

Curriculum Vitae

Philipp BRAUN

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| Date of Birth: | 12 November 1985 | Address: | Phone: +49 176 63651644 |
| Place of Birth: | Neumarkt i.d.Opf | Marienroggenweg 51 | Email: braunp@in.tum.de |
| Nationality: | German (EU citizenship) | 18147 Rostock | |

EDUCATION

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|------------|--|--------------------------------|
| OCT 2011 | M.Sc., Applied & Engineering Physics | Technische Universität München |
| - SEP 2013 | Laurea Magistrale, Materials Science | University of Turin |
| (expected) | Master 2, Chemistry | University of Montpellier 2 |
| | CURRENT GPA: 1.7 (German grades range from 1.0 (excellent) to 5.0 (fail)) | |
| | Erasmus Mundus Master programme Materials Science Exploring Large Scale Facilities (MaMaSELF) leading to a triple degree | |
| OCT 2009 | B.Sc., Informatics | Technische Universität München |
| - SEP 2012 | Application Area: Physics | |
| | GPA: 1.8, Thesis title: "Probe position refinement in X-ray ptychography" | |
| | Advisor: Prof. Thomas Huckle (TUM Informatics), Pierre Thibault, PhD. (TUM Physics) | |
| OCT 2008 | B.Sc., Physics | Technische Universität München |
| - SEP 2011 | Specialization Area: Condensed Matter Physics | |
| | GPA: 2.2, Thesis title: "Development and analysis of a momentum spectrometer for charged particles emitted after the photo double ionization of ethyne and ethylene" | |
| | Advisor: Dr. Thorsten Weber (LBNL), Prof. Peter Müller-Buschbaum (TUM) | |
| APR 2006 | Associate Engineer, Computer Systems and Automation | Siemens Technik Akademie |
| - MAR 2008 | GPA: 1.0 | Erlangen, Germany |
| MAY 2005 | Abitur, | Melanchthon Gymnasium |
| | GPA: 1.4 | Nuremberg, Germany |

WORK EXPERIENCE

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| FEB 2013 | Research Intern | cSAXS beamline, PAUL SCHERRER INTITUTE |
| - SEP 2013 | Coherent Diffractive Imaging | Villigen, Switzerland |
| (expected) | Masters Student. Mixed State Reconstruction with X-Ray Ptychography, Advisors: Dr. Andreas Menzel, Dr. Pierre Thibault | |
| JUL 2012 | Research Intern | Coherent Imaging Division, CFEL, DESY |
| - SEP 2012 | Coherent Imaging with FELs | Hamburg, Germany |
| | Participant in the DESY Summer Programme. 3D phase retrieval algorithms. Binary classification of single-particle diffraction patterns from FELs. Advisors: Dr. Anton Barty, Prof. Henry Chapman | |
| JUL 2011 | Research Intern | AMOS Group, LAWRENCE BERKELEY NATIONAL LABORATORY |
| - SEP 2011 | Atomic and Molecular Physics | Berkeley, U.S. |
| | Participant in the DAAD RISE programme. Development, simulation and resolution analysis of a 3D momentum spectrometer for charged particles emitted after the photo double ionization of ethyne and ethylene. Help with setup of the experiment at beamline 10.0.1 of the Advanced Light Source. Advisor: Dr. Thorsten Weber | |
| OCT 2008 | Software Engineer | INTERASCO GmbH |
| - NOV 2009 | IT Solutions and Services | Munich, Germany |
| | Helped defining the architecture for a newly started long term project. Developed an easy to use multithreading framework. Coached the team in using the framework and provided thorough documentation. | |
| APR 2008 | Junior Developer | SWINTON COLLONADE LTD. |
| - OCT 2008 | Insurance and Financial Services | Manchester, U.K. |
| | Developed enterprise scale object oriented web applications. Developed website frontend with javascript, DHTML, webservices. Monitored website performance and troubleshot defects out of regular working hours. | |
| OCT 2007 | Software Developer Intern | SIEMENS STANDARD DRIVES |
| - MAR 2008 | Manufacturing & Automation | Congleton, U.K. |
| | Developed an application to streamline tracking of defective circuit boards and increase item throughput in the adjoining factory. Developed an application to automate a small assembly line. | |

PUBLICATIONS

- Photo double ionization of acetylene and subsequent fragmentation pathways, B. Gaire, **P. Braun** et al., Bulletin of the American Physical Society 57 (2012)
- Dissociative and non-dissociative photo double ionization of hydrocarbon molecules: C_2H_4 and C_2H_2 , B. Gaire, **P. Braun** et al., Bulletin of the American Physical Society 57 (2012)
- Ultrafast Energy Transfer between Oxygen Molecules, F.P. Sturm, B. Gaire, I. Bocharova, **P. Braun** et al., Bulletin of the American Physical Society 57 (2012)

COMPUTER SKILLS

Programming: WEB PAGES (Expert), WINDOWS APPLICATIONS (Expert), Qt (Basic)
DATABASE DESIGN (Expert)

Programming Languages: C# (Expert), VISUAL BASIC (Expert), C/C++ (Expert)
SML (Intermediate), SQL (Intermediate), PERL (Basic),
HTML (Intermediate), Python (Intermediate)

Computer Algebra Programs: MATHEMATICA (Intermediate)

Operating Systems: WINDOWS (Expert), LINUX (Intermediate)

Office: \LaTeX , Office-Suite

LAB EXPERIENCE

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| BASIC LAB COURSE 1 | - Oscillations and chaos - Capillary viscosimeter - Determination of molar mass - Constitutive equation of real gases - Determination of sonic velocity - Dissociation and freezing point depression of KNO_3 |
| BASIC LAB COURSE 2 | - Determination of electron charge - Bridge circuit - Creation of ultra high vacuum, measurement of vacuum pressure - Measurement of transmission curves on the oscilloscope - Characteristic lines of transistors - fuel cell characteristics |
| BASIC LAB COURSE 3 | - measurement and handling of radioactive materials - measurement of electromagnetic fields - diffraction and refraction of light - X-rays: characteristic and continuous spectrum, generation - geometrical optics: lenses, lense systems, principal plane, autocollimation, focal distance - Franck-Hertz-Experiment |
| ADVANCED LAB COURSE | - x-ray fluorescence spectrometry - atomic force microscopy - molecular motors. fluorescence microscopy - plasma interferometry, He-Ne lasers, laser resonator, Fabry-Perot-interferometer - organic photovoltaic cells - surface plasmons - Mössbauer Effect - Lasers and nonlinear optics |
| BACHELOR THESIS | - Fourier transform holography - synchrotron radiation - 3rd generation synchrotrons |

MILITARY SERVICE

JUL 2005 | Private First class at GERMAN AIRFORCE, Landsberg a. Lech
- MAR 2006 | *Air raid defences*

LANGUAGES

ENGLISH: Fluent GERMAN: native SPANISH: C1 Level
ITALIAN: A2 Level FRENCH: A1 Level

INTERESTS AND ACTIVITIES

Technology, Philosophy of Science, University Choir, Programming, Travelling