



TECHNISCHE UNIVERSITÄT  
CHEMNITZ

# Institut für Physik Physikalisches Kolloquium



Mittwoch, 08.01.2020, **um 11:15 Uhr**

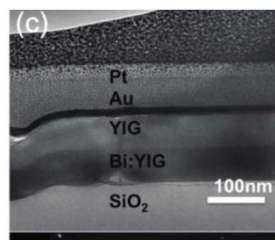
Ort: Reichenhainer Str. 90;  
Zentrales Hörsaal- und Seminargebäude,  
Raum 2/N013

**Prof. Dr. Martin Veis**

Institute of Physics of Charles University Prag

## Novel trends in magneto-optics: from Faraday effect to spin-photonics

Magneto-optical phenomena play an important role in both research and application fields. Magneto-optical experiments are widely used as non-destructive, depth sensitive and extremely precise tools to explore basic and novel physical properties of magnetic materials, including very recent research in spintronics (spin-orbit torques, etc.). Recent rapid development in computer science calls for novel technological approaches to increase the density of the data storage, speed of both computer chips and data transmission, or to develop the display technology capable of 3D imaging without the necessity of additional glasses. As conventional electronics faces its limits, other approaches receive considerable attention. Among them, spintronic or magneto-optical approaches proved themselves to be very promising. The next logical step is therefore to combine the spintronic control of magnetism and magneto-optical control of light polarization in the next generation of so-called spin-controlled photonic devices. Such attempts started to appear very recently and show one of the possible ways for technology of the future. The talk will provide an overview of the changes in the magneto-optical research during the last years as well as sketch new possibilities and opportunities to produce the next generation of spin-controlled photonic devices.



Alle Zuhörer sind ab 11:00 zu Kaffee und Tee vor dem Hörsaal eingeladen.

Informationen zum Vortrag erteilt:  
Prof. Dr. Georgeta Salvan, Tel. 0371 531 33137

[www.tu-chemnitz.de/physik](http://www.tu-chemnitz.de/physik)