

# MICHAL ŠINDLER

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Institute of Physics, Academy of Sciences of the Czech Republic  
Department of Magnetism and Superconductors  
Cukrovarnická 10/112, 162 00 Praha 6, Czech Republic

## PERSONAL INFORMATION

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Date of Birth 26.11.1983  
Place of Birth Ostrava, Czech Republic  
Citizenship Czech  
Sex Male

## EDUCATION

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*Faculty of Mathematics and Physics, Charles University in Prague, Czech republic*

**PhD in Physics** **September 2012**

Thesis title: Properties of superconductors in the terahertz frequency region

Advisors: prof. Ladislav Skrbek and Dr. J. Koláček

*Faculty of Mathematics and Physics, Charles University in Prague, Czech republic*

**Master degree in Physics** **September 2008**

Thesis title: Vortex dynamics in superconductors

Advisors: prof. Ladislav Skrbek and Dr. Jan Koláček

*Faculty of Mathematics and Physics, Charles University in Prague, Czech republic*

**Bachelor degree in Physics** **September 2006**

Thesis title: Quantized vortices in superfluid He II

Advisors: prof. Ladislav Skrbek

## SCIENTIFIC CARRER

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Oct 2008 – Aug 2012	Junior Research Fellow, Institute of Physics Academy of the Czech Republic, Prague
March 2011 – June 2011	3 month research stay in PICO group in Aalto University, Helsinki, Finland, working on Cooper pair sluice project under supervision of Professor Jukka Pekola
September 2011	CryoCourse 2011 (summer school in cryogenics and low temperature physics) in Grenoble, France
Oct 2012 – present	Postdoctoral Researcher, Institute of Physics Academy of Sciences of the Czech Republic, Prague
Sep 2014 – Aug 2015	Postdoc position, University of Bordeaux, France, Amadeus project: Millimeter and Terahertz characterization of inorganic spherical and calibrated micro-resonators (in group of Patrick Mounaix)

## RESEARCH SKILLS

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- Optics of Thin Films and Multilayers - calculation of transmission through general homogeneous multilayer structure, effective medium approximation
- Superconductivity - BCS theory (calculation of high-frequency conductivity), high-frequency vortex dynamics (Coffey-Clem model)

- Broad experience with PC-instrument communication and measurement program development in Labview
- Working experience with scanning electron microscope (SEM) with Electron Beam Lithography, electron beam evaporator and nanofabrication
- Measurement experience and data analysis of laser thermal spectroscopy and time domain terahertz spectroscopy (including optical pump techniques)
- Metamaterial research - Mie resonance based metamaterials, electrodynamical simulations (MEEP)

## SKILLS AND QUALIFICATION

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### Languages

- Czech - native language
- English - speak fluently and read/write with high proficiency
- Russian - basic level, good reading ability

### IT skills

- long term experience with versatile PC operation under MS Windows
- development of webpages - HTML, CSS, PHP
- Latex ( text, presentation, poster)
- Octave (Matlab) and Labview programming, working experience with data analysis in Origin (Origin C including)
- Python, Python-MEEP, C language

### Research interests

- low temperature physics and cryogenics
- high-frequency measurement (laser thermal spectroscopy, time domain terahertz spectroscopy, pump probe measurements)
- complex conductivity of superconductors
- vortex dynamics (vortex mass determination)
- non-equilibrium superconductivity
- superconductor-insulator transition
- metamaterials