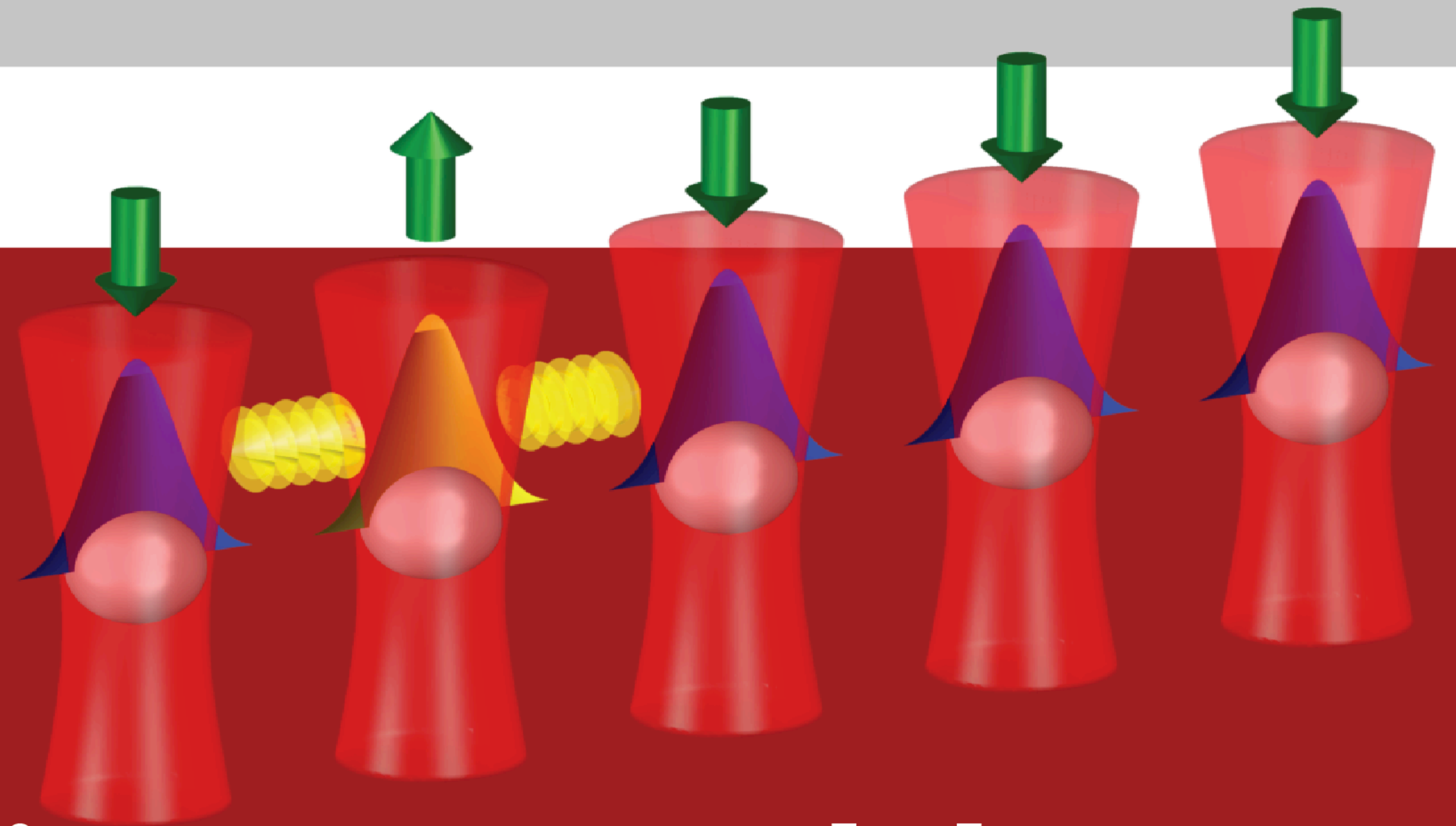


Workshop

on

Quantum Dynamics of Spins, Atoms and Electrons



www.fen.bilkent.edu.tr/~qdyn/

16-19 May 2016

The last century saw tremendous success of quantum theory in describing the inner workings of the world that we see around us. It is likely, that the present century will see mankind harnessing the understanding of quantum physics for increasingly sophisticated technological applications. In this development spins, atoms and electrons are the essential building blocks of novel quantum matter, tailored towards a specific purpose. On this road we require a unified picture of these building blocks.

It is the aim of this workshop to provide an overview of the fascinating diversity emerging of fully controllable yet complex quantum systems ranging from semiconductors over cold-atoms to molecular dye-aggregates, while highlighting differences and similarities in theoretical and experimental approaches across these fields. To this end, we have invited distinguished international researchers from the fields of solid-state quantum optics, ultra-cold atoms and complex systems to deliver pedagogical lectures from basics to the frontier.

We would be glad to welcome you in Ankara in order to join these explorations.

Topics

- Optical control of spins
- Spintronics
- Semiconductor quantum dots
- Topological effects
- Cold atoms in optical lattices
- Quantum squeezing
- Nonequilibrium quantum dynamics
- Rydberg atoms
- Photosynthesis and light harvesting

Invited lecturers

- Alexander Einfeld (DE)
- Michael E. Flatté (US)
- Xavier Marie (FR)
- Erich Mueller (US)
- Tomáš Opatrný (CZ)
- Shannon Whitlock (DE)

Local organisation

- Ceyhun Bulutay
- M. Özgür Oktel
- Sebastian Wüster



Targeted audience are physicists including post-graduate researchers as well as graduate and senior-level physics students. Attendees are welcomed to contribute with their posters of relevance to the general theme of quantum dynamics. The workshop is free of charge. However, participants need to cover their own travel and daily expenses.

Apply preferentially before **6th May 2016** via the website: www.fen.bilkent.edu.tr/~qdyn