ITN COHERENCE – School and Young Excited Atomix Meeting
Dresden, 1st to 5th July 2013

Program

Monday, 1st July

School

08:50 - 09:00 *Opening*: Frédéric Merkt, ETH Zürich

09:00 -10:30 **Tim Softley**, University of Oxford: Rydberg-surface interactions

10:30 - 11:00 *coffee break*

11:00 - 11:45 **Sebastian Wüster,** Max-Planck-Institut für Physik komplexer Systeme: Flexible Rydberg aggregates

11:45 - 12:30 **Tim Softley**, University of Oxford: Rydberg-surface interactions

12:30 - 14:30 *lunch break*

COHERENCE - Dresden Long Night of Sciences

14:30 - 15:10 Project Presentation

YEA Workshop

15:10 - 15:15 *Welcome*: Adrian Sanz Mora & Wildan Abdussalam, the scientific coordinators of the YEA project

Chairman: Adrian Sanz Mora

15:15 - 15:35 **Danila Khikhlukha**, Russian Academy of Sciences: Kinetic study of ultracold neutral plasma

15:35 - 15:55 **Anita Gaj**, Universität Stuttgart: Single Rydberg impurities in a Bose-Einstein-Condensate

15:55 - 16:30 *coffee break*

cryp13 colloquium, chairman: Thomas Pohl (mpipks)

16:30 - 17:30 **Ed Grant**, University of British Columbia: Penning lattice: Dissociation and the development of spatial correlation in a molecular ultracold plasma

18:15 - 20:00 *supper*

20:00 - 22:00 *YEA poster session*

Tuesday, 2nd July

School

09:00 - 10:30 **Sebastian Wüster**, Max-Planck-Institut für Physik komplexer Systeme: Flexible Rydberg aggregates

10:30 - 11:00 *coffee break*

11:00 - 11:45 *Shannon Whitlock's Journal Club*: Rydberg polaritons and atom light interactions

11:45 - 12:30 **Stephen Hogan**, University College London: Rydberg atom and molecule optics

12:30 - 14:30 *lunch break*

14:30 - 15:15 *COHERENCE-Dresden Long Night of Sciences: Project Development*

YEA Workshop

Chairwoman: Anita Gaj

15:15 - 15:35 **Henning Labuhn**, Institut d'Optique: Direct measurement of the Van der Waals interaction between two single atoms using Rydberg blockade

15:35 - 15:55 **Julian Naber**, University of Amsterdam: Quantum information in magnetic microtraps

16:00 - 16:30 *coffee break*

Chairmen: Heiner Sassmannshausen & Adrian Sanz Mora

16:30 - 16:50 **Elizabeth Bridge**, Durham University: Rydberg blockade in strontium via narrow intercombination lines

16:50 - 17:10 **Wildan Abdussalam**, Max-Planck-Institut für Physik komplexer Systeme: Crystalline structures in two-dimensional Rydberg lattice gases

17:10 - 17:30 **Mike Kohlhoff**, University of Oxford: Velocity dependence of the interaction of Rydberg H atoms with a metal surface – Towards Rydberg-Stark deceleration

17:30 - 17:50 **Guang Wu**, Universität Hamburg: Excitation properties of Rydberg atoms in one dimensional lattices

17:50 - 18:10 **Vladislav Gavryusev**, Universität Heidelberg: Optical imaging of Rydberg atoms in dense atomic gases

18:10 - 20:00 *supper*

20:00 - 22:00 *poster session*

Wednesday, 3rd July

School

09:00 - 10:30 **Antoine Browaeys**, Institut d'Optique: Entanglement and Rydberg interaction

10:30 - 11:00 *coffee break*

11:00 - 11:45 *Shannon Whitlock's Journal Club*: Coupling Rydberg atoms with surfaces

School

11:45 - 12:15 **Howard Potter**, Photonics Technologies Ltd: The joys of taking a simple idea commercial

12:15 - 14:30 *lunch break*

14:30 - 15:15 *COHERENCE-Dresden Long Night of Sciences: Project Development*

YEA Workshop

Chairwoman: Anita Gaj

15:15 - 15:35 **Maria Martinez Valado**, University of Pisa: Multimode distributions in the full counting statistics of a strongly interacting Rydberg gas

15:35 - 15:55 **Heiner Sassmannshausen**, ETH Zürich: Spectroscopy of ultracold Rydberg atoms in the interacting and non-interacting regime

15:55 - 16:30 *coffee break*

Chairmen: Heiner Sassmannshausen & Wildan Abdussalam

16:30 - 16:50 **Markus Kurz**, Universität Hamburg: Electrically dressed ultralong-range polar Rydberg molecules

16:50 - 17:10 **Marco Mattioli**, Universität Innsbruck: Cluster Luttinger liquids of Rydberg-dressed gases in optical lattices

17:10 - 17:30 **Hannes Busche**, Durham University: Microwave-controlled interactions between optical photons stored as Rydberg polaritons

17:30 - 17:50 **Adrian** Sanz Mora, Max-Planck-Institut für Physik komplexer Systeme: Interfacing optomechanics with Rydberg atoms

17:50 - 18:10 **Riccardo Faoro**, CNRS: Observation of a four body resonance in cold cesium Rydberg atoms

18:10 - 18:20 *closure of the YEA project*

18:30 - 20:00 *supper*

Thursday, 4th July

School

09:00 - 10:30	**Stephen Hogan**, University College London: Rydberg atom and molecule optics
10:30 - 11:00	*coffee break*
11:00 - 11:45	*Shannon Whitlock's Journal Club*: Rydberg molecules
11:45 - 12:30	**Antoine Browaeys**, Institut d'Optique: Entanglement and Rydberg interaction
12:30 - 14:30	*lunch break*

Friday, 5th July

08:30 - 18:00 ***Midterm review (for ITN members only)***

18:00 - 01:00 ***Presenting the project at the Long Night of Sciences***
