core courses:

Materials and Devices in Electrical Engineering	Universität Karlsruhe (TH)	2,0	3
Electromagnetics and Numerical Calculation of Fields	Universität Karlsruhe (TH)	3,0	3
Integrated Systems of Signal Processing	Universität Karlsruhe (TH)	2,0	3
System Dynamics and Control Engineering	Universität Karlsruhe (TH)	2,0	6
Advanced Radio Communications I	Universität Karlsruhe (TH)	1,7	4,5
Advanced Radio Communications II	Universität Karlsruhe (TH)	1,0	4,5

Compulsory concentration courses:

Digital Spectral Analysis	Universität Karlsruhe (TH)	1,0	3
Optical Communications - Components	Universität Karlsruhe (TH)	1,0	4,5
Smart Antennas	Universität Karlsruhe (TH)	1,0	3
Systems and Software Engineering	Universität Karlsruhe (TH)	2,3	4,5
Management Systems for Communication Networks	Universität Karlsruhe (TH)	1,3	3

Elective concentration courses:

Introduction to Microstrip Antennas	Universität Karlsruhe (TH)	1,0	3
Student Research Project in Radio Frequency Engineering	Universität Karlsruhe (TH)	1,0	12
Optical Communications Systems	Universität Karlsruhe (TH)	1,0	3
Radar Systems Engineering	Universität Karlsruhe (TH)	1,3	3

Examination courses	University, where the examination has been passed	Grade, assigned by the university	ECTS-Credit Points of the respective university
Computer-aided design of wireless communication systems	Politecnico di Torino, Italy	30 L	6
Information theory and codes	Politecnico di Torino, Italy	30 L	5
Spaceborne SAR Remote Sensing	Universität Karlsruhe (TH)	1,7	4,5
Operating systems	Politecnico di Torino, Italy	27	4
Language model courses:			
Deutsch als Fremdsprache intensiv 1	Sprachenzentrum, Universität Karlsruhe (TH)	1,5	9
Additional courses:			
Video communications	Politecnico di Torino, Italy	26	5

Overall score of the examinations, passed at Universität Karlsruhe (TH): 1,48

Overall score of the examinations, passed at Politecnico di Torino, Italy: 29,73 – converting to the grading system of the Universität Karlsruhe (TH): 1,29

Overall score of the Universität Karlsruhe (TH): 1,4

The examinations have been taken at the universities Politecnico di Torino, Italy and Universität Karlsruhe (TH), Germany.

The Bachelor-Examination passed at the Guru Gobind Singh Indraprastha University - Maharaja Surajmal Institute of Technology (Indien) has been acknowledged by the Universität Karlsruhe (TH).

Chairman of Examination Board
Department of Electrical Engineering
and Information Technologies
at Universität Karlsruhe (TH)



individual grade

very good	= 1,0 - 1,3
good	= 1,7 - 2,0 - 2,3
satisfactory	= 2,7 - 3,0 - 3,3
sufficient	= 3,7 - 4,0

course grade

very good	= in case of an average up to 1,5
good	= in case of an average above 1,5 to 2,5
satisfactory	= in case of an average above 2,5 to 3,5
sufficient	= in case of an average above 3,5 to 4,0

overall score

with distinction	= in case of an average from 1,0 up to 1,1*
very good	= in case of an average above 1,1 to 1,5
good	= in case of an average above 1,5 to 2,5
satisfactory	= in case of an average above 2,5 to 3,5
sufficient	= in case of an average above 3,5 to 4,0

*) master thesis must be evaluated with „very good“