Alexandra Diehl

Department of Informatics
University of Zurich

1. Current Position

Senior researcher at the Visualization and MultiMedia Lab,   May 2019
Department of Informatics, University of Zurich (UZH).

  (I) **Co-Principal Investigator -** in the Swiss National Science Foundation (SNSF) SPIRIT Grant "*UnWeather Vizard: Uncertainty Visualization and Analysis of High-Resolution Numeric Weather Forecasts*".

  (II) **Senior researcher -** in the SNSF Sinergia project *"Narratives from the long tail: Transforming access to audiovisual archives"*, in collaboration with EPFL and University of Amsterdam.

  (III) **Chefentwicklerin Interaktive KI -** in the project *"ALVA: Automated Learning and Visualization of Autistic features"* for the study and development of deep learning and visual analytics methods to classify behaviour patterns of children with autism. This project is a collaboration among the UZH, University Hospital for Psychiatry Basel, and the FIAS (Short-Term and Highly Intensive Early Intervention) center. Funded by Hasler Stiftung and Swiss Seaside Foundation.

2. Education

PhD in Computer Science, University of Buenos Aires (UBA), Argentina.	2009–2016
Software Engineer - Worked at several companies as Software Developer and Software Engineer.	2001–2008
Diploma in Computer Engineering, University of Buenos Aires, Argentina.	1996–2005

3. Academic Experience

Lecturer in Computer Science (**Tenure**) - appointed at the College of Science, Swansea University, Swansea, United Kingdom.	May 2019
Postdoctoral fellow at the Data Analysis and Visualization group, University of Konstanz, Germany.	2016–2019
Full-time **research and teaching assistant**, University of Buenos Aires, Argentina.	2012–2016
Research assistant fellow, University of Buenos Aires, Argentina.	2011
Research visitor at Institute of Visual Computing & Human-Centered Technology, TU Wien, Austria.	(several stays) 2011 - 2022
Research exchange student (Erasmus Mundus), Friedrich-Schiller-Universität Jena, Germany.	2011
Research assistant fellow, CONICET (National Research Council of Argentina).	2009–2010
Research assistant at CITEDEF, Institute of Scientific and Technological Research of the Army Force, Argentina.	2008–2009

4. Industry Experience

Data Vis Scientist at FIAS-Therapiemethode sowie zum Therapiezentrum (NGO), Switzerland.	2022-Ongoing
Data Vis Scientist at The Right Livelihood Award Organization (NGO), Switzerland.	2021-2022
Software engineer at various software development companies:	2004–2007

- Huddle Group S.A., Argentina.
- Redynet Group S.A., Argentina.
- EDS S.A. for Siderar/Techint, Argentina.

Software developer at various software development companies:	2001–2004

- Recursos Action S.A., for Repsol YPF.
- CODE S.A.
- RMyA S.A., Argentina.

5. Mentorship Activities

Master thesis:

- Mr. Joe Müller (UZH)   August 2023
  Topic: "VisKnowsBest: A Web Catalogue of Visualization Guidelines and Best Practices"
- Ms. Dominique Hässler (UZH)   December 2022
  Topic: "Visual Analysis of Weather Discoverers' Networks"
- Ms. Melike Çiloglu (UZH)   September 2022
  Topic: "Unveiling the Inner Structures of the Montreux Jazz Music Festival"

- Mr. Uensal Satan (UZH)   July 2022
  Topic: "OIC - Visual Patterns for Runners of One of a Kind"
- Mr. Sajan Srikugan   August 2021
  Topic: "VisGuidesExplorer - A Comprehensive and Semi-Automatic Study of Visualization Guidelines"
- Mr. Ananya Pandya (UZH)   July 2021
- Topic: "Towards Citizen-driven Visual Design of Weather Forecast Visualizations based on cognitive science
- Ms. Nida Cilasun (University of Konstanz)   February 2020
- Topic: "eBird Visual Analytics: Understanding Uncertain and Contradictory Reports from Birders".
- Mr. Leandro Pelorosso (University of Buenos Aires)   August 2018
- Topic: "Visualization of Probabilistic Forecasts for Decision Making".
- Mr. Michael Hundt (University of Konstanz)   April 2018
  Topic: "Visual Analysis of Geo-echo Chambers and Social Media for Journalism".

Advisory of Master Project's students (16 students)   **2019–2023**
at IFI, UZH ranging from geovisualization to visual analytics topics.

6. Teaching Duties

Course Developments
- UZH IFI Seminar :"Seminar Best Practices and Guidelines for Visualization (BINFS161)"   HS21, HS22, HS23
- UZH Film Research Group Seminar, P-8: Projekt DISK4U (Digital Skills for You):   HS21, HS22
  "Visual Analytics for Digital Humanities"
- Design of the curriculum for the course "Data Visualization Concepts"   HS19
  at the University of Zurich, Switzerland.
- Design of the curriculum for the course "Information Visualization"   2016
  at the Data Mining Master at the University of Buenos Aires, Argentina.

Courses Taught and Currently Teaching
- IFI Seminar :"Seminar Best Practices and Guidelines for Visualization (BINFS161)"   HS21, HS22
  at the University of Zurich, Switzerland.
- IFI Seminar "Seminar in Graphics and Multimedia (BINFS130, MMINFS530)"   HS21
  at the University of Zurich, Switzerland.
- DSI Seminar "Interdisciplinary Reading Seminar"   SS20
  at the Digital Society Initiative, University of Zurich, Switzerland.
- Lecturer in the course "Data Visualization Concepts"   HS19, HS20, FS22
  at the University of Zurich, Switzerland.
- Lecturer in the course "Information Visualization   WS 16/17, WS 18/19, WS 17/18
  at the University of Konstanz, Germany.
- Lecturer in the course "Geographic Information Systems"   SS18, SS17,
  at the University of Konstanz, Germany.
- Lecturer in the course "Information Visualization"   First Semester 2016
  at the Data Mining Master at the University of Buenos Aires, Argentina.
- Lecturer in the course "Informatics 1"   2013–2014
  at the Catholic University of Buenos Aires, Argentina.
- Teaching assistant in the course "Algorithms and Data Structures I"   2012–2016
  at the University of Buenos Aires, Argentina.
- Teaching assistant in the course "Software Engineering 1"   2009–2010
  at the University of Buenos Aires, Buenos Aires, Argentina.

Institutional Responsibilities
- Delegate representative for the Post-Docs and Senior Assistants   2020–Ongoing
  at the Department of Informatics, University of Zurich
- Representative of the Equal Opportunity Officer for the application process   May–December 2017
  of the W1 professorship "Virtual Reality", University of Konstanz, Germany

7. Research Projects as Leading Investigator and Grants

SNF SPIRIT Grant "UnWeather Vizard: Uncertainty Visualization and Analysis of High-Resolution Numeric Weather Forecasts" (circa 600K CHF) 2023-2027.
Project Partner (Significantly contributed to the project proposal).

Funded project "ALVA: Automated Learning and Visualization of Autistic features". (50K CHF) 2022, (50K CHF) 2023, funded by the Hasler Stiftung.
Lead computer scientist partner of the pilot project

Digital Society Initiative (DSI) Fellowship Project 2020–2022 (25K CHF)
"Visual Tools based on Citizen Data for Improving the Communication of Severe Weather Events". Recipient: Alexandra Diehl. (25 K CHF) https://www.dsi.uzh.ch/en/research/documents/fellowship.html

Priority Programme "Volunteered Geographic Information: Interpretation, Visualisation and Social Computing" (SPP 1894)
"Guiding the Crowds: Uncertainty and Trust-Aware Visual Analytics for Mobility based on Heterogeneous Volunteered Geographic Information." (Execution).

8. Prizes, Fellowships and Memberships

Fellowship from the Digital Society Initiative (DSI) at University of Zurich,	2020–2022
Fellowship from the CONICET (National Research Council of Argentina),	2009–2010
Membership at the GI (Die Gesellschaft für Informatik e.V.)	2021–Ongoing

ACM-W Scholarship Award (http://women.acm.org/scholarship) for attendance to the SIGGRAPH 2014.
Honorable mention award: Alireza Amiraghdam, Alexandra Diehl, and Renato Pajarola."LOCALIS: Locally-adaptive Line Simplification for GPU-based Geographic Vector Data Visualization". *Computer Graphics Forum 2020.*
Best paper award: Bruno Schneider, Dominik Jäckle, Florian Stoffel, Alexandra Diehl, Johannes Fuchs, and Daniel Keim. "Visual Integration of Data and Model Space in Ensemble Learning".
Symposium on Visualization in Data Science (VDS) at IEEE VIS 2017. arXiv:1710.07322 [cs.HC].

9. Invited Presentations and Talks

Invited talks:
- "Visual Tools for the Communication and Analysis of High-Impact Weather Events"   December 2022
  at the Visualization Group of the TU Wien, Austria.
- "Visual Analytics of Weather Forecasts"   November 2019
  at the Visualization Group of the TU Wien, Austria.
- Invited talk: "Applications of Geospatial Visual Analytics"   August 2019
  at the Visualization Group of the University of Bergen, Norway.
- Hands-on workshop: VGIScience, collaborative Research Week (CRW),   May 2018
  University of Heidelberg, Germany.
- Invited talk: "Geospatial Visualization",   February 2017
  University of Heidelberg, Germany.
- Invited talk: "Deciphering Multiple Aspects of Uncertainty in the Visual Analysis   February 2018
  of Social Media Data" at the Visualization Group of the TU Wien, Austria.
- Invited talk: "Geospatial Visual Analytics Applications for Predictive Analysis"   August 2018
  University of Heidelberg, GIS Science Group, Germany.
- Invited talk: "Visual Analysis of Spatio-Temporal Data: Applications in Weather   July 2015
  Forecasting" at the Visualization Group of the TU Wien. Austria.
  Kickoff of the bilateral collaboration project: "Weather Forecast Visualization: May 2015
  Ongoing projects" at the Visualization Group of the TU Wien. Austria.
- Invited talk: "Geovisualization" at the Friedrich-Schiller University of Jena, Germany.   July 2012

Kickoff presentation:
- Project "GPGPU Applications in Environmental Sciences"
  at the Latin-American Workshop,
  Microsoft Faculty Summit 2011, Redmond, WA, USA.   July 2011

10. Conference Organization

Poster Co-chair: EuroVis 2024, Odense, Denmark.
Student Volunteer Co-organizer: EuroVis 2021, Zurich, Switzerland.
Co-organizer: IEEE VisGuides Workshop at IEEE VIS 2022, Oklahoma City, USA.

Co-organizer: IEEE VisGuides Workshop at IEEE VIS 2020, Salt Lake City, USA.

Co-organizer: IEEE VisGuides Workshop at IEEE VIS 2018, Berlin, Germany.

Co-organizer: Meetup at I EEEVIS 2019, Vancouver, Canada. "Viewpoints on Diversity through the VIS history".

Co-organizer: Meetup at IEEEVIS 2017, Phoenix, USA. "Career Plans for Women in Visualization".

Local organizer: BDVA 2018, International Symposium on Big Data Visual Analytics, Konstanz, Germany.

11. Outreach

NII Shonan Meeting "Augmented Software Visualization"
At Shonan Village Center, Japan, November 27 - 30, 2023.

Dagstuhl Seminar 22261
Participant of the "Visualization Empowerment: How to Teach and Learn Data Visualization" seminar. 2022-06-26 to 2022-07-01. https://www.dagstuhl.de/2226a

International Program Committee member
- EuroGraphics 2021–2022.
- EuroVis 2019–2023: STAR Reports and Short Papers track.
- ISVC (International Symposium on Visual Computing) 2017–2023.

Reviewer
IEEE TVCG, EuroVis, EuroGraphics, Information Visualization Journal, Pacific Graphics Notes, among others

VisGuides
www.visguides.org
Main responsible for VisGuides, an open, public, and democratic discussion forum that supports community-driven learning about visualization guidelines since 2017.

12. References

Prof. Dr. Min Chen
http://www.oerc.ox.ac.uk/people/min-chen
Email: min.chen@oerc.ox.ac.uk

Prof. Dr. M. Eduard Gröller
https://www.cg.tuwien.ac.at/staff/EduardGroeller.html
Email: groeller@cg.tuwien.ac.at

Prof. Dr. M. Stefan Bruckner
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Prof. Dr. Renato Pajarola
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