

DAVID CADUFF

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Work Address

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Current Position

University of Zurich, Department of Geography **Zurich, Switzerland**
■ PH.D. Student and Research Assistant
Geographic Information Visualization and Analysis (GIVA) Division

Education

University of Zurich - Irchel, Department of Geography **Zurich, Switzerland**
■ Ph.D. Student, March 2004 to present
■ Advisor: Sabine Timpf, Sara I. Fabrikant
■ Thesis topic: Landmark Saliency for Wayfinding Tasks
■ PhD Coursework: Spatial Analysis, People-based GIScience, Spatial Data Infrastructures, Spatial Databases, Dynamic Route Planning, Visualization of Spatio-temporal Data, Geospatial data quality, Artificial Intelligence, Seminars in Spatial Cognition, Neural Mechanisms in Spatial Cognition

University of Maine at Orono, Spatial Information Science and Engineering **Orono, ME, USA**
■ M.S. Spatial Information Science and Engineering, December 2002
■ Major GPA 3.8/4.0
■ Advisor: Max J. Egenhofer
■ Thesis Topic: Sketch-based Queries in Mobile GIS Environments

University of Applied Sciences Basel, (FHBB), Computer Science **Muttenz, Switzerland**
■ B.S. Computer Science (Dipl. Ing. FH NDS), April 2000
■ Advisor: Stephan Nebiker
■ Thesis Topic: A Java-based Client for Oracle 8i

University of Applied Sciences, Basel, Geodesy and Surveying **Muttenz, Switzerland**
■ B.S. Geodesy and Surveying (Dipl. Ing. HTL), December 1998
■ Advisor: Bruno Spaeni
■ Thesis Topic: Customizing of a GIS for Municipalities

Cavigelli and Partners, Ilanz, Switzerland **Ilanz, Switzerland**
■ Apprenticeship as Land Surveyor (Eidg. Dipl. Vermessungszeichner), June 1994
■ Vocational High School, Zurich, Switzerland

Current Research Interests: Spatial Cognition, Navigation and Wayfinding, and LBS

- “Landmark Theory: A Framework for the Assessment of Landmark Saliency for Wayfinding Tasks”: This work addresses the question on how to computationally assess the saliency of landmarks for wayfinding tasks.
- “Network Routing by Landmarks”: This work investigates methods to find routes in a network that can be described by a simple sequence of instructions. Typically, such instructions refer to landmarks, which are integrated in the instructions and need to be considered when generating route instructions.
- “Refined Route Instructions based on Topological Stages of Closeness ”: This work investigates the theoretical framework for dealing with position uncertainty in pedestrian guiding systems. Stages of closeness are defined based on the topological relation between the navigator and a waypoint, which allows refining route instructions.

Teaching Experience

- University of Zurich, Department of Geography** **Zurich, Switzerland**
- Advanced GIS course (GIS II), Winter 2004/05
Responsible for introductory lessons and lab preparation and assistance
 - Project Seminar (Projektseminar), Summer 2005 and 2006
Supervision of independent projects by group of students
 - Supervision of students working on diploma thesis
- University of Maine at Orono, Spatial Information Science and Engineering** **Orono, ME USA**
- Engineering Databases and Information Systems (SIE 451), Fall 2002
Responsible for labs and the web-based part of the course

Academic Honors and Review Work

- University of Zurich, Department of Geography** **Zurich, Switzerland**
- Teaching Assistantship, Winter 2004/2005
 - Research Assistantship, January 2004 to August 2006
Problem-solving knowledge for multi-modal wayfinding
SNF Project Nr.: 2151-065291, 205120-101631, 205120-109621
- University of Maine at Orono, Spatial Information Science and Engineering** **Orono ME, USA**
- Teaching Assistantship, August 2001 to December 2002
 - Research Assistantship, August 2000 to August 2001
Spatial Sketches on a Palm Pilot, Funded by Lockheed&Martin
- University of Applied Sciences, Basel, Geodesy and Surveying** **Muttenz, Switzerland**
- Recipient Leica Award for best Diploma Thesis, January 1999
LEICA Geosystems AG, Glattbrugg, Switzerland
Thesis title: Customizing of a GIS for Municipalities
- IADIS International Conference, WWW/Internet 2006** **Murcia, Spain**
- Reviewer, Spring 2006
- National Science Foundation (NSF)** **USA**
- Proposal Reviewer, Spring 2006

Work Experience

- IST - Intelligent Spatial Technologies and
NCGIA - National Center for Geographic Information and Analysis** **Orono ME, USA**
- Senior Software Developer, March 2003 – December 2003
Responsibilities range from technical management of Smart Map Project to research, design, and development of intelligent spatial technologies
- Geonova AG** **Muttenz, Switzerland**
- Software Developer, April 2000 – August 2000
Activities include development and maintenance of database- and web-based applications for GIS, implementation and testing of software, and customer support
- Cavigelli and Partners** **Ilanz, Switzerland**
- Land Surveyor. Juli 1994 – August 1995, Summer 1996 – 1998, January 1999 – March 1999
Activities include leading a surveying team performing field work, cadastral and geodetic project management

References

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Max J. Egenhofer

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Other

- Proficient with several GIS packages and related software, programming languages (C/C++, Tcl/Tk, Java), Matlab, Statistical analysis tools, and Office applications
- Fluent in Romontsch and German, Proficient in English, Fair in French and Italian