Curriculum Vitae

JOHANNES HÖLKEN

- **Date of birth** March 1983
- **Nationality** German

EDUCATION

since 2021 **PhD in Astrophysics**

MPI for Solar System Research, Justus-von-Liebig Weg 3, Göttingen
Georg August University Göttingen, Wilhelmsplatz 1, Göttingen

Topic Observations of the magnetic fine-structure in a Sunspot umbra

2006 to 2015 **Diploma in Mathematics**

University Duisburg Essen, Universitätsstraße 2, Essen

Focus Area Algebraic Geometry (Mathematics) and Proof Theory (Philosophy)

2003 to 2006 **High School Diploma**

Westfalenkolleg Dortmund, Rheinische Straße 67, Dortmund

Diploma from German secondary school qualifying for university admission or matriculation.

Focus Areas Mathematics, German, Latin

1993 to 1999 Secondary School

1989 to 1993 Primary School

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WORK EXPERIENCE

2020 to 2021 **Research Associate**

Hochschule für Angewandte Wissenschaft und Kunst (HAWK), Gesundheitscampus Göttingen, Philipp-Reis-Straße 2 A, Göttingen

- Project: Zukunftslabor Gesundheit (see below)
- Supervision of Master Projects
- Research

Sector Medical / Health Informatics

2015 to 2020 **Technical Project Lead**

SCISYS Deutschland GmbH, Borgmannstraße 2, Bochum

- Development and maintenance of the central software factory
  Docker based Gitlab, Gitlab-CI, Artifactory, Jenkins and SonarQube
- Generation and Review of Coding Standards
- In-house & bespoke Software Design and Development
- Technical Project and Team Leadership (see below)
- Internal trainings, tutor- and mentorship
  Topics: Unit Testing, Test Driven Development, Clean Code, System Test Automation

Sector Software Engineering for Space Domain

2009 to 2015 **Student Assistant (various)**

University Duisburg-Essen, Universitätsstraße 2, Essen

- Giving tutor courses incl. correction of exercises and tests
- Conference organization assistance
- Experimental Mathematics (IEM)
- Creation of lecture scripts with LaTeX

Sector Faculty of Mathematics

2007 to 2015 **Software Engineering**

CAND VISION GmbH, Alfredstraße 295, Essen

- Software and Web Template Development
- Design and Development of an in-house Content Management System (CMS)
- Design and Development of an in-house Support Ticket System
- Operations Support

Sector Bespoke Web Development

2002 to 2003 **Civilian Service: Vocational Training of handicapped people**

Krelinger Holzwerkstatt, Krelingen 198, Walsrode

1999 to 2002 **Vocational Training as Carpenter**

Tischlerei Weischenberg, Bergstr. 38, Lünen

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PROJECT EXPERIENCE

Aug 2020 to Aug 2021

@ HAWK

for **Zentrum für Digitale Innovation Niedersachsen (ZDIN)**

Development / Evaluation

Zukunftslabor Gesundheit (ZL-G)

- Design of a mobile application for physiotherapy (rehabilitation)
- Automated detection of correct and wrong body movements
- Sensor integration (In-Depth Camera, Acceleration, etc.)
- Software Development with Java, Dart, Ruby and ObjectiveC
- Automated System Test Development
- Medical Product Documentation
- Scientific evaluation

Area Medical/Health Informatics (MI)

May 2018 to July 2020

@ SCISYS

for **German Aerospace Center (DLR) and Weltraum Lage Zentrum (WRLageZ, German Armed Forces), Uedem**

Technical Project Lead

EUSST Sensor Data Database Development

- Technical Project Lead
- Software Architect
- Sensor Data Integration (Telescope, Radar, SLR)
- Sensor Data Validation & Format Translation
- Software Development in Ruby, Java and JavaScript
- Web Development with Ruby on Rails
- Database Design and Development
- Management of database operations and maintenance
- Automated Acceptance Test Development
- Attending SST/SSA Conferences
- Project Documentation (ECSS)
- Operations Support

Area Space Situational Awareness (SSA)

July 2016 to July 2020

@ SCISYS

Product Maintainer

Automated Integration Testing Framework (AITF)

- Road Map Board Member
- Issue Management
- Release Management
- Software Development in (j)Ruby
- Domain Specific Language (DSL) Development
- Design and Development of the result inspection Web MMI
- User Trainings and Operations Support

Area End-To-End Test Automation

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Aug 2015 to Jan 2020

@ SCISYS

for **Thales Alenia Space France, Toulouse**

Main Module Maintainer

Galileo GACF and MDDN Elements

- Main maintainer of the central configuration management
- Design of the Software Module
- Design of SQL and NoSQL Schemata
- Software Development in Java, Java EE and JavaScript
- Project Documentation (GSWS)
- Customer & Operator Trainings

Area Ground Control Center Software

Aug 2015 to Jan 2019

@ SCISYS

for **European Space Operation Center (ESOC), Darmstadt**

Technical Project Lead

Anomaly Reports Tracking System (ARTS)

- Technical Project Lead
- Software Architect
- Software Development in Ruby, PHP and JavaScript
- Web Development with Ruby on Rails
- Database Design and Development
- Automated Acceptance Test Development
- Project Documentation (ECSS)
- Operations Support

Area Ground Control Center Software

LANGUAGES

Mother tongue(s) German

Other language(s)	Listening	Reading	Spoken interaction	Spoken production	Writing
English	C1	C1	B2	C1	C1
French	A1	A1	A1	A1	A1

Levels as of common European Framework of Reference for Languages: A1/2 Basic user, B 1/2 Independent user, C 1/2 Proficient user

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SCIENCE OUTPUT

Paper	M. Katzensteiner, S. Vogel, J. Hüsers, J. Richter, **J. Hölken**, N. Lesniewska, O.J.Bott; *Development of a Didactic Online Course Concept for Heterogeneous Audience Groups in the Context of Healthcare IT*, pHealth 2021, S. 219, doi:10.3233/SHTI210602	
	M. Wuttke, **J. Hölken**, C. Russmann; *Digitale Möglichkeiten für die Schulterrehabilitation*, Zeitschrift für Physiotherapie, July 2021	
Conferences	Poster: HINODE-16/IRIS-13, Niigata, Japan	2023-09
	Attended: 1st International Orbital Debris Conference (IOC), Houston, USA	2019-12
	Attended: 7th European Conference on Space Debris, Darmstadt, Germany	2017-04
	LOC support: Algebraic Geometry and Arithmetic, Essen, Germany	2010-02
Observations	2023b GREGOR/SolO campaign, telescope and instrument operation and observation at **GREGOR**, remotely from MPS, Göttingen, Germany	2023-10-12 to 2023-10-26
	Prototype extension of the FISS instrument and observation campaign, **Big Bear Solar Observatory (BBSO)**, Big Bear City, California, USA	2023-04-28 to 2023-05-21
	Prototype extension of the FISS instrument and observation campaign, **Big Bear Solar Observatory (BBSO)**, Big Bear City, California, USA	2022-09-13 to 2022-10-13
	SUSI ground operation: Flight preparation and operation, observation, **Sunrise-III**, Kiruna, Sweden	2022-05-01 to 2022-07-15
Teaching	Clean Code for (Astro-)Physicists [**own lecture**], WS 22/23, WS 23/24	IMPRS, Uni Göttingen
	Lab course: CCD Calibration (setup and execution), WS 22/23, SS23	Uni Göttingen
	Co-Supervision of two master-projects in the context of digital health application development, 2021	HAWK Göttingen
	Multiple workshops and trainings on Clean Code and Software Testing	SCISYS
	Tutor: „Analysis für Lehramtsstudiengänge der Grund-, Haupt-, Real-, und Gesamtschule" [WS 11/12, WS 13/14]	Uni Duisburg-Essen
	Tutor: „Modellieren für Lehramtsstudiengänge der Grund-, Haupt-, Real-, und Gesamtschule" [SS 12, SS 14]	Uni Duisburg Essen
Outreach	Institute guided tours (clean rooms, workshops, labs and science)	MPS, Göttingen
	Guided tours and public observations at the Göttingen Hainberg-Observatory (historic solar tower and nighttime telescopes)	AVG, Göttingen
	Public talks on diverse solar, physics and space science topics	AVG, Göttingen

VOLUNTARY WORK

2021 to present Amateurastronomische Vereinigung Göttingen e.V. (AVG)

Private club to preserve the historic Göttingen Hainberg-Observatory

2015 to 2021 NABU Deutschland e.V., local group Essen

Practical nature conservation

2007 to 2009 Second-Hand Dog e.V., Essen

Correcting animal shelter problem dog behavior

1999 to 2006 Disabled Group at evangelic Church, Bergkamen-Oberaden

Care for handicapped people

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