



# Stephan Heuel

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## Summary

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As an experienced Engineering Manager and digitalization expert, I bring technical expertise in the fields of data engineering, software development, statistics, and machine learning, and I possess extensive leadership experience in cross-functional teams. In my current position as Executive Director at MSCI, I make a significant contribution to the development of climate-related data products and successfully drive digital transformation by integrating agile methods as well as the use of AI and geospatial data.

My academic background in Computer Science and Geomatics, combined with my experience as a partner at EBP in IT consulting, allows me to integrate technology and business processes in a holistic manner. A key focus of my work is the effective communication and teaching of new and proven technologies and processes to all stakeholders involved: A deep understanding of the task and the technologies significantly increases quality and accelerates project execution.

## Work Experience

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### MSCI

Zurich

EXECUTIVE DIRECTOR AND OFFICE HEAD

March 2021 - Present

- Leading a team of more than 20 software developers in Zurich, Budapest, Berlin, and India
- Transformation and integration of the software infrastructure of a startup into a complex corporate architecture
- Design and planning of climate-related data products (footprinting, risk, and impact models for 10,000 publicly traded companies with 20 climate change scenarios)
- Introduction of agile methods and project management practices in a cross-functional team of 70 scientists and software developers
- Identifying and designing practical use cases for artificial intelligence, planning and execution including a multi-day Climate AI Hackathon with Google at the end of 2023
- Leading the MSCI office in Zurich with 50 employees, ensuring alignment and further development of the office with the company's objectives

### EBP Switzerland

Zurich

PARTNER, HEAD OF IT CONSULTING

January 2018 - March 2021

- Partner and member of the extended executive management of EBP
- Co-responsibility for growth in the IT sector from 25 to 40 people over 5 years
- Founding a new division for IT consulting in 2019
- Key Account Manager for, among others, SBB, Migros, and Swissgrid, responsible for integrated geospatial services on the SBB Mobile app and web.
- Provision of consulting services for public authorities at cantonal and national levels
- Initiation and market launch of innovative new consulting products, such as the "EBP Design Sprint"

### EBP Switzerland

Zurich

HEAD OF GEOINFORMATION

January 2010 - December 2017

- Leading the geoinformation and data science team of six people
- Focus on projects in the transport sector, particularly in the integration of geoinformation in strategy, architecture, data analysis, and training
- Successful acquisition of new client projects, including a major project with the Swiss Federal Railways
- Execution of several geodata projects and studies for autonomous driving, routing capabilities, and pedestrian accessibility

### EBP Switzerland

Zurich

PROJECT MANAGER

January 2007 - December 2009

- Rejoining EBP Switzerland as Project Manager and expert for GIS infrastructure
- Planning and development of the GIS infrastructure for MeteoSwiss based on the ArcGIS platform
- Successful integration of GIS with MeteoSwiss's internal data warehouse
- Taking on various roles in client projects (software architecture, business analysis, project management, quality assurance)

## Geo-Information Science and Earth Observation (ITC), University of Twente

ASSISTANT PROFESSOR FOR "MOBILE MAPPING"

Enschede, Netherlands

January 2005 - December 2006

- Research in the field of computer vision with image and radar sensors
- Advising three doctoral students
- Lectures for master's students in programming
- Publication of papers on the extraction of flood maps from oblique views captured from helicopters

## EBP Switzerland

Zurich

GIS ANALYST AND SOFTWARE DEVELOPER

January 2002 - December 2004

- Collaboration on several interdisciplinary projects
- Development of software and data flows for the first international flood risk maps on the web for Germany, France, and Luxembourg.
- Development of a database for critical infrastructure for the Federal Office for Security in Information Technology, Germany
- Leading and conducting training events for geospatial databases at cantonal offices.

## Siemens Corporate Research

Princeton, New Jersey, U.S.A.

VISITING RESEARCHER

September 1999 - April 2000

- Research on the extraction of cylindrical pipes from photos of industrial plants, particularly the extraction of straight lines from multiple photographs to estimate the position in 3D

## University of Bonn

Bonn, Germany

RESEARCH ASSOCIATE

September 1997 - December 2001

- Responsible for lectures and exercises for students in computer vision and machine learning
- Creation of a statistical algebraic framework for calculating points, lines, and planes with uncertainty
- Application of the framework to the extraction of buildings from aerial images
- The work was published at international conferences, awarded, and published in the "Lecture Notes for Computer Sciences" by Springer

## University of Southern California

Los Angeles, California, U.S.A.

VISITING RESEARCHER

August 2004 - August 2005

- Visiting researcher at the Computer Vision Lab
- Publication of a paper on incorporating interaction into an automated modeling system for buildings

## Education

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### University of Bonn

Germany

DR.-ING. GEOMATICS, SUMMA CUM LAUDE

August 1997 - December 2001

(Completed 2004)

### University of Bonn

Germany

DIPLOMA COMPUTER SCIENCE (MSc)

October 1991 - July 1997

## Technical Skills

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<b>Business Development</b>	Jira, Miro, Office Suite, Salesforce, Generative AI
<b>Data Science</b>	Python Stack, Statistical and geospatial Analysis, Data Visualization
<b>Software Development</b>	CI/CD (Azure Devops, Github), Cloud Computing (GCP, Azure), Kubernetes/Docker, Code Co-pilots
<b>Software Design</b>	Cloud Architecture, Data Engineering, Enterprise Systems, Digital Transformation
<b>Geoinformation</b>	ArcGIS platform, Open Source GIS, Specialized ETL tools

## Awards

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2000	<b>Best Paper Award "Statistically Testing Uncertain Geometric Relations"</b> , German Association for Pattern Recognition, DAGM	Kiel
2004	<b>Otto von Gruber Award</b> , International Society for Photogrammetry and Remote Sensing (ISPRS)	Istanbul

## Languages

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**German** Native  
**English** Proficient (C2)  
**French** Basic knowledge (A2)

## Out of Office Activities

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- Co-founder and Organizer of the GeoBeer Network Switzerland**, GeoBeer is a professional network of over 500 people interested in geography, GIS, cartography, and current technologies. With a newsletter, social media activities, and quarterly meetings, the exchange of ideas is promoted. Events take place throughout Switzerland and are sponsored by companies or organizations. Zurich
- Chairman of the Board of the Childcare Organization Verein FEE.**, The Verein FEE in Meilen offers high-quality, family- and school-complementary care services for children from four months until the end of primary school. The services include daycare centers, student clubs, and the placement of day families. The association employs 140 staff members. Meilen

## Selected Publications

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- Mobile augmented reality to identify mountains  
S. Karpischek, C. Marforio, M. Godenzi, S. Heuel, F. Michahelles  
*Roots for the Future of Ambient Intelligence*, 2009
- Multi-scale texture and color segmentation of oblique airborne video data for damage classification  
A.K. Rasika, N. Kerle, S. Heuel  
*International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences* 36 (2006). 2006
- Uncertain Projective Geometry  
S. Heuel  
. Lecture Notes in Computer Science 3008 (2004). 2004
- Points, lines, and planes and their optimal estimation  
S. Heuel  
*23rd DAGM Symposium, Munich, Germany, September 12-14, 2001. Proceedings*, 2001
- Matching, reconstructing and grouping 3D lines from multiple views using uncertain projective geometry  
S. Heuel, W. Förstner  
*Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition*, 2001
- Statistically Testing Uncertain Geometric Relations  
Wolfgang Förstner, Ansgar Brunn, Stephan Heuel  
*Mustererkennung 2000*, 2000
- Topological and geometrical reasoning in 3D grouping for reconstructing polyhedral surfaces  
S. Heuel, W. Förstner, F. Lang  
*International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, 2000
- Including interaction in an automated modelling system  
Stephan Heuel, Ramakant Nevatia  
*Proceedings of the IEEE International Conference on Computer Vision*, 1995