

# Programme

## Week 1 (10-14 July, 2006)

|       | 10 (M)                   | 11 (Tu)            | 12 (W)            | 13 (Th)           | 14 (F)            | 15/16     |
|-------|--------------------------|--------------------|-------------------|-------------------|-------------------|-----------|
| 9:00  | registration             | <b>Shekhter 1</b>  | <b>Ivanov 1</b>   | <b>Cheianov 1</b> | <b>Efros 1</b>    | free days |
| 10:00 | opening (10:15-10:30)    | <b>Shekhter 2</b>  | <b>Ivanov 2</b>   | <b>Cheianov 2</b> | <b>Efros 2</b>    |           |
| 11:00 | 10:30 <b>MacDonald 1</b> | coffee             | coffee            | coffee            | coffee            |           |
| 11:30 | <b>MacDonald 2</b>       | <b>MacDonald 3</b> | <b>Imamoglu 3</b> | <b>Shekhter 3</b> | <b>Ivanov 3</b>   |           |
| 12:30 | lunch                    | lunch              | lunch             | lunch             | lunch             |           |
| 14:00 | registration             | discussions        | discussions       | poster talks      | discussions       |           |
| 16:30 | coffee                   | coffee             | coffee            |                   | coffee            |           |
| 17:00 | <b>Imamoglu 1</b>        | <b>Ardavan 1</b>   | <b>Roukes 1</b>   | posters           | <b>Kastner 1</b>  |           |
| 18:00 | <b>Imamoglu 2</b>        | <b>Ardavan 2</b>   | <b>Roukes 2</b>   |                   | <b>Kastner 2</b>  |           |
| 19:00 | dinner                   | dinner             | dinner            | dinner            | conference dinner |           |
| 20:30 |                          |                    |                   |                   | (bus at 19:15)    |           |

## Week 2 (17-21 July, 2006)

|       | 17 (M)            | 18 (Tu)              | 19 (W)              | 20 (Th)              | 21 (F)               | 22 (Sat)  |
|-------|-------------------|----------------------|---------------------|----------------------|----------------------|-----------|
| 9:00  | <b>Lerner 1</b>   | <b>Loss 1</b>        | <b>Littlewood 1</b> | <b>Shlyapnikov 1</b> | <b>Altshuler 1</b>   | departure |
| 10:00 | <b>Lerner 2</b>   | <b>Loss 2</b>        | <b>Littlewood 2</b> | <b>Shlyapnikov 2</b> | <b>Altshuler 2</b>   |           |
| 11:00 | coffee            | coffee               | coffee              | coffee               | coffee               |           |
| 11:30 | <b>Cheianov 3</b> | <b>Cheianov 4</b>    | <b>Langedijk 1</b>  | <b>Lerner 3</b>      | <b>Shlyapnikov 3</b> |           |
| 12:30 | lunch             | lunch                | lunch               | lunch                | lunch                |           |
| 14:00 | discussions       | discussions          | discussions         | discussions          | discussions          |           |
| 16:30 | coffee            | coffee               | coffee              | coffee               | coffee               |           |
| 17:00 | <b>Falko 1</b>    | <b>Turberfield 1</b> | <b>Geim 1</b>       | <b>Lagendijk 2</b>   | <b>Marcus 1</b>      |           |
| 18:00 | <b>Falko 2</b>    | <b>Turberfield 2</b> | <b>Geim 2</b>       | <b>Lagendijk 3</b>   | <b>Marcus 2</b>      |           |
| 19:00 | dinner            | dinner               | dinner              | dinner               | closing reception    |           |
| 20:30 |                   |                      |                     |                      |                      |           |

Lecture: 50 mins, plus 5 mins questions, and 5-mins break between two lectures in a pair.  
On 10 July, the first lecture by A. MacDonald starts at 10:30.

On 13 July, 14:00-17:00, attendees will give short talks (3mins, 2 slides) advertising their posters.

The conference dinner will take place on 14 July, in the agriturismo Mezzaluna near Sistiana. Bus departs from Adriatico at 19:15. The conf. dinner fee, 25Euro/person should be payable upon registration.

# Lectures

- B. Altshuler (Columbia U, NY) - (1&2) *Adiabatic and non-adiabatic dynamics of quantum condensates*
- A. Ardavan (Oxford) - (1) *An introduction to magnetic resonance in quantum information processing*  
(2) *Endohedral fullerenes and electron spin resonance quantum information processing*
- V. Cheianov (Lancaster) - (1-3) *Kondo effect, Luttinger liquid and bosonisation technique*  
(4) *Friedel oscillations in graphene*
- A. Efros (Utah) - (1&2) *Optical properties of materials with negative refraction: Perfect lenses and cloaking*
- V. Falko (Lancaster) - (1&2) *Quantum transport of chiral electrons in graphene*
- A. Geim (Manchester) - (1&2) *Physics of graphene*
- A. Imamoglu (Zurich) - (1) *Quantum optics with quantum dots: elementary properties, photon correlation measurements, single photon sources*  
(2) *Cavity-QED with quantum dots in photonic crystal cavities*  
(3) *Quantum dot spin manipulation*
- A. Ivanov (Cardiff) - *Statistically-degenerate indirect excitons in coupled quantum wells*  
(1) *Thermalization and optical decay*  
(2) *Diffusion and photoluminescence rings*  
(3) *In-plane traps and extremely low temperatures*
- M. Kastner (MIT, Boston) - (1) *Introduction to the physics of semiconductor quantum dots*  
(2) *Electron correlations in single-electron transistors*
- A. Lagendijk (Twente) - (1) *Photonic crystals: without and with imperfections*  
(2) *Multiple light scattering in mesoscopic and nano-systems*  
(3) *Quantum optics and multiple scattering*
- I. Lerner (Birmingham) - (1-3) *Decoherence and relaxation in qubits: a challenge for experimentalists, a puzzle for theorists*
- P. Littlewood (Cambridge) (1&2) *Excitonic and polaritonic condensates*
- D. Loss (Basel) - (1&2) *Spin qubits and spin decoherence in single and double quantum dots*
- A. MacDonald (Austin) (1-3) *Introduction to Spintronics*
- C. Marcus (Harvard) - (1&2) *Mesoscopic quantum dots and spin qubits*
- M. Roukes (Caltech) - (1&2) *Physics, engineering & applications of nano-electro-mechanical systems and quantum electro-mechanical systems*
- R. Shekhter (Chalmers) - (1-3) *Theory of electromechanical shuttles*
- G. Shlyapnikov (Orsay) - (1) *Strongly interacting Fermi gases. From few-body to many-body physics*  
(2) *Strongly interacting mixtures of heavy and light fermions*  
(3) *Supersolid states in quantum gases*
- A. Turberfield (Oxford) - (1) *Nanofabrication by biomolecular self-assembly*  
(2) *Self-assembled nanomachines*