# ATTOFEL Summer School

Crete, May 2-6, 2011

**The ATTOFEL Summer School will provide young researchers with training in the fields of attosecond and free electron laser science.**

The scientific program includes 19 courses and hands-on-training, covering topics from ultrafast laser technology to experimental instrumentation and strong-field physics. The school will offer a basic introduction into the generation of XUV, attosecond, and free electron laser light pulses and present a large range of physical experiments based on such novel light sources. A balance between theoretical and experimental talks will ensure that the students receive all the tools to succeed in their research projects. The scientific program is modeled on a Gordon Conference schedule with free afternoons to allow ample time for discussion and social interactions.

**Posters**

Poster can be viewed during all breaks and in two evening poster-sessions. The poster boards have a size of 1x1 m.

**Location**

The summer school will take place in the Atlantica Sensatori Resort in Crete, right at the beach of the Cretan Sea. We expect beautiful weather, so don't forget the sunscreen! The resort is close to the village Analipsi and is easily reached from Heraklion Airport (≈20 km). Please book the hotel online before April 23rd, using the booking form provided by Mitos and register your arrival time so we can arrange shared taxi transfer.

**Summer School Program**

Sunday, May 1

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| 6.00 pm - 8.00 pm | **Registration** |
| 7.30 pm - 8.30 pm | **Welcome reception** |
| 8.30 pm | *Dinner* |

Monday, May 2

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| 9.00 am | Dimitris Charalambidis:<br>**Welcome address** | **Chair: Marc Vrakking** |
| 9.20 am | Uwe Morgner (Hannover U.)<br>**Basic introduction to laser systems** | |
| 10.30 am | *Coffee Break* | |
| 11.00 am | Uwe Morgner (Hannover U.)<br>**Ultrafast amplifiers** | |
| 12.00 am | Vincent Crozatier (Fastlite)<br>**Carrier envelope phase stabilization** | |
| 13.00 pm | *Lunch* | |
| | *Free afternoon* | |
| 5.30 pm | Adam Wyatt (Oxford U.)<br>**Pulse characterization (IR to XUV)** | **Chair:** |
| 7.00 pm | **Poster talks**<br>Poster presenters, please prepare a 3 minutes presentation per poster, no more than 2 slides! | |
| 8.00 pm | *Dinner* | |
| 9.30 pm | **Poster session** | |

Tuesday, May 3

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|---|---|---|
| 9.00 am | Christian Bressler (European XFEL, Hamburg)<br>**Free electron laser** | |
| 10.15 am | *Coffee Break* | |
| 10.30 am | Vitaly Averbukh (Imperial College, London)<br>**Auger processes** | **Chair:** |
| 11.30 am | Misha Ivanov (Imperial College, London)<br>**Semiclassical methods of strong field interactions** | |
| 13.00 pm | *Lunch* | |
| | *Free afternoon* | |
| 5.30 pm | Olga Smirnova (MBI Berlin)<br>**Electron recollision, high harmonic spectroscopy** | |
| 7.00 pm | **Poster talks**<br>Poster presenters, please prepare a 3 minutes presentation per poster, no more than 2 slides! | **Chair:** |
| 8.00 pm | *Dinner* | |
| 9.30 pm | **Poster session** | |

Wednesday, May 4

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|---|---|---|
| 9.00 am | Anne L'Huillier (Lund U.)<br>**High harmonic generation and attosecond pulse production** | **Chair: Oleg Kornilov** |
| 10.15 am | *Coffee Break* | |
| 10.45 am | Reinhard Kienberger (TU München)<br>**Attosecond applications on surfaces** | |
| 12.00 pm | George Tsakiris (MPQ München)<br>**High harmonic generation from surfaces** | |
| 13.00 pm | *Lunch* | |
| 2.15 | Hands-on training<br>**Rabitt (computer-based tutorial)**<br>**Beam focussing & diagnostics (hands-on tutorial)** | |
| 4.00 pm | ***Lab Tours at FORTH*** | |
| | **Hands-on training**<br>Imaging molecules | |
| 8.30 pm | **Summer School Dinner / BBQ** | |

Thursday, May 5

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|---|---|---|
| 9.00 am | Willem Boutu (CEA, Saclay)<br>**Coherent diffractive imaging** | **Chair: Bertrand Carre** |
| 10.00 am | *Coffee Break* | |
| 10.30 am | Andreas Panagopoulos (Crete U.)<br>**Intellectual property, patents, and startup companies** | |
| 13.00 pm | *Lunch* | |
| | *Free afternoon* | |
| 5.00 pm | Hands-on training<br>**Rabitt (computer-based tutorial)**<br>**Beam focussing & diagnostics (hands-on tutorial)** | **Chair:** |
| 6.45 pm | Theofanis Kistopoulos (FORTH, Crete)<br>**Spectrometers, detectors** | |
| 8.00 pm | *Dinner* | |
| 9.30 pm | **Business meeting** | |

Friday, May 6

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|---|---|---|
| 9.00 am | Franck Lepine (Lyon U.)<br>**Attosecond applications in molecules** | |
| 10.15 | *Coffee Break* | **Chair:** |
| 10.45 | Giuseppe Sansone (CNR Milano)<br>**Attosecond applications in atoms** | |
| 12.00 | Matthias Kling (MPQ München)<br>**Plasmonics** | |
| 13.00 pm | *Lunch* | |
| | *Free afternoon* | |
| 5.30 pm | Philippe Zeitoun (LOA, Paris)<br>**Tabletop X-ray sources** | **Chair:** |
| 6.45 pm | Artem Rudenko (MPIK, Heidelberg)<br>**Strong field interaction at XUV/x-ray wavelengths** | |
| 8.00 pm | *Dinner* | |