

# Piotr Kot

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## Professional profile:

I am a physicist with over 8 years experience performing research at high-end universities and institutes. I have a passion for developing an understanding of novel physical phenomena and for implementing practical applications using quantum mechanics.

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## Lab Skills:

- Cryogenic systems down to milliKelvin temperatures
- Ultra high vacuum systems
- Low-noise electronics
- Radio frequency electronics
- Transport measurements

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## Computer Skills:

- Programming languages: Python, Matlab, Java, Latex
- Linux, Windows and macOS operating systems

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## Theoretical Knowledge:

- Condensed matter physics
- Quantum mechanics

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## Laboratory Work Experience

Jan. 2018 – 2022

**Max Planck Institute for Solid State Research, Stuttgart**  
**Experimental Physicist**

- Developed a state of the art electron spin resonance scanning tunneling microscope. First, and as of March 2021 the only, one capable of probing resonances up to 98 gigahertz.
- Performed experiments on: superconductors, single atom and molecular magnets, spin systems, crystal surfaces, high frequency cabling and more.
- Gained experience working in a professional laboratory setting. Specifically learnt to maintain a lab and lab book, and learnt how to present results to team members.

Jan. 2015 – April 2015

**University of British Columbia, Vancouver**  
**Laboratory Assistant**

- Measured band dispersions of Li deposited graphene

May 2013 – April 2014

**University of British Columbia, Vancouver**

### **Cooperative Placement Student/Thesis Student**

- Was in charge of optimizing graphene growth and graphene transfer
- Performed transport measurements on polycrystalline graphene

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### **Other Work Experience**

Sept. 2015 – Dec. 2017      **Max Planck Institute for Solid State Research, Stuttgart  
Computational Physicist**

- Developed algorithms that corrected experimental data
- Implemented theoretical models to understand experimental results
- Presented research at international conferences

May 2014 – Dec. 2014      **Max Planck Institute for Solid State Research, Stuttgart  
Cooperative Placement Student**

- Simulated electronic properties of graphene using Matlab

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### **Education**

2018-2022      **University of Stuttgart**      Stuttgart, Germany  
Doctor rerum naturalium in Physics

2015-2017      **University of Stuttgart**      Stuttgart, Germany  
Master of Science in Physics

2011-2015      **University of British Columbia**      Vancouver, Canada  
Bachelor of Science in Honours Physics

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### **Scholarships**

2015-2017      **International Max Planck Research School Scholarship**  
Condensed Matter Science

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### **Publications**

2020      Microwave-assisted tunneling and interference effects in superconducting junctions under fast driving signals  
**Physical Review B 101 (13), 134507**

2020      Band dispersion of graphene with structural defects  
**Physical Review B 101 (23), 253116**

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### **Languages:**

- Native English and Polish
- Beginner French, German and Japanese