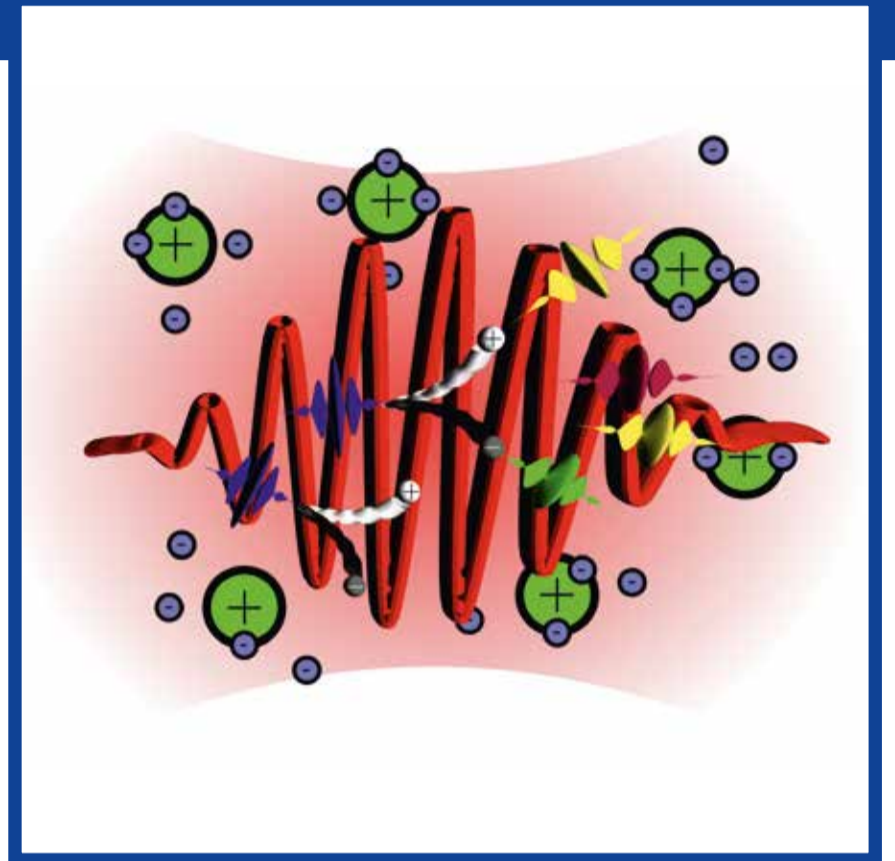


QED Laser Plasmas

International Workshop 21 - 25 September 2020

Ultra-intense lasers are indispensable tools for fundamental and applied research. They can ionize matter, excite collective effects, accelerate particles to relativistic energies and drive non-linear quantum effects. The aim of this workshop is to bring together laser-plasma theorists and experimentalists with nonperturbative quantum field theorists, to explore the rapidly growing new field of non-linear relativistic multi-particle quantum dynamics.



Topics:

- How do nonlinear relativistic quantum dynamics affect ultra-intense laser-plasma interactions?
- How do multi-particle plasma effects affect non-linear relativistic quantum dynamics?
- In what parameter regimes do incoherent models of nonperturbative QED have to be amended?
- What simplified models can include plasma dynamics in nonperturbative QED calculations?
- Which experimental tests can explore relativistic quantum plasmas?
- What novel phenomenology can be triggered by multi-particle relativistic quantum dynamics?
- How can a multi-particle relativistic quantum framework be developed?

Invited speakers:

A. V. Arefiev (US)
 T. G. Blackburn (SE)
 S. S. Bulanov (US)
 S. V. Bulanov (CZ)
 E. S. Efimenko (RU)
 N. Elkina (DE)
 A. M. Fedotov (RU)
 P. Ghenuche (RO)
 A. Gonoskov (SE)
 M. Grech (FR)
 K. Z. Hatsagortsyan (DE)
 B. Kämpfer (DE)
 C. H. Keitel (DE)
 J. G. Kirk (DE)
 K. Krajewska (PL)
 R. Li (CN)
 J. T. Mendonca (PT)
 C. H. Nam (KR)
 H. Ruhl (DE)
 S. Rykovanov (DE)

T. Toncian (DE)
 M. Vranic (PT)
 S. Weber (CZ)
 M. Zepf (DE)

Scientific coordinators:

Antonino Di Piazza,
 Heidelberg, Germany

Felix Mackenroth,
 Dresden, Germany

Stuart Mangles,
 London, UK

Mattias Marklund,
 Gothenburg, Sweden

Organisation:

Maria Voigt
 MPIPKS Dresden

Applications received before 15th May 2020 are considered preferentially.

Applications are welcome and should be made by using the application form on the event's web page. The number of attendees is limited. The registration fee for the international workshop is 140 Euro and should be paid by all participants. Costs for accommodation and meals will be covered by the Max Planck Institute. Limited funding is available to partially cover travel expenses.

For further information please contact:

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