

## TRR Guest Scientist Lecture / Seminar

Date/Time: 08.07.2016 / 11:15am

Location: Paderborn P1.5.01.4



### Xiaohong Song

*College of Science, Shantou University,  
Swatow, Guangdong, China*

## Applications of generalized quantum-trajectory Monte Carlo Method: From Atoms, Molecules to Solids

### Abstract:

Monte Carlo methods are a broad class of computational algorithms that rely on repeated random sampling to obtain numerical results, which are sometimes referred to as stochastic simulation. This method has been widely used in different areas, such as academia, finance, engineering, environmental, etc..

In this talk, I'll introduce the applications of our recently developed generalized quantum-trajectory Monte Carlo Method in simulating the photoelectron momentum spectra of atoms and molecules, which agrees well with the experimental results. Moreover, the possibilities of extending this method to simulating the ultrafast dynamics in metal nanostructures and semiconductor will also be discussed.

Contact: Prof. Dr. Torsten Meier  
[torsten.meier@upb.de](mailto:torsten.meier@upb.de)

Prof. Dr. Jens Förstner  
[foerstner@tet.upb.de](mailto:foerstner@tet.upb.de)