# Fabio Miranda

ASSISTANT PROFESSOR, DEPARTMENT OF COMPUTER SCIENCE, COLLEGE OF ENGINEERING

University of Illinois at Chicago

851 S. Morgan St, MC 152, Chicago, IL, 60607

■ fabiom@uic.edu | ★ fmiranda.me

#### **Research Interests**

I am interested in developing techniques that allow for the interactive visual analysis of large-scale data, combining methods from visualization, data management, machine learning and computer graphics. I have worked closely with domain experts from different fields and the outcome of these collaborations included not only research published in leading venues, but also systems that were made available to experts in academia, industry and government agencies. My work has also received extensive coverage from different media outlets, including The New York Times, The Economist, Architectural Digest, Curbed, among others.

#### **Education**

2012 - 2018 **Ph.D. in Computer Science**  New York, NY, USA

New York University (NYU)

Advised by Professor Cláudio T. Silva, IEEE Fellow

Dissertation: "Data structures for the interactive visual analysis of urban data".

2009 - 2011 M.S. in Computer Science Rio de Janeiro, RJ, Brazil

Pontifical Catholic University of Rio de Janeiro (PUC-Rio)

Advised by Professor Waldemar Celes.

Thesis: "Volume rendering of unstructured hexahedral meshes".

2005 - 2009 **B.S. in Computer Science**  Belo Horizonte, MG, Brazil

Federal University of Minas Gerais (UFMG) Advised by Professor Luiz Chaimowicz.

## **Professional Experience**

Oct. 2020 - present **University of Illinois at Chicago**  Chicago, IL, USA

Assistant Professor, Department of Computer Science, College of Engineering

Fall 2018 - Fall 2020 **New York University**  New York, NY, USA

Postdoctoral researcher

Summer 2016 **Argonne National Laboratory**  Lemont, IL, USA

Research intern, Mentor: Venkatram Vishwanath

**IBM T.J. Watson Research Center** Summer 2015

Yorktown Heights, NY, USA

Research intern, Mentor: Bruce D'Amora

Summer 2014 **AT&T Research**  Middletown, NJ, USA

Research intern, Mentors: Lauro Lins and James Klosowski

Summer 2013 **Sandia National Laboratories**  Albuquerque, NM, USA

Research intern, Mentor: Patricia Crossno

Research assistant, Mentor: Waldemar Celes

2009 - 2012 TecGraf / PUC-Rio Rio de Janeiro, Brazil

## **Awards & Honours**

IEEE VIS 2023 Best Paper Honorable Mention 2023

> For "ProWis: A Visual Approach for Building, Managing, and Analyzing Weather Simulation Ensembles at Runtime".

SIBGRAPI 2023 Best Paper Honorable Mention 2023 For "Visual Analytics for Profiling Land Use Changes". National Academy of Sciences Kavli Fellow 2022 SIGMOD Best Demonstration Award 2018 For "Interactive Visual Exploration of Spatio-Temporal Urban Data Sets Using Urbane". Pearl Brownstein Doctoral Research Award 2018 For doctoral research that shows the greatest promise, awarded by NYU. **CAPES** and Petrobras Fellowships 2010-2012 Awarded during M.S. studies. FINEP and CNPq Fellowships 2006-2009 Awarded during B.S. studies. **Selected Media Coverage** A scrap metal shredder on the Southwest Side wants to renew its permit. But Pilsen residents are fighting back. November 2022 Chicago Tribune 🗗 Escuelas y comunidades latinas en Chicago son las más afectadas por la contaminación, según estudio. February 2022 Univision Chicago 🗹 Urban Pulse maps, analyzes use of urban spaces. November 2017 GCN 🗗 Urban Pulse Uses Social Media Data to Show Cities in a New Light. September 2017 Architectural Digest 🗹 New program wants to improve cities with the power of tweets and Flickr uploads. September 2017 Curbed 🗹 Mapping the Shadows of New York City: Every Building, Every Block. December 2016 The New York Times 🗷 Listen to the music of the traffic in the city. October 2016 The Economist 🗹

#### **Publications**

Underlined name: advised UIC student
J: journal, C: conference / symposium, A: abstract, W: workshop
Note: VIS & EuroVis conference papers appear in a special issue of the IEEE TVCG and CGF journals.

#### Accepted:

[C18] 2024 A Survey on Visual Analytics for 3D Urban Data
 F. Miranda, T. Ortner, G. Moreira, M. Hosseini, F. Biljecki, C. T. Silva, M. Lage, N. Ferreira Computer Graphics Forum (Accepted, to appear) (EuroVis 2024)

 [J14] 2024 Deep Umbra: City-Scale Automatic Shadow Detection using Building Height Information K. Omar, G. Moreira, D. Hodczak, M. Hosseini, M. Lage, F. Miranda IEEE Transactions on Big Data (Accepted, to appear)
 [C17] 2024 The Urban Toolkit: A Grammar-based Framework for Urban Visual Analytics G. Moreira, M. Hosseini, M.N.A. Nipu, M. Lage, N. Ferreira, F. Miranda IEEE Transactions on Visualization and Computer Graphics, vol. 1, no. 1, Jan 2024 (IEEE VIS 2023)

[C16] 2024	ProWis: A Visual Approach for Building, Managing, and Analyzing Weather Simulation Ensembles at Runtime C.V.F. de Souza, S.M. Bonnet, D. de Oliveira, M. Cataldi, <b>F. Miranda</b> , M. Lage  IEEE Transactions on Visualization and Computer Graphics, vol. 1, no. 1, Jan 2024  Best Paper Honorable Mention (IEEE VIS 2023)
[A3] 2024	e-JUST: Environmental Justice using Urban Scalable Toolkit A. Sharma, C. Veiga, P. Li, <b>F. Miranda</b> , <u>G. Moreira</u> , S. Wu, M. Budhathoki, A. Tiwari, J. Wei, M. Turk, E. Makra
[C15] 2023	104th Annual Meeting of the American Meteorological Society  Visual Analytics for Profiling Land Use Changes
	C. Santos, M. Hosseini, J. Rulff, <b>F. Miranda</b> , L. Wilson, C. Silva, N. Ferreira, M. Large 36th Conference on Graphics Patterns and Images (SIBGRAPI 2023)  Best Paper Honorable Mention (SIBGRAPI 2023)
[C14] 2023	Visual Analytics Using Heterogeneous Urban Data S. Bonadia, R. Gama, D. Oliveira, <b>F. Miranda</b> , M. Lage 36th Conference on Graphics Patterns and Images (SIBGRAPI 2023)
[J13] 2023	Environmental Justice through Community-Policy Participatory Partnerships P.A. Boda, F. Fusi, <b>F. Miranda</b> , G.M.M. Palmer, J. Flax-Hatch, M. Siciliano, A. Sambanis, L. Johnson, S. Derrible, M. Cailas <i>Journal of Environmental Protection, vol. 14, no. 8, pp. 616-636, Aug 2023</i>
[J12] 2023	A Comparison of Spatiotemporal Visualizations for 3D Urban Analytics
	R. Mota, M. Horga, N. Ferreira, J. D. Silva, M. Lage, L. Ceferino, U. R. Alim, E. Sharlin, <b>F. Miranda</b> <i>IEEE Transactions on Visualization and Computer Graphics, vol. 29, no. 1, pp. 1277-1287, Jan 2023</i> (IEEE VIS 2022)
[C13] 2023	Does a quieter city mean less complaints? The sounds of New York City during COVID-19 lockdown M. Cartwright, M. Fuentes, C. Mydlarz, <b>F. Miranda</b> , J. P. Bello <i>The International Conference on Acoustics, Speech, &amp; Signal Processing (ICASSP)</i>
[J11] 2023	Mapping the Walk: A Scalable Computer Vision Approach for Generating Sidewalk Network Datasets M. Hosseini, A. Sevtsuk, <b>F. Miranda</b> , R. M. Cesar Jr, C. T. Silva <i>Computers, Environment and Urban Systems</i> Featured on MIT Press
[A2] 2022	Interactive Visual Analysis of Urban Data: Applications in the Weather and Climate Domains  F. Miranda  American Geophysical Union Fall Meeting 2022
[A1] 2022	Mapping Sidewalk Fall Risks Using Big Data And Machine Learning  F. Miranda, M. Hosseini  Innovation in Aging (6)
[W5] 2022	Crowdsourcing and Sidewalk Data: A Preliminary Study on the Trustworthiness of OpenStreetMap Data in the US K. Omar, G. Moreira, D. Hodczak, M. Hosseini, <b>F. Miranda</b> ASSETS 2022 UrbanAccess Workshop
[C12] 2022	The Future of Urban Accessibility for People with Disabilities: Data Collection, Analytics, Policy, and Tools J. Froehlich, Y. Eisenberg, M. Hosseini, <b>F. Miranda</b> et al.  The 24th International ACM SIGACCESS Conference on Computers and Accessibility (ASSETS '22)
[J10] 2022	A Comparative Study of Methods for Visualization of Probability Distributions of Geographical Data <u>S. Srabanti</u> , C. V. de Souza, E. J. da Silva, M. Lage, N. Ferreira, <b>F. Miranda</b> <i>Multimodal Technologies and Interaction 6 (7), 53</i>

[W4] 2022	Towards Global-Scale Crowd+Al Techniques to Map and Assess Sidewalks for People with Disabilities M. Hosseini, M. Saugstad, <b>F. Miranda</b> , A. Sevtsuk, C. T. Silva, J. E. Froehlich AVA: Accessibility, Vision, and Autonomy Meet (CVPR 2022 Workshop)
[J9] 2022	Near-fall detection in unexpected slips during over-ground locomotion S. Wang, <b>F. Miranda</b> , Y. Wang, <u>R. Rasheed</u> , T. Bhatt Sensors, vol. 22, no. 9, 3334
[C11] 2022	Urban Rhapsody: Large-scale Visual Exploration of Urban Soundscapes J. Rulff, <b>F. Miranda</b> , M. Hosseini, M. Lage, M. Cartwright, G. Dove, J. P. Bello, C. Silva Computer Graphics Forum, vol. 41, no. 3, pp. 209-2021, Jun 2022
[C10] 2022	A Tale of Two Centers: Visual Exploration of Health Disparities in Cancer Care <u>S. Srabanti</u> , M. Tran, V. Achim, D. Fuller, G. Canahuate, <b>F. Miranda</b> , G.E. Marai 2022 IEEE Pacific Visualization Symposium (PacificVis)
[J8] 2022	CitySurfaces: City-scale Semantic Segmentation of Sidewalks Surfaces M. Hosseini, <b>F. Miranda</b> , J. Lin, C. Silva Sustainable Cities and Society
[J7] 2022	Visualizing Simulation Ensembles of Extreme Weather Events C. V. de Souza, P. Luz, M. Cataldi, <b>F. Miranda</b> , M. Lage Computers & Graphics, vol. 104, pp. 162-172, May 2022
[J6] 2022	UrbanRama: Navigating Cities in Virtual Reality  S. Chen, <b>F. Miranda</b> , N. Ferreira, M. Lage, H. Doraiswamy, C. Brenner, C. Defanti, M. Koutsoubis, L. Wilson, K. Perlin, C. Silva
[C9] 2021	Visualizing Environmental Justice Issues in Urban Areas with a Community Input Approach J. Flax-Hatch, S. Srabanti, F. Miranda, A. Sambanis, M. Cailas 2nd Spatial Data Science Symposium Featured on Univision Chicago
[C8] 2021	Sidewalk Measurements from Satellite Images: Preliminary Findings M. Hosseini, I. B. Araujo, H. Yazdanpanah, E. Tokuda, <b>F. Miranda</b> , C. Silva, R. M. Cesar Jr  2nd Spatial Data Science Symposium
[W3] 2021	COVID-19 EnsembleVis: Visual Analysis of County-level Ensemble Forecast Models  S. Srabanti, G. E. Marai, <b>F. Miranda</b> 12th Workshop on Visual Analytics in Healthcare
[W2] 2021	Transportation Scenario Planning with Graph Neural Network  A. A. Peregrino, <u>S. Pradhan</u> , Z. Liu, N. Ferreira, <b>F. Miranda</b> 10th International Workshop on Urban Computing
[C7] 2020	Urban Mosaic: Visual Exploration of Streetscapes Using Large-scale Image Data <b>F. Miranda</b> , M. Lage, H. Doraiswamy, M. Hosseini, G. Dove, C. T. Silva  2020 CHI Conference on Human Factors in Computing Systems
[C6] 2020	Learning Geo-Contextual Embeddings for Commuting Flow Prediction  Z. Liu, <b>F. Miranda</b> , W. Xiong, J. Yang, Q. Wang, C. T. Silva  Thirty-Fourth AAAI Conference on Artificial Intelligence
[J5] 2019	Shadow Accrual Maps: Efficient Accumulation of City-Scale Shadows over Time <b>F. Miranda</b> , H. Doraiswamy, M. Lage, L. Wilson, M. Hsieh, C. T. Silva <i>IEEE Transactions on Visualization and Computer Graphics, vol. 25, no. 3, pp. 1559-1574, Mar 2019</i> Featured on The New York Times

[C5] 2018	F. Miranda, M. Lage, H. Doraiswamy, C. Mydlarz, J. Salamon, Y. Lockerman, J. Freire, C. T. Silva Computer Graphics Forum, vol. 37, no. 3, pp. 23-35, Jun 2018
[C4] 2018	Interactive Visual Exploration of Spatio-Temporal Urban Data Sets using Urbane H. Doraiswamy, E. Tzirita Zacharatou, <b>F. Miranda</b> , M. Lage, A. Ailamaki, C. T. Silva, J. Freire 2018 ACM SIGMOD Intl. Conf. on Management of Data - Demo Best Demonstration Award
[J4] 2018	Spatio-Temporal Urban Data Analysis: A Visual Analytics Perspective H. Doraiswamy, J. Freire, M. Lage, <b>F. Miranda</b> , C. T. Silva <i>IEEE Computer Graphics and Application, vol. 38, no. 5, pp. 26-35, Sept/Oct 2018</i>
[J3] 2018	TopKube: A Rank-Aware Data Cube for Real-Time Exploration of Spatiotemporal Datasets <b>F. Miranda</b> , L. Lins, J. Klosowski, C. T. Silva <i>IEEE Transactions on Visualization and Computer Graphics, vol. 24, no. 3, pp. 1394-1407, Mar 2018</i>
[J2] 2017	Urban Pulse: Capturing the Rhythm of Cities <b>F. Miranda</b> , H. Doraiswamy, M. Lage, K. Zao, B. Goncalves, L. Wilson, M. Hsieh, C. T. Silva <i>IEEE Transactions on Visualization and Computer Graphics, vol. 23, no. 1, pp. 791-800, Jan 2017</i> Featured on The Economist, invited to SIGGRAPH 2017 TVCG special session
[C3] 2017	Data Visualization Tool for Monitoring Transit Operation and Performance  A. Kurkcu, <b>F. Miranda</b> , K. Ozbay, C. T. Silva  5th IEEE Intl. Conf. on Models and Technologies for Intelligent Transportation Systems (2017)
[W1] 2016	TopKube: A Rank-Aware Data Cube for Real-Time Exploration of Spatiotemporal Datasets <b>F. Miranda</b> , L. Lins, J. Klosowski, C. T. Silva Data Systems for Interactive Analysis (DSIA) 2016
[J1] 2012	Volume Rendering of Unstructured Hexahedral Meshes <b>F. Miranda</b> , and W. Celes <i>The Visual Computer Journal, vol. 28, no. 10, pp. 1005-1014, Oct 2012</i>
[C2] 2011	Accurate Volume Rendering of Unstructured Hexahedral Meshes  F. Miranda, and W. Celes  24th Sibgrapi Conference on Graphics, Patterns and Images (2011)
[C1] 2011	Illustrative Volume Visualization for Unstructured Meshes Based on Photic Extremum Lines A. Rocha, <b>F. Miranda</b> , and W. Celes 24th Sibgrapi Conference on Graphics, Patterns and Images (2011)
	External Grants (Share: \$1,453,000)

#### Awarded:

Fall 2024 - Fall 2029 Collaborative Research: Frameworks: Cyberinfrastructure to Catalyze and Sustain the Urban Computing Community

NSF (Cyberinfrastructure for Sustained Scientific Innovation)

Role: UIC PI

Total: \$5,000,000. UIC's share: \$1,750,000. Miranda's share: \$1,050,000 (60% of UIC's share)

Fall 2023 - Fall 2026

Research Infrastructure: MRI: Track 2 Acquisition of Data Observation and Computation Collaboratory (DOCC)

NSF (Major Research Instrumentation Program)

Role: Co-PI

Total and UIC's share: \$1,548,545. Miranda's share: \$154,854 (10% of UIC's share)

Fall 2023 - Fall 2028	Clean Energy and Equitable Transportation Solutions (CLEETS)	NSF (US-UK Global Centers)
	Role: SP	·
	Total: \$5,000,000. UIC's share: \$1,181,443. Miranda's share: \$177,216 (15% of UIC's sha	re)
Fall 2023 - Fall 2025	Impact Measurement for At-Grade Crossings Analysis and Prioritization Role: Pl	IDOT
	Total: \$205,000. UIC's share: \$41,000. Miranda's share: \$41,000 (100% of UIC's share).	
Fall 2022 - Fall 2023	Data readiness for 'Perturbation training for enhancing stability and limb support control for fall-risk reduction among stroke survivors'  Role: Co-I	NIH
	Total and UIC's share: \$308,918. Miranda's share: \$30,000 (10% of UIC's share).	
	Internal Grants	
	PRESUR: Planning a Resilient and Equitable State Using	
Fall 2022 - Fall 2023	Real-time Data	DPI
	Role: Co-PI	
	UIC's share: \$125,000. Miranda's share: \$32,000 (25%).	
	Teaching	
Spring 2024	CS424: Visualization & Visual Analytics (Students: 90)	UIC
	Graduate session (n=6): Overall teaching effectiveness: 4.83; Overall quality of the cour Undergraduate session (n=26): Overall teaching effectiveness: 3.69; Overall quality of t Course page	
Fall 2023	CS424: Visualization & Visual Analytics (Students: 90)	UIC
	Graduate session (n=39): Overall teaching effectiveness: 4.7; Overall quality of the cour Undergraduate session (n=40): Overall teaching effectiveness: 4.28; Overall quality of t Course page	
Spring 2023	CS524: Big Data Visualization & Visual Analytics (Students: 38)	UIC
	Graduate session (n=35): Overall teaching effectiveness: 4.63; Overall quality of the cou Course page 🗹	ırse: 4.54
Fall 2022	CS424: Visualization & Visual Analytics (Students: 50)	UIC
	Graduate session (n=19): Overall teaching effectiveness: 4.63; Overall quality of the countergraduate session (n=22): Overall teaching effectiveness: 4.36; Overall quality of the Course page 🗷	
Spring 2022	CS425: Computer Graphics I (Students: 49)	UIC
	Graduate session (n=6). Overall teaching effectiveness: 4.67; Overall quality of the cour Undergraduate session (n=31). Overall teaching effectiveness: 3.97; Overall quality of t Course page	
Fall 2021	CS594: Big Data Visualization & Analytics (Students: 29)	UIC
	Graduate session (n=25). Overall teaching effectiveness: 4.4; Overall quality of the cource page	rse: 4.36
Spring 2021	CS425: Computer Graphics I (Students: 41)	UIC
	Graduate and undergraduate sessions (n=33): Overall teaching effectiveness: 4.03; Overall teaching effective	rall quality of the

Course page ☑

2021 -	<b>Ph.D. students (advisor)</b> Leonardo Ferreira, Gustavo Moreira, Kazi Omar, Stefan Cobeli, Sanjana Sr. Elisabeta Marai)	UIC abanti (co-adivising with G.
2021 -	<b>M.Sc. students (advisor)</b> Davide Bartoletti, Sajal Chandra	UIC
2021 -	<b>Undergraduate students (advisor)</b> Daniel Hodczak, Jayanth Podapati, Reem Sheikh, Rahiya Rasheed	UIC
2018 - 2020	<b>Ph.D. students (mentor)</b> Zhicheng Liu (CS PhD student at Southeast University, China), Maryam Hostudent at Rutgers), Shaoyu Chen (CS PhD student at NYU), João Rulff (CS PhD student at NYU), Albert (CS	· · · · · · · · · · · · · · · · · · ·
March 2024	Selected Invited Talks and Presentations Interactive Urban Visual Analysis at Scale: From Data to Actionable Insights	Online
March 2023	US Census Bureau Interactive Urban Visual Analysis at Scale: From Data to Actionable Insights Visiting lecturer Fluminense Federal University	Niteroi, RJ, Brazil
December 2022	Interactive Visual Analysis of Urban Data: Applications in the Weather and Climate Domains AGU Fall Meeting 2022 American Geophysical Union	Chicago, IL, USA
November 2022	Mapping Sidewalk Fall Risks Using Big Data and Machine Learning GSA 2022 Annual Scientific Meeting Gerontological Society of America	Indianapolis, IN, USA
October 2022	Interactive Visual Analysis at Scale: From Data to Actionable Insights Keynote speaker SIBGRAPI 2022	Natal, RN, Brazil
October 2022	Visualizing Environmental Justice Issues in Urban Areas with a Community-based Approach Keynote speaker Visualization for Social Good (VIS4SG) workshop	Natal, RN, Brazil
July 2022	Interactive Visual Analysis of Urban Data: Immersive Analytics Opportunities Kavli Frontiers of Science Symposium National Academy of Science	Davis, CA, USA
April 2022	Interactive Visual Analysis of Urban Data: Immersive Analytics Opportunities The Next Evolution: XR & AEC VRAR CHICAGO	Online
January 2022	Interactive Visual Analysis of Urban Data: Beyond Flatland Urban Initiative Program	Online

**Advised Students** 

New York University

April 2021	Interactive Visual Analysis of Urban Data: Beyond Flatland Department of Energy Computer Graphics Forum 2021 Department of Energy	Online
April 2021	Interactive Visual Analysis of Urban Data: A Computational Perspective on Cities Federal University of Rio Grande do Sul	Porto Alegre, RS, Brazil
March 2021	Interactive Visual Analysis of Urban Data: A Computational Perspective on Cities Fluminense Federal University	Niteroi, RJ, Brazil
December 2018	<b>Exploration of Street-Level Images at Scale</b> Pedestrian Movement Technology Showcase at Metro North	New York City, NY, USA
November 2018	Shadow Accrual Maps: Efficient Accumulation of City-Scale Shadows over Time IEEE Visualization Conference (VIS)	Berlin, Germany
June 2018	Time Lattice: A Data Structure for the Interactive Visual Analysis of Large Time Series EG/VGTC Conference on Visualization (EuroVis)	Brno, Czech Republic
October 2017	TopKube: A Rank-Aware Data Cube for Real-Time Exploration of Spatiotemporal Datasets IEEE Visualization Conference (VIS)	Phoenix, AZ, USA
September 2016	<b>Visualizing and Exploring Urban Data</b> Data Visualization Summit	Boston, MA, USA
October 2016	<b>TopKube: A Rank-Aware Data Cube for Real-Time Exploration of Spatiotemporal Datasets</b> Data Systems for Interactive Analysis Workshop (DSIA)	Chicago, IL, USA

## **Academic Services**

#### **Program chair**

• SIBGRAPI (2022)

#### **Conference and workshop organization**

- 1st Workshop on The Future of Urban Accessibility at ASSETS'22
- VIS 2021, Local co-chair (2021)
- The Future of Global-Scale Spatial Data Collection and Analyses on Urban (in)Accessibility for People with Disabilities Workshop, Co-chair (2021)

## **Program committees**

- IEEE VIS Full papers (2022, 2023, 2024) IEEE VIS Short papers (2019, 2020, 2021, 2023)
- EuroVis (2022, 2023, 2024) Visualization and Data Analysis Conference (2022) SIBGRAPI (2019, 2020, 2021, 2023)

#### **Editor**

• Computers & Graphics (SIBGRAPI 2022 Special Issue)

#### **Grant reviewer**

- NSF reviewer (2022, 2022, 2024)
- Center for Transportation, Equity, Decisions and Dollars reviewer (2022) Discovery Partners Institute reviewer (2021)

#### Journal reviewer

- IEEE Trans. on Visualization and Computer Graphics (2020, 2021, 2022, 2023) IEEE Trans. on Big Data (2020)
- IEEE Trans. on Intelligent Transportation Systems (2021) The Visual Computer Journal (2019, 2020, 2021, 2022) Transportation Research Record Journal (2020) International Journal of Geo-Information (2021)

#### Conference reviewer

- IEEE VIS (2020, 2021, 2022) EuroVis (2019, 2020, 2021, 2022) Sibgrapi (2019, 2020, 2021, 2022)
- VLDB (2021) WWW (2021) International Conference on Pattern Recognition (2020, 2021, 2022)

#### **PhD & MSc committees**

#### **PhD** committees

•Mobashir Sadat (ICL, 2024) •Emily Muller (ICL, 2023) • Andrew Wentzel (2023) • Carolina Veiga (UFF, 2022) • Shaoyu Chen (NYU, 2022)

#### **Master's project committees**

●Parikshit Solunke (2021) ● Pavana Doddi (2021)

#### **WCP** committees

Stefan Cobeli (2023) ◆ Kazi Omar (2023) ◆ Carla Floricel (2021) ◆ Md Nafiul Alam Nipu (2021) ◆ Andrew Wentzel (2021) ◆ Muhammad Abdul Wahhab (2021)

## **University services**

#### **Department committees**

- Graduate Committee (2023-2024)
- Faculty Search Committee (2021-2022, 2022-2023)
- Graduate Admission Committee (2020-2021)

#### Reviewer

• Provost's Graduate Research Award reviewer (2020)

## **Professional Memberships**

Association for Computing Machinery (ACM) Brazilian Computer Society (Sociedade Brasileira de Computação, SBC)