Quantum Information Theory (WiSe 2014/21015)

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Date	Type	Content
15.10.2014	L (MW/CH)	Intro and Overview
16.10.2014	L (MW)	A little bit of information theory, covering the bit, the memoryless source, the Shannon entropy and the source coding theorem
22.10.2014	L (MW)	Channel coding, covering the notion of a channel, the mutual information, channel rates and capacities and the noisy coding theorem
(23.10.2014	X (CH)	Quantum Optics Excercise session)
29.10.2014	L (MW)	Picoreview of the quantum mechanics of pure states and introducing the qubit
30.10.2014	X (MW)	Exercise session (Landauer Principle, classical info)
05.11.2014	L (MW)	(Quantum) Cryptography, BB84
(06.11.2014	X (CH)	Quantum Optics Excercise session)
12.11.2014	L (MW)	EPR, Bell inequalities and all that
13.11.2014	X (MW)	Exercise session (qubit manipulation and control)
19.11.2014	L (MW)	(Quantum) Computation
(20.11.2014	X (CH)	Quantum Optics Exercise session)
26.11.2014	L (MW)	Shor
27.11.2014	X (MW)	Exercise session (Quantum teleportation, dense coding)
03.12.2014	L (MW)	No cloning and other impossible machines, covering Wern magic trinity
(04.12.2014	X (CH)	Quantum Optics Exercise session)
10.12.2014	L (CH)	Generalized States and Channels
11.12.2104	X (MW)	Exercise session
17.12.2014	L (CH)	Open system dynamics
(18.12.2014	X (CH)	Quantum Optics Exercise session)
07.01.2015	L (CH)	...
08.01.2015	X (CH)	Exercise session
14.01.2015	L (CH)	...
(15.01.2015	X (CH)	Quantum Optics Exercise session)
21.01.2015	L (CH)	...
22.01.2015	X (CH)	Exercise session
28.01.2015	L (CH)	...
(29.01.2015	X (CH/MW)	Quantum Optics Exercise session)
04.02.2015	L (CH/MW)	Summarizing
05.02.2015	X (CH/MW)	Written exam