Daniel Haehn, University of Massachusetts Boston haehn@cs.umb.edu haehn danielhaehn.com

I am a biomedical imaging and visualization researcher who investigates how computational methods can accelerate biological and medical research.

Education

2019 **PhD in Computer Science, Harvard University** Cambridge, MA
Analyzing Brain Connectivity and Computing Machine Perception
Advisor: Hanspeter Pfister
Committee: Steven Gortler, Finale Doshi-Velez, Scott Kuindersma, Jeff W. Lichtman

2010 **Diplom (MSc) in Medical Computer Science, University of Heidelberg** Germany
Signal- and Image Processing
Thesis: Coronary Artery Centerline Extraction
Advisors: Hartmut Dickhaus, Ron Kikinis

2007 **Vordiplom (BSc) in Medical Computer Science, University of Heidelberg** Germany
with Honors, rank #1 of class, all study fees waived

Experience

2019–present **University of Massachusetts Boston** Boston, MA
Assistant Professor of Computer Science (Tenure-track)
Director of the Machine Psychology research group
Associate of the Harvard John A. Paulson School of Engineering and Applied Sciences

Summer 2017 **Apple, Inc.** Cupertino, CA
Research Intern in Data Science

Summer 2014 **Mental Canvas** New York City, NY
Research Intern in Computer Graphics

2011–2013 **Boston Children's Hospital** Boston, MA
Research Software Developer III, Fetal Neonatal Neuroimaging and Developmental Science Center
Advisors: Rudolph Pienaar, P. Ellen Grant

Experience (continued)

2010–2011 **University of Pennsylvania** Philadelphia, PA
Research Scholar, Section for Biomedical Image Analysis
Advisor: Kilian Pohl

2009 **German Cancer Research Center (DKFZ) and BioQuant Center** Heidelberg, Germany
Research Assistant, Biomedical Computer Vision and Experimental Radiology Research Groups
Advisors: Stefan Wörz, Hendrik von Tengg-Kobligk

2008–2009 **Brigham and Women's Hospital** Boston, MA
Fellow, Department of Radiology and the Surgical Planning Laboratory
Advisors: Ron Kikinis, Steve Pieper, Luca Antiga

Publications

From UMass Boston (* undergraduate student, ** graduate student; all peer-reviewed)

2022 Neha Goyal**, Yahiya Hussain*, Gianna G. Yang*, and Daniel Haehn. **Real-Time Alignment for Connectomics**. *Springer LNCS: Biomedical Image Registration (WBIR).*

2022 Francois Rheault, Valérie Hayot-Sasson, Robert E. Smith, Christopher Rorden, Jacques-Donald Tournier, Eleftherios Garyfallidis, Fang-Cheng Yeh, Christopher J. Markiewicz, Matthew Brett, Ben Jeurissen, Paul A. Taylor, D. Baran Aydogan, Derek A. Pisner, Serge Koudoro, Soichi Hayashi, Daniel Haehn, Steve Pieper, Daniel Bullock, Emanuele Olivetti, Jean-Christophe Houde, Marc-Alexandre Côté, Flavio Dell'Acqua, Alexander Leemans, Maxime Descoteaux, Bennett Landman, Franco Pestilli, and Ariel Rokem. **TRX: A community-oriented tractography file format**. *OHBM 2022-Human Brain Mapping (Oral).*

2022 Jay Burkhardt*, Aaryaman Sharma*, Jack Tan*, Loraine Franke**, Jahnavi Leburu**, Jay Jeschke, Sasha Devore, Daniel Friedman, Jingyun Chen, and Daniel Haehn. **N-Tools-Browser: Web-Based Visualization of Electrocorticography Data for Epilepsy Surgery.** *Frontiers in Bioinformatics*.

2022 Katharina Paulick, Simon Seidel, Christoph Lange, Annina Kemmer, Mariano Nicolas Cruz-Bournazou, André Baier, and Daniel Haehn. **Promoting Sustainability through Next-Generation Biologics Drug Development.** *MDPI Sustainability*.

Publications (continued)

From UMass Boston (continued) (* undergraduate student, ** graduate student)

2022 Nalini M. Singh, Jordan B. Harrod, Sandya Subramanian, Mitchell Robinson, Ken Chang, Suheyla Cetin-Karayumak, Adrian Vasile Dalca, Simon Eickhoff, Michael Fox, Loraine Franke**, Polina Golland, Daniel Haehn, Juan Eugenio Iglesias, Lauren J. O'Donnell, Yangming Ou, Yogesh Rathi, Shan H. Siddiqi, Haoqi Sun, M. Brandon Westover, Susan Whitfield-Gabrieli, and Randy L. Gollub. **How Machine Learning is Powering Neuroimaging to Improve Brain Health.** *Neuroinformatics*.

2021 Bella Baidak*, Yahiya Hussain*, Emma Kelminson*, Thouis R. Jones, Loraine Franke**, and Daniel Haehn. **CellProfiler Analyst Web (CPAW) - Exploration, analysis, and classification of biological images on the web.** *IEEE Visualization Short Paper (IEEE VIS)*.

2021 Loraine Franke**, Daniel Karl I Weidele, Fan Zhang, Suheyla Cetin-Karayumak, Steve Pieper, Lauren J O'Donnell, Yogesh Rathi, and Daniel Haehn. **FiberStars: Visual Comparison of Diffusion Tractography Data between Multiple Subjects.** *IEEE Pacific Visualization (PacificVis)*.

2020 Loraine Franke** and Daniel Haehn. **Modern Scientific Visualizations on the Web**. *MDPI Informatics*.

2020 Daniel Haehn, Loraine Franke**, Fan Zhang, Suheyla Cetin Karayumak, Steve Pieper, Lauren O'Donnell, and Yogesh Rathi. **TRAKO: Efficient Transmission of Tractography Data for Visualization**. *Medical Image Computing and Computer-Assisted Intervention (MICCAI)*.

2020 Vincent Casser, Kai Kang, Hanspeter Pfister, and Daniel Haehn. **Fast Mitochondria Detection for Connectomics**. *International Conference on Medical Imaging with Deep Learning (Spotlight Award at MIDL)*.

2020 Zudi Lin, Donglai Wei, Won-Dong Jang, Siyan Zhou, Xupeng Chen, Xueying Wang, Richard L. Schalek, Daniel R. Berger, Brian Matejek, Lee D. Kamentsky, Adi Peleg, Daniel Haehn, Thouis R. Jones, Toufiq Parag, Jeff W. Lichtman, and Hanspeter Pfister. **Two-Stream Active Query Suggestion for Large-Scale Object Detection in Connectomics**. *European Conference on Computer Vision (ECCV)*.

2020 Fritz Lekschas, Brant Peterson, Daniel Haehn, Eric Ma, Nils Gehlenborg, and Hanspeter Pfister. **Peax: Interactive Visual Pattern Search in Sequential Data Using Unsupervised Deep Representation Learning.** *Computer Graphics Forum (Best Paper Award at EuroVis)*.

Prior to UMass Boston

2019 Brian Matejek, Daniel Haehn, Haidong Zhu, Donglai Wei, Toufiq Parag, and Hanspeter Pfister. **Biologically-Constrained Graphs for Global Connectomics Reconstruction**. *IEEE Computer Vision and Pattern Recognition (CVPR)*.

Publications (continued)

Prior to UMass Boston (continued)

2018 Daniel Haehn, James Tompkin, and Hanspeter Pfister. **Evaluating 'Graphical Perception' with CNNs.** *IEEE Transactions on Visualization and Computer Graphics (IEEE VIS).*

2018 Daniel Haehn, Verena Kaynig, James Tompkin, Jeff W. Lichtman, and Hanspeter Pfister. **Guided Proofreading of Automatic Segmentations for Connectomics**. *IEEE Computer Vision and Pattern Recognition (CVPR).*

2017 Daniel Haehn, John Hoffer, Brian Matejek, Adi Suissa-Peleg, Ali K. Al-Awami, Lee Kamentsky, Felix Gonda, Eagon Meng, William Zhang, Richard Schalek, Alyssa Wilson, Toufiq Parag, Johanna Beyer, Verena Kaynig, Thouis R. Jones, James Tompkin, Markus Hadwiger, Jeff W. Lichtman, and Hanspeter Pfister. **Scalable Interactive Visualization for Connectomics.** *MDPI Informatics*.

2017 Brian Matejek, Daniel Haehn, Fritz Lekschas, Michael Mitzenmacher, and Hanspeter Pfister. **Compresso: Efficient Compression of Segmentation Data For Connectomics**. *Medical Image Computing and Computer-Assisted Intervention (MICCAI).*

2017 Felix Gonda, Verena Kaynig, Thouis R. Jones, Daniel Haehn, Jeff W. Lichtman, Toufiq Parag, and Hanspeter Pfister. **ICON: An Interactive Approach to train Deep Neural Networks for Segmentation of Neuronal Structures**. *IEEE International Symposium on Biomedical Imaging (ISBI).*

2017 Rudolph Pienaar, Ata Turk, Jorge Bernal-Rusiel, Nicolas Rannou, Daniel Haehn, P. Ellen Grant, and Orran Krieger. **CHIPS--A Service for Collecting, Organizing, Processing, and Sharing Medical Image Data in the Cloud**. *VLDB Workshop on Data Management and Analytics for Medicine and Healthcare*.

2016 Adi Suissa-Peleg, Daniel Haehn, Seymour Knowles-Barley, Verena Kaynig, Thouis R. Jones, Alyssa Wilson, Richard Schalek, Jeff W. Lichtman, and Hanspeter Pfister. **Automatic Neural Reconstruction from Petavoxel of Electron Microscopy Data.** *Microscopy and Microanalysis*.

2016 Ali K. Al-Awami, Johanna Beyer, Daniel Haehn, Narayanan Kasthuri, Jeff W. Lichtman, Hanspeter Pfister, and Markus Hadwiger. **NeuroBlocks--Visual Tracking of Segmentation and Proofreading for Large Connectomics Projects.** *IEEE Transactions on Visualization and Computer Graphics (IEEE VIS).*

2016 Richard Schalek, Dong Lee, Narayanan Kasthuri, Adi Peleg, Thouis R. Jones, Verena Kaynig, Daniel Haehn, Hanspeter Pfister, David Cox, and Jeff W. Lichtman. **Imaging a 1 mm^3 Volume of Rat Cortex using a Multi-Beam SEM.** *Microscopy and Microanalysis*.

2015 Kiho Im, Banu Ahtam, Daniel Haehn, Jurriaan M. Peters, Simon K. Warfield, Mustafa Sahin, and P. Ellen Grant. **Altered Structural Brain Networks in Tuberous Sclerosis Complex.** *Cerebral Cortex*.

Publications (continued)

Prior to UMass Boston (continued)

2015 Rudolph Pienaar, Nicolas Rannou, Jorge Bernal, Daniel Haehn, and P. Ellen Grant. **ChRIS--A web-based Neuroimaging and Informatics System for Collecting, Organizing, Processing, Visualizing and Sharing of Medical Data**. *IEEE Engineering in Medicine and Biology Society (EMBC)*.

2014 Daniel Haehn, Seymour Knowles-Barley, Mike Roberts, Johanna Beyer, Narayanan Kasthuri, Jeff W. Lichtman, and Hanspeter Pfister. **Design and Evaluation of Interactive Proofreading Tools for Connectomics.** *IEEE Transactions on Visualization and Computer Graphics (IEEE VIS)*.

2013 Daniel Haehn, Nicolas Rannou, P. Ellen Grant, and Rudolph Pienaar. **Slice:Drop -- Collaborative Medical Imaging in the Browser**. *ACM SIGGRAPH Computer Animation Festival*.

2012 Daniel Haehn, Nicolas Rannou, Banu Ahtam, P. Ellen Grant, and Rudolph Pienaar. **Neuroimaging in the Browser using the X Toolkit.** *Frontiers in Neuroinformatics (Spotlight Award at INCF Neuroinformatics)*.

2012 Myong-sun Choe, Silvia Ortiz-Mantilla, Nikos Makris, Matt Gregas, Janine Bacic, Daniel Haehn, David Kennedy, Rudolph Pienaar, Verne S. Caviness Jr, April A. Benasich, and P. Ellen Grant. **Regional Infant Brain Development: an MRI-based Morphometric Analysis in 3 to 13 month olds.** *Cerebral Cortex*.

2012 Arno Klein, Forrest S. Bao, Yrjö Häme, Eliezer Stavsky, Joachim Giard, Daniel Haehn, Nolan Nichols, and Satrajit S. Ghosh. **Mindboggle: Automated Human Brain MRI Feature Extraction, Labeling, Morphometry, and Online Visualization.** *Frontiers in Neuroinformatics*.

2012 Arno Klein, Nolan Nichols, and Daniel Haehn. **Mindboggle 2 interface: Online Visualization of Extracted Brain Features with XTK.** *Frontiers in Neuroinformatics*.

Grants

Funded (* Principal Investigator)

2022–2024 Sloan Foundation Grant: **Culture Change in Computer Science and Engineering at the University of Massachusetts Public University System: A Partnership Between UMass Boston and Amherst**, UMB Site-PI (Co-PI Kimberly Hamad Schifferli, UMass Amherst: PI Nilanjana (Buju) Dasgupta, Co-PI Neena Thota, Co-PI Shannon Roberts), $499,972.00 (UMB share $238,948.00)

2021–2023 National Institutes of Health, R21: **Real-time visualization and precision targeting in transcranial magnetic stimulation**, Co-PI (PI Lipeng Ning, Harvard Medical School), $493,011.00 (UMB share $156,663.00)

2021–2022 UMass Boston, Proposal Development Grant: **Towards Developing Deep Learning Approaches for Protein-Protein Interaction Detection**, Co-PI (PI Nurit Haspel, UMB), $20,000.00

Grants (continued)

Funded (continued) (* Principal Investigator)

2020–2023 *Massachusetts Life Sciences Center, Bits to Bytes: **The Oregon-Massachusetts Mammography Database (OMAMA-DB)**, (Co-PIs Haspel, Tonyushkin, Pomplun, Simovici; UMB), $749,834.00

2020 Federal Ministry of Education and Research Germany: International Future Labs for Artificial Intelligence in collaboration with the KIWI Biolab at the Technical University Berlin (covering 18 months exchange visits of a PostDoc and a Ph.D. student), (PI Cruz-Bournazou, TU Berlin)

2019 *NVidia Accelerated Data Science GPU Grant, 1x Titan V100 GPU

Presentations

* invited presentation

2022 *Speaker at the **High Performance Computing Day**: *Processing of Massive Biological Datasets at UMB*

2022 *Speaker at **Visualizing Biological Data (VIZBI)**: *Masterclass on Scientific Visualization*

2021 *Presenter at the **UMass Summit for AI, Data Science, and Robotics**

2020 *Presenter at the **Creative Commons Global Summit**: *The 7 Levels of Open Science*

2020 Presenter at the **National Alliance for Medical Image Computing Project Week**: *Integrating TRAKO with 3D Slicer*

2020 *Speaker at the **Fetal Neonatal Developmental Science Center, Boston Children's Hospital**: *Scientific Visualization at Scale!*

2020 Paper presentation at **International Conference on Medical Image Computing and Computer Assisted Intervention**: *TRAKO: Efficient Transmission of Tractography Data for Visualization*

2020 *Speaker at the **Lymph Node Quantification Project, Harvard Medical School**: *Machine-Guided Annotation Methods*

2020 Paper presentation at **Medical Imaging with Deep Learning (MIDL)**: *Fast Mitochondria Detection for Connectomics*

2020 *Presentation at the **UMass Boston-Dana Farber/Harvard Cancer Center initiative**: *Guided Tumor Detection and Annotation Methods for Cancer Imaging*

2020 *Speaker at the **Massachusetts Life Sciences Center**: *The Oregon-Massachusetts Mammography Database*

2020 *Researcher at **Shonan Meeting No. 167 in Japan**: *Formalizing Biological and Medical Visualization*

2019 *Speaker at **Sarah Frisken's Lab, Harvard Medical School**: *Brain Connectivity, Machine Perception, and Computer Graphics - all at different scales!*

2019 *Speaker at **Suffolk University**: *Brain Connectivity and Machine Perception*

2019 *Speaker at the **MIT McGovern Institute**: *The Performance Gap between the Brain and AI*

2018 Paper presentation at **IEEE Visualization**: *Evaluating 'Graphical Perception' with CNNs*

Presentations (continued)

* invited presentation

2018	**Harvard Visual Computing Group** meeting presentation: *The 7 Levels of Open Science*
2018	*Speaker at **Brown University, Department of Computer Science**: *Analyzing Brain Connectivity and Computing Machine Perception*
2018	*Speaker at **IBM Research** (AI Systems Day): *Evaluating 'Graphical Perception' with CNNs*
2017	**Harvard Visual Computing Group** meeting presentation: *Guided Proofreading of Automatic Segmentations for Connectomics*
2016	*Speaker at the **IEEE Visualization Doctoral Colloquium**: *Proofreading for Connectomics*
2015	**Harvard Lichtman Lab** meeting presentation: *Interactive Proofreading Tools for Connectomics*
2014	Paper presentation at **IEEE Visualization**: *Design and Evaluation of Interactive Proofreading Tools for Connectomics*
2014	**Harvard Visual Computing Group** meeting presentation: *Proofreading Tools for Connectomics*
2014	*Speaker at the **MIT Computer Graphics Group**: *Web-based Visualization of Scientific Data*
2014	**Harvard Visual Computing Group** meeting presentation: *Interactive Proofreading with Dojo*
2014	**Harvard Lichtman Lab** meeting presentation: *Web-based Visualization and Proofreading for Connectomics*
2013	**Harvard Visual Computing Group** meeting presentation: *Web-based Scientific Visualization*
2013	*Speaker at **Visualizing Biological Data (VIZBI)**: *Physiology & Function*
2012	Spotlight presentation at **INCF Neuroinfomatics**: *Neuroimaging in the Browser using the X Toolkit*
2012	*Speaker at **WebGL Camp Orlando**: *WebGL for Baby Brains*

Awards

2022	Selected for Oral Presentation at ISMRM Neuromodulation for TMS Visualization
2022	Selected for Oral Presentation at the Organization for Human Brain Mapping for TRX
2020	Best Paper Award at EuroVis for Peax
2020	Spotlight Award at MIDL: Fast Mitochondria Detection for Connectomics
2020	AI Scientist of the Future for the KIWI Biolab at the Technical University Berlin, Germany
2015–2019	Winkler Scholarship
2013–2019	Harvard University Fellowship
2013	Real-Time Live! presentation of Slice:Drop at SIGGRAPH
2012	INCF Neuroinformatics Spotlight Award for XTK
2012	Mozilla Hacks WebGL Dev Derby Runner-up for Slice:Drop
2012	Visualizing.org VisWeek Challenge Winner with Slice:Drop

Awards (continued)

2010	1st Prize for End User Tutorial at the National Alliance of Medical Image Computing (NA-MIC)
2008–2009	Karl Steinbuch Foundation Scholarship
2007–2009	Thomas Gessmann Foundation Scholarship

Teaching

At UMass Boston (* re-designed course, ** new course, main instructor unless indicated)

2022	Guest Lecturer for CS615 User Interface Design
2022	CS480/CS697 Special Topics: Biomedical Signal and Image Processing (27 students, Instructor rating: 5/5, Course rating: 4.93/5)
2022	CS410 Introduction to Software Engineering (62 students, Instructor rating: 4.23/5, Course rating: 4.41/5)
2022	Guest Lecturer for BIOL693 Seminar in Neurobiology
2021	Guest Lecturer for CS615 User Interface Design
2021	CS460 Graphics (20 students, Instructor rating: 5/5, Course rating: 4.94/5)
2021	**CS480/CS697 Special Topics: Biomedical Signal and Image Processing (27 students, Instructor rating: 4.8/5, Course rating: 4.75/5)
2021	CS410 Introduction to Software Engineering (47 students, Instructor rating: 4.59/5, Course rating: 4.45/5)
2020	CS460 Graphics (28 students, Instructor rating: 4.9/5, Course rating: 4.9/5)
2020	*CS410 Introduction to Software Engineering (27 students, Instructor rating: 4.87/5, Course rating: 4.73/5)
2019	**CS460 Graphics (24 students, Instructor rating: 4.81/5, Course rating: 4.57/5)
2019	Guest Lecturer for two lectures of the CS187 Science Gateway Seminar

Outside UMass Boston

2021	Guest Lecturer for CSCI2254 Web Application Development at Boston College
2020	Guest Lecturer for CSCI2254 Web Application Development at Boston College
2019	Guest Lecturer for the CMPSC131 Computer Science course at Suffolk University
2018–2019	TEALS Volunteer for AP Computer Science at Cambridge Rindge and Latin School
2016	Technical Assistant for the Deep Learning mini-course at the Harvard IACS Compute Fest
2015	Teaching Fellow for the Harvard CS171 Visualization course
2008	Workshop for Advanced Microcontroller Programming, University of Bratislava, Slovakia
2008	Workshop for Microcontroller Programming at the University of Tbilisi, Georgia (Europe)
2004–2008	Teaching Assistant for the Microcontrollers in EXperiment and LEarning (MEXLE) educational platform, Heilbronn University, Germany

Mentoring

Graduate Students (PhD)

2022–present	Mahsa Geshvadi, Computer Science, University of Massachusetts Boston
2020–present	Kristin (Yanan) Qi, Computational Sciences, University of Massachusetts Boston
2021	Hayoun Oh, Computer Science, Harvard University (co-mentored)
2020–2021	Aswin Vasudevan, Computer Science, University of Massachusetts Boston
2019–present	Loraine Franke, Computer Science, University of Massachusetts Boston
2019–2021	Jesse Freeman, Computer Science, University of Massachusetts Boston

Graduate Students (MS)

2022–present	Kunal Jain, Computer Science, University of Massachusetts Boston
2022–present	Kiran Sandilya, Computer Science, University of Massachusetts Boston
2022–present	Jenna (JieHyun) Kim, Computer Science, University of Massachusetts Boston
2022	Pablo Bendiksen, Computer Science, University of Massachusetts Boston
2021–present	Neha Goyal, Computer Science, University of Massachusetts Boston
2020	Jiali Cheng, Computer Science, Northeastern University
2020	Gianna Yang, Computer Science, University of Massachusetts Boston
2020	Barkha Java, Computer Science, University of Massachusetts Boston
2019	Manish Mourya, Computer Science, University of Massachusetts Boston
2018–2020	Vincent Casser, Computer Science, Harvard University
2010-2011	Suares Tamekue, Intern at Brigham and Women's Hospital (co-mentored)

Undergraduate and Pre-College Students

2022–present	Josh Kotler, Computer Science, University of Massachusetts Boston
2022–present	Ryan Zurrin, Computer Science, University of Massachusetts Boston
2022–present	Akshata Tiwari, Pre-college student at Aliso Niguel High School
2022	Kendrick Kheav, Biochemistry, University of Massachusetts Boston
2022	Nikol Vladinska, Conputer Science and Honors Thesis, University of Massachusetts Boston
2021–2022	Jay Burkhardt, Computer Science, University of Massachusetts Boston
2021	Isabelle Lara, Biology, University of Massachusetts Boston
2021	Patricia Somera, Biology, University of Massachusetts Boston
2021	Bella Baidak, Computer Science, University of Massachusetts Boston
2019–2021	Yahiya Hussain, Computer Science, University of Massachusetts Boston
2019–2021	Nandinii Yeleswarapu, Computer Science and Honors Thesis, University of Massachusetts Boston

Mentoring (continued)

Undergraduate and Pre-College Students (continued)

2019–2020	Safwa Ali, Engineering, University of Massachusetts Boston
2019–2020	Huda Irshad, Engineering, University of Massachusetts Boston
2018–2020	Ian Svetkey, Pre-college student at Harvard University
2016	Eagon Meng, Computer Science, Harvard University
2016	Omar Shaikh, (Remote-) Intern at Harvard University
2015–2017	John Hoffer, Computer Science, Harvard University
2015	William Zhang, Pre-college student at Harvard University
2013	Jay Andrew Robinson, Intern at Boston Children's Hospital (co-mentored)
2013	Emily Seibring, Intern at Boston Children's Hospital (co-mentored)

Service and Outreach

Departmental Level

2022–present	Member of the Broadening Participation in Computing Task Force
2022–present	Faculty Advisor for the Computer Science Club
2020–present	Organizer of Events and Maintainer of the Discord Server for CS+IT Students
2020	Member of the Paul English Scholarship Committee
2019–present	Member of the Outreach and Publicity Committee
2019–present	Member of the Student Recruitment Committee
2019–2020	Organizer of bi-weekly social events for IT and CS students

College and University Level

2023	Member of the Research Computing Hiring Committee
2022	Invited Researcher for the UMass President's Office NSF Type 2 Engine proposal for Equitable Health
2022	Member of the Research Computing Hiring Committee
2022	Member of the Data Science Faculty Search Committee
2022	Member of the Joint Discipline & Grievance Committee
2021	Panelist for the Brain Trusts in AI/Robotics/Data Science Initiative from the UMass President's Office
2020–present	Member of the Research Computing Advisory Committee
2020–2021	STEM Educational Excellence (STEM-EdX) Fellow
2020	Member of the Data Science Faculty Search Committee

Service and Outreach (continued)

Professional Activities

2022	National Science Foundation Reviewer and Panelist for SBIR Grants
2022	Program Committee member at the IEEE Visualization conference
2022	Topic Editor: Open Source for Open Science, Frontiers in Neuroinformatics
2021	Program Committee member at the IEEE Visualization conference
2021	Faculty Mentor at the MGH Neuroimaging 2021 Virtual Symposium
2021	Organizer of the Chart Question Answering Workshop at CVPR 2021 in collaboration with Harvard, Columbia, Northwestern, and UMass Amherst
2021	National Science Foundation Reviewer and Panelist for SBIR Grants
2020	Program Committee member for short papers at the IEEE Visualization conference
2018–present	Reviewer for *Manning Publications*
2016–present	**Reviewer for Frontiers in Neuroinformatics, ISMRM, Neuroinformatics, Frontiers in Neural Circuits, ACM SIGCHI, IEEE CVPR, IEEE Visualization / Transactions on Visualization and Computer Graphics, IEEE Access, MDPI Applied Sciences, Nature Communications Biology, Scientific Reports, Transactions on Pattern Analysis and Machine Intelligence, Nature, Computer & Graphics**
2013	Technical Reviewer for *Matsuda and Lea: WebGL Programming Guide, Addison-Wesley*

Community Service

2023–present	Volunteer for the Petey Greene Program to tutor incarcerated people
2022	Member of the Principal Search Committee for the Putnam Ave Upper School in Cambridge
2019–2020	Advisor for the AP Data Science Curriculum in Cambridge Public Schools
2018–2019	Head Coach for Cambridge Youth Soccer
2018	Volunteer+Presentation Facilitator at the Cambridge 8th Grade Science & Engineering Showcase
2007–2010	President of the Student Computer Club at Heilbronn University, StuWoNet e.V.
2007–2009	Voluntary Project Lead of RANDI2, a randomization software for clinical trials at the German Cancer Research Center (DKFZ), coordinating 15+ developers
1997–1999	Vice-President of The German Computer Freaks, a National Cyber Security Club

My Erdős Number is 3.