

# Caio Batista de Melo

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## Education

- **University of California, Irvine** **Irvine, CA**  
*Ph.D. in Computer Science, GPA: 3.9/4.0* *Sep. 2018 – present*  
Advised by Prof. Nikil Dutt
- **University of Brasília** **Brasília, Brazil**  
*M.Sc. in Computer Science, GPA: 4.6/5.0* *Aug. 2017 – Aug. 2018*  
Thesis: Characterization of Implied Scenarios as Families of Common Behavior  
Advised by Prof. Genáina Rodrigues
- **University of Brasília** **Brasília, Brazil**  
*B.Sc. in Computer Science, GPA: 3.7/5.0* *Mar. 2012 – Jul. 2017*
- **Fordham University** **New York, NY**  
*Visiting student, GPA: 3.8/4.0* *Jul. 2015 – Aug. 2016*

## Teaching Experience

### University of California, Irvine

Course	Quarter	Students	Mean Overall Evaluation
Embedded Software	Spring '22	145	7.93/9 (71% responses)
Intro to Programming*	Winter '22	34	8.53/9 (74% responses)
Intro to Programming	Fall '21	36	8.39/9 (78% responses)
Intro to Programming*	Spring '21	301	N/A**
Intro to Programming*	Winter '21	229	N/A**
Intro to Programming*	Fall '20	379	N/A**
Intro to Programming*	Spring '20	44	8.00/9 (27% responses)
Intro to Programming	Winter '20	38	8.94/9 (81% responses)
Intro to Programming	Fall '19	72	8.68/9 (75% responses)
Intro to Programming	Spring '19	84	8.47/9 (54% responses)
Intro to Programming	Winter '19	80	8.52/9 (41% responses)
Intro to Programming	Fall '18	89	8.25/9 (69% responses)

\*Course taught remotely due to COVID-19; \*\*Not responsible for lecture, lab, or discussion sections.

- **Instructor** *Spring '22*  
*CS 145/145L, Embedded Software*
- **Teaching Assistant** *Fall '18 – Winter '22*  
*ICS 31, Intro to Programming*
- **Certificates and Awards**
  - Certificate in Excellence in Engineering Communications (2022)
  - Thank a Teacher Recipient (2020)
  - Certificate in Teaching Excellence (2019)
  - Certificate in Course Design (2019)
  - Center for Integration of Research, Teaching and Learning (CIRTL) Associate Level (2019)
  - Teaching Assistant Professional Development Program (2018)

## University of Brasília

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### Teaching Assistant

- *CIC 113913, Introduction to Computer Science* Spring '18

### Undergraduate Tutor

- *CIC 113913, Introduction to Computer Science* Fall '12 – Spring '14, Spring '16
- *CIC 116785, Objected Oriented Programming* Spring '14

## Fordham University

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### Guest Lecturer

- *CISC 6080, Capstone Project in Data Science* Fall '18

## Mentoring Experience

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- UCI Undergraduate Research Opportunities Program Research Discovery Program (Winter '22 – Spring '22)  
One of 25 campus-wide mentors, worked closely with 4 CS undergrads to help them get started in research.
- Global Research Experience in Artificial Intelligence Program (Winter '22)  
Mentored 3 undergraduate exchange students from South Korea that participated in active research projects.
- UCI Certificate in Mentoring Excellence (2021)

## Research Experience

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- **University of California, Irvine** **Irvine, CA**  
*Center for Embedded and Cyber-physical Systems (CECS), Graduate Research Assistant* Sep. 2018 – present
- **University of Brasília** **Brasília, Brazil**  
*Software Engineering Lab. (LES), Graduate Research Assistant* Aug. 2017 – Aug. 2018  
*LES, Undergraduate Research Assistant* Aug. 2016 – Jul. 2017
- **Fordham University** **New York, NY**  
*Lab. of Informatics and Data Mining, Undergraduate Research Assistant* Jun. 2016 – Aug. 2016

## Publications

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### Journal Articles

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- [J2] Eberle A. Rambo, Bryan Donyanavard, Minjun Seo, Florian Maurer, Thawra M. Kadeed, Caio B. de Melo, Biswadip Maity, Anmol Surhonne, Andreas Herkersdorf, Fadi Kurdahi, Nikil D. Dutt, and Rolf Ernst. “The Self-Aware Information Processing Factory Paradigm for Mixed-Critical Multiprocessing”. In: *IEEE Transactions on Emerging Topics in Computing* (2020). DOI: 10.1109/TETC.2020.3011663.
- [J1] Caio Batista de Melo, André Luiz Fernandes Caçado, and Genaína Nunes Rodrigues. “Characterization of Implied Scenarios as Families of Common Behavior”. In: *Journal of Systems and Software* 158 (2019). DOI: 10.1016/j.jss.2019.110425.

### Peer-reviewed Conferences

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- [C2] Eberle A. Rambo, Thawra Kadeed, Rolf Ernst, Minjun Seo, Fadi Kurdahi, Bryan Donyanavard, Caio Batista de Melo, Biswadip Maity, Kasra Moazzemi, Kenneth Stewart, Saehanseul Yi, Amir M. Rahmani, Nikil Dutt, Florian Maurer, Nguyen Anh Vu Doan, Anmol Surhonne, Thomas Wild, and Andreas Herkersdorf. “The Information Processing Factory: A Paradigm for Life Cycle Management of Dependable Systems”. In: *IEEE/ACM/IFIP International Conference on Hardware/Software Codesign and System Synthesis (CODES+ISSS'19)*. New York, New York, USA, Oct. 2019. DOI: 10.1145/3349567.3357391.

[C1] Anna Poulakas, Alon Yoeli, Sebastian Deossa, [Caio Batista de Melo](#), D. Frank Hsu, Dawn J. Adams, Cesarina Javier, and Anita V. Batisti. "WATSHERE: A Watson Cognitive System to Navigate Social/Health Resources for Public Schools". In: *Global Business and Technology Association Conference (GBATA)*. Vienna, Austria, July 2017, pp. 813–823. ISBN: 1-932917-13-6.

## Book Chapters

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[BC1] Bryan Donyanavard, Tiago Mück, Kasra Moazzemi, Biswadip Maity, [Caio Batista de Melo](#), Kenneth Stewart, Saehanseul Yi, Amir M. Rahmani, and Nikil Dutt. "Reflecting on Self-Aware Systems-on-Chip". In: *A Journey of Embedded and Cyber-Physical Systems*. Ed. by Jian-Jia Chen. Cham: Springer International Publishing, 2021, pp. 79–95. ISBN: 978-3-030-47487-4. DOI: 10.1007/978-3-030-47487-4\_6.

## Technical Reports

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[TR1] Eberle A. Rambo, Bryan Donyanavard, Minjun Seo, Florian Maurer, Thawra Kadeed, [Caio B. de Melo](#), Biswadip Maity, Anmol Surhonne, Andreas Herkersdorf, Fadi J. Kurdahi, Nikil D. Dutt, and Rolf Ernst. *The Information Processing Factory: Organization, Terminology, and Definitions*. 2019. URL: <http://arxiv.org/abs/1907.01578>.

## Presentations

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- [Caio Batista de Melo](#), André Luiz Fernandes Cançado, Genáina Nunes Rodrigues, *Characterization of Implied Scenarios as Families of Common Behavior*, 35th IEEE/ACM International Conference on Automated Software Engineering (Journal-First Track), 2020
- Kenneth Stewart, [Caio Batista de Melo](#), Saehanseul Yi, Nikil Dutt, *Self-Aware Systems-On-Chip*, 1st UCI/UCR/UPHF International Workshop on Cyber-Physical Systems and their Applications in Intelligent and Connected Transportation System (Poster), 2019
- Kenneth Stewart, [Caio Batista de Melo](#), Saehanseul Yi, Nikil Dutt, *Self-Aware Systems-On-Chip*, Richard Newton Young Fellow Forum at the Design Automation Conference (Poster), 2019
- Kenneth Stewart, [Caio Batista de Melo](#), Saehanseul Yi, Nikil Dutt, *The Information Processing Factory*, Richard Newton Young Fellow Forum at the Design Automation Conference (Poster), 2019
- [Caio Batista de Melo](#), Genáina Rodrigues, *Implied Scenario Detection Oriented Dependability Analysis*, joint 23rd University of Brasília/14th Federal District Undergraduate Research Workshop (Poster), 2017

## Academic Service

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### Peer Reviewer

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- International Conference on Hardware/Software Codesign and System Synthesis (CODES+ISSS) 2019, 2021, 2022;
- Design, Automation and Test in Europe Conference (DATE) 2021, 2022;
- Asia and South Pacific Design Automation Conference (ASP-DAC) 2022;
- International Conference on VLSI Design (VLSID) 2021.

## Honors & Awards

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- UCI Graduate Division Preparing for a Faculty Career Certificate (2022)
- Design and Automation Conference (DAC) A. Richard Newton Young Student Fellow (2019)
- University of California, Irvine Dean's Award (2018–2019)
- Brazilian Coordination for the Improvement of Higher Education Personnel (CAPES) Scholarship (2017–2018)
- Brazilian National Council for Scientific and Technological Development (CNPq) Scholarship (2016–2017)
- Fordham University's Student Ambassador at the International Conference on Cyber Security (2016)
- Institute of International Education (IIE) Brazil Scientific Mobility Program (2015–2016)

## Skills

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### Programming Languages.....

- Python, C, C++, SQL, Java.

### Spoken Languages.....

- Native fluency: English, Portuguese;
- Basic communication: Spanish.

## Industry Experience

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- **Meta** **Menlo Park, CA**  
*Network Delivery Systems, PhD Software Engineer Intern* *Jun. 2022 – present*
- **Google** **Irvine, CA**  
*CloudNet Control, Software Engineering Intern* *Jun. 2021 – Sep. 2021*
- **Google** **Irvine, CA**  
*Cloud CDN, Software Engineering Intern* *Jun. 2020 – Sep. 2020*
- **Cal/Amp** **Irvine, CA**  
*Information Security, IT/Product Security Intern* *Jun. 2019 – Sep. 2019*
- **University of Brasília** **Brasília, Brazil**  
*Computer Science Department, Java Development Intern* *Feb. 2015 – Jul. 2015*

## References

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Available under request.