

CURRICULUM VITAE

STEFAN BAAR

PERSONAL INFORMATION

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CURRENT ADDRESS:	Hokkaido, Muroran-shi, Etomo-cho 3 Chome 5-6, Japan
HOME ADDRESS:	Pestalozzstraße 28, 08393 Meerane, Germany
DATE OF BIRTH:	January 21, 1987
NATIONALITY:	German

APPOINTMENTS

2020 - NOW	<p>RESEARCHER in Machine learning and image processing for applications in agriculture and cell biology Muroran Institute of Technology, Japan</p> <p>Research:</p> <ul style="list-style-type: none">• Detection and Classification cell features and movements using novel Machine Learning Techniques• Estimating plant phenotyping using novel Machine Learning Techniques <p>Institute Director: Prof. Dr. Shinya Watanabe Institute: Computational Intelligence Laboratory, Muroran Institute of Technology</p>
2016 - 2020	<p>RESEARCHER (TENURE TRACK) in Astrophysics and Cosmology, University of Hyogo, Japan</p> <p>Research:</p> <ul style="list-style-type: none">• Detection and Classification of Diffuse shock emission in large scale Radio Surveys using novel Machine Learning Techniques• Automation of Robotic Telescopes <p>Education:</p> <ul style="list-style-type: none">• Astrophysics lecture for university students, high school students and the general public• Voluntary computational astrophysics seminar <p>Institute Director: Prof. Dr. Yoichi Itoh Institute: Center for Astronomy, Nishi-Harima Astronomical Observatory</p>

EDUCATION

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| 2013 - 2016 | Ph.D in PHYSICS, Muroran Institute of Technology , Japan <ul style="list-style-type: none">• Thesis: <i>Scanning Tunneling Studies of the Pseudo Gap in High Temperature Superconductors</i>• Supervisor: Prof. Dr. rer. nat. Naoki Momono• Institute: Material Science Unit |
| 2011 - 2013 | Master of Science in PHYSICS, Friedrich-Schiller-Universität Jena , Germany <ul style="list-style-type: none">• Thesis: <i>The Westerbork Synthesis Radio Telescope (WSRT): Legacy Survey: Radio Relics in Galaxy Clusters</i>• Grade: 1.4• Supervisor: Dr. rer. nat. Matthias Hoelt• Institute: Thueringer Landessternwarte Tautenburg (TLS) |

EDUCATION

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| 2008 - 2011 | Bachelor of Science in PHYSICS, Friedrich-Schiller-Universität Jena , Germany <ul style="list-style-type: none">• Thesis: <i>The setup of the Small Radio Telescope (SRT) Jena</i>• Grade: 1.1• Supervisor: PD Dr. rer. nat. habil. Katharina Schreyer (Assistant Professor)• Institute: Astrophysikalisches Institut und Universitäts-Sternwarte (AIU)• Laboratory experience: Gamma spectroscopy, Superconductivity, Lasers, Fourier interferometry, Scanning tunneling microscopes, Optical and radio telescopes |
| 2004 - 2007 | High school, Pestalozzi Gymnasium Meerane , Germany |
| 2003 - 2004 | High school, Ellsworth Community High School , USA |

LABORATORY EXPERIENCE

- Gamma Spectroscopy
- Superconductors (Josephson Contact, Thermostats, etc.)
- Semiconductors
- Lasers and Optical Alignment
- Fourier Interferometry
- Scanning Tunnelling Microscopes
- Optical and Radio Telescopes and Interferometers

RESEARCH ASSISTANCE

OCT 2013 - SEP 2016	Material Science Research Unit, Muroran Institute of Technology <ul style="list-style-type: none">• Weekly Group Seminar• Computational Physics
JUN - SEP 2013	Robotics Research Unit, Muroran Institute of Technology <ul style="list-style-type: none">• Development of an API to control and automate a crawler robot in combination with a Lidar sensor.
JUL - OCT 2009	University Observatory, Friedrich Schiller University Jena <ul style="list-style-type: none">• Learned to operate a 90-cm mirror telescope• Collected transit information of planetary motion and stars• Performed data processing from raw CCD images

SOCIAL ACTIVITIES

OCT 2015 - JUN 2016	Volunteer work with Rotary Yoneyama Foundation.
OCT 2011 - MAY 2013	Tutor and support for foreign exchange students at Jena University
JUL 2005 - JUN 2007	Volunteer Basketball Coach and School President

COMPUTER SKILLS

ADVANCED KNOWLEDGE:	Python, Torch, SageMath, TensorFlow, L ^A T _E X, Cuda, C-programming, MatLab, CASA, Javascript, IGOR Pro, Adobe Photoshop, Adobe Illustrator, Adobe Dreamweaver, Adobe Premier Pro, Final Cut Pro, HTML and CSS programing, Microsoft Office, Wireshark, ettercap, Metasploit, Kali Linux, Mac OS X, Unix
BASIC KNOWLEDGE:	AutoCAD, Mathematica, AIPS, AppleScript, Quantum Espresso, kwant, XCrySDen

OTHER SKILLS

DRIVER'S LICENSE	International Japan Germany
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LANGUAGES

GERMAN:	Mother tongue
ENGLISH:	Fluent (CEFR-C2)
JAPANESE:	Fluent in speaking (B2)
SPANISH:	Intermediate Knowledge (B2)
FRENCH:	Intermediate Knowledge (A2-B1)
ARABIC:	Intermediate Knowledge (A2)
CHINESE:	Intermediate Knowledge (A2)