

Felipe Ebert

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<https://felipeebert.github.io>

Personal Information *Date of birth:* May 15, 1986
Nationality: Brazilian
Residence: Eindhoven, The Netherlands

Research Interests Social and technical aspects of software engineering, mining software repositories, empirical software engineering, software maintenance and evolution, static analysis, machine learning, natural language processing (NLP), energy consumption.

Academic Experience **Postdoctoral Researcher - Jheronimus Academy of Data Science, Tilburg University**
Data Governance group **February 2022 - Today**
Research project: Sentinel (development of a regional labor exploitation monitor).
Supervisor: Willem-Jan van den Heuvel

Postdoctoral Researcher Teaching Assistant - Eindhoven University of Technology
Department of Mathematics and Computer Science **March 2020 – January 2022**
Software Engineering and Technology (SET) group
Research topics: Software evolution (code reviews, technical debt, self-admitted technical debt, code comprehension), mining software repositories.
Supervisor: Alexander Serebrenik

Postdoctoral Researcher - Federal University of Pernambuco
Informatics Center **March 2019 - February 2020**
National Institute of Science and Technology in Software Engineering
Research topics: Software evolution (code reviews, code comprehension), mining software repositories.
Supervisor: Fernando Castor

Education **Federal University of Pernambuco, Brazil**
Informatics Center
Ph.D. Computer Science **February 2019**

- Thesis Topic: “Understanding Confusion in Code Reviews”
- Advisor: Fernando Castor
- Co-Advisor: Alexander Serebrenik
- Areas: human aspects of code reviews, confusion, machine learning, exploratory software engineering.

Federal University of Pernambuco, Brazil
Informatics Center
MSc Computer Science **August 2013**

- Dissertation Topic: “An Exploratory Study on Exception Handling Bugs”
- Advisor: Fernando Castor
- Areas: Exception handling, bugs, software repository mining.

Federal University of Pernambuco, Brazil

Informatics Center

BSc Computer Science

September 2009

- Dissertation Topic: “Promodeller: Software Process Modeling Tool from BPMN files using Process Ontology”
- Advisor: Alexandre Marcos Lins de Vasconcelos
- Degree: 8.48/10
- Areas: Business Process Modeling Notation (BPMN), Software Process Engineering Metamodel (SPEM), software process ontology.

Grants

PhD Scholarship - Sandwich Doctorate Program Abroad

March 2017 - February 2018

Coordenação de Aperfeiçoamento de Pessoal de Nível Superior - CAPES

Scholarship to spend one year working at TU/e granted by the CAPES.

Monetary amount: € 20,490.00 (EUR)

PhD Scholarship - Aid to Student Mobility

October 2016 - January 2017

Fundação de Amparo a Ciência e Tecnologia do Estado de Pernambuco - FACEPE

Scholarship to spend 3 months working at TU/e granted by the FACEPE.

Monetary amount: R\$ 117,120.00 (BRL)

PhD Scholarship

March 2014 - February 2018

Fundação de Amparo a Ciência e Tecnologia do Estado de Pernambuco - FACEPE

Scholarship for my PhD program at UFPE granted by the FACEPE.

Monetary amount: R\$ 11,920.00 (BRL)

Awards

Distinguished Reviewer Award

XIV Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS'2020)

Best PhD Thesis of 2019

Informatics Center from Federal University of Pernambuco

Title: Understanding Confusion in Code Reviews

Best Paper Award

International Conference on Software Analysis, Evolution, and Reengineering (SANER'2019)

Title: Confusion in Code Reviews: Reasons, Impacts, and Coping Strategies [7]

Distinguished Reviewer Award

XIII Brazilian Symposium on Software Components, Architectures, and Reuse (SBCARS'2019)

Teaching
Experience

Guest Lecture: Applications of Data Science to Software Engineering (MSc)

2020 - 2021 Q2

Department of Mathematics and Computer Science, TU/e

Duties: Guest lecture about code reviews.

Course: Programming in Java (BSc)

2021 - 2022 Q1

Department of Mathematics and Computer Science, TU/e

Teaching Assistant

Duties: Preparation and conduction of on-campus instructions for the Java Programming course for first year students. I worked with a group of about 30 students. The content of the instructions was a quick review of the lecture content and working on collaboration exercises with the students, also helping them on the exercises. Additionally, I was also responsible for managing the Teaching Assistants (students) who helped with the instructions and grading.

Expertise gained: Ability to teach on-campus setting. Additionally, I tried to apply learning theories: such as preparing Learning Outcomes and following the Principles of Instruction, even for every single instruction.

Graduation Project: Software/Web Engineering Project course (BSc)

2020 - 2021 Q3

Department of Mathematics and Computer Science, TU/e

Teaching Assistant

Duties: Supervision of the graduation project, reviewing and grading of the software documents produced by the students. All supervision was on the online setting.

Expertise gained: Ability to teach and supervise students' projects about software development process on the online setting.

Guest Lecture: Software Evolution (MSc)

2020 - 2021 Q3

Department of Mathematics and Computer Science, TU/e

Duties: Guest lecture about code reviews and confusion.

Course: Programming in Java (BSc)

2020 - 2021 Q1

Department of Mathematics and Computer Science, TU/e

Teaching Assistant

Duties: Preparation and conduction of on-campus instructions for the Java Programming course for first year students. I worked with two different groups of students (one with 23 students and another with 13 students). The content of the instructions was a small review of the lecture content and working on collaboration exercises with the students, also helping them on the exercises.

Expertise gained: Ability to teach on-campus setting, while keeping the 1.5m distance rule. Additionally, I tried to apply learning theories: such as preparing Learning Outcomes and following the Principles of Instruction, even for every single instruction.

Graduation Project: Software/Web Engineering Project course (BSc)

2019 - 2020 Q4

Department of Mathematics and Computer Science, TU/e

Teaching Assistant

Duties: Supervision of the graduation project, reviewing and grading of the software documents produced by the students. All supervision was on the online setting.

Expertise gained: Ability to teach and supervise students' projects about software development process on the online setting.

Guest Lecture: Software Evolution (MSc)

2019 - 2020 Q4

Department of Mathematics and Computer Science, TU/e

Duties: Guest lecture about understanding confusion in code reviews.

Course: Software Engineering (BSc)

2008 Q1-Q4

Informatics Center, Federal University of Pernambuco

Student Assistant

Workload: 480 hours

Duties: Preparation and conduction of on-campus instructions for the whole class during the whole semester. Additionally, grading of homework assignments.

Course: Database (BSc)

2007 Q1-Q4

Informatics Center, Federal University of Pernambuco

Student Assistant

Workload: 480 hours

Duties: Preparation and conduction of on-campus instructions for the whole class during the whole semester. Additionally, grading of homework assignments.

Course: Linear and Vector Algebra (BSc)

2005 Q3-Q4

Informatics Center, Federal University of Pernambuco

Student Assistant

Workload: 240 hours

Duties: Preparation and conduction of on-campus instructions for the whole class during the whole semester. Additionally, grading of homework assignments.

Professional
Experience

IBM – Recife, Brazil

Java Developer

July 2009 – September 2011

Duties: Development of WEB systems for the control of the websites of IBM customers. Technologies used: Java, Struts, Servlets, Java Server Pages (JSP), Java Server Faces (JSF).

E.life Company – Recife, Brazil

Java Developer

August 2008 – July 2009

Duties: Development of client-server systems based on WEB with data base. Technologies used: JAVA, CXF, and MySQL.

Publications

- [16] Giuseppe Cascavilla, Gemma Catolino, Felipe Ebert, Damian A. Tamburri, Willem-Jan van den Heuvel, ““When the Code becomes a Crime Scene” Towards Dark Web Threat Intelligence with Software Quality Metrics”, *to appear in 38th International Conference on Software Maintenance and Evolution (ICSME)*, 2022.
- [15] Victoria Bogachenkova, Linh Nguyen, Felipe Ebert, Fernando Castor, Alexander Serebrenik, “Evaluating Atoms of Confusion in the Context of Code Reviews”, *to appear in 38th International Conference on Software Maintenance and Evolution (ICSME)*, 2022.
- [14] Hamid Mohayjei Nasrabadi, Felipe Ebert, Eric Arts, Eleni Constantinou and Alexander Serebrenik, “On the Adoption of a TODO Bot on GitHub: A Preliminary Study”, **4th International Workshop on Bots in Software Engineering (BotSE)**, pp. 23-27, 2022.

- [13] Felipe Ebert, Alexander Serebrenik, Christoph Treude, Nicole Novielli, Fernando Castor, “*On Recruiting Experienced GitHub Contributors for Interviews and Surveys on Prolific*”, **1st International Workshop on Recruiting Participants for Empirical Software Engineering (RoPES)**, 2022.
- [12] Gabrielle Porto, Rodrigo Andrade, Felipe Ebert, “*A Comparative Analysis Between Information Flow Control Tools for Java-written systems*”, **15th Brazilian Symposium on Software Components, Architectures and Reuse (SBCARS)**, pp. 80-89, 2021.
- [11] Felipe Ebert, Fernando Castor, Nicole Novielli, Alexander Serebrenik, “*An Exploratory Study on Confusion in Code Reviews*”, **Empirical Software Engineering (EMSE)**, Vol. 26, Art. 12, pp. 1-48, 2021.
- [10] Felipe Ebert, “*From Transient Information to Persistent Documentation: Enhancing Software Documentation*”, **36th IEEE International Conference on Software Maintenance and Evolution (ICSME)**, pp. 849-853, 2020.
- [9] Victor Oliveira, Leopoldo Teixeira, Felipe Ebert, “*On the Adoption of Kotlin on Android Development: A Triangulation Study*”, **27th International Conference on Software Analysis, Evolution and Reengineering (SANER)**, pp. 206-216, 2020.
- [8] Felipe Ebert, Fernando Castor, Alexander Serebrenik, “*A Reflection on ‘An Exploratory Study on Exception Handling Bugs in Java Programs’*”, **27th International Conference on Software Analysis, Evolution and Reengineering (SANER)**, pp. 552-556, 2020.
- [7] Felipe Ebert, Fernando Castor, Nicole Novielli, Alexander Serebrenik, “*Confusion in Code Reviews: Reasons, Impacts, and Coping Strategies*”, **26th International Conference on Software Analysis, Evolution and Reengineering (SANER)**, pp. 49-60, 2019.
- [6] Felipe Ebert, Fernando Castor, Nicole Novielli, Alexander Serebrenik, “*Communicative Intention in Code Review Questions*”. **34th International Conference on Software Maintenance and Evolution (ICSME)**, pp. 519-523, 2018.
- [5] Felipe Ebert, Fernando Castor, Nicole Novielli, Alexander Serebrenik, “*Confusion Detection in Code Reviews*”, **33rd International Conference on Software Maintenance and Evolution (ICSME)**, pp. 549-553, 2017.
- [4] Marcel Rebouças, Gustavo Pinto, Felipe Ebert, Wesley Torres, Alexander Serebrenik, Fernando Castor, “*An Empirical Study on the Usage of the Swift Programming Language*”, **23rd International Conference on Software Analysis, Evolution, and Reengineering (SANER)**, pp. 634-638, 2016.
- [3] Felipe Ebert, Fernando Castor, Alexander Serebrenik, “*An Exploratory Study on Exception Handling Bugs in Java Programs*”, **Journal of Systems and Software (JSS)**, Elsevier, Vol. 106, pp. 82-101, 2015.
- [2] Irineu Moura, Gustavo Pinto, Felipe Ebert, Fernando Castor, “*Mining Energy-Aware Commits*”, **12th Working Conference on Mining Software Repositories (MSR)**, pp. 56-67, 2015.

- [1] Felipe Ebert, Fernando Castor, “A Study on Developers’ Perceptions about Exception Handling Bugs”, **29th International Conference on Software Maintenance (ICSM)**, pp. 448-451, 2013.

Invited
Presentations

- **An Exploratory Study on Confusion in Code Reviews**, invited for the BENEVOL 2020 (BELgian-NEtherlands software eVOLution symposium), Luxembourg, December 2020.
- **Understanding Confusion in Code Reviews**, invited by Miguel Botto Tobar as a keynote for the International Conference on Technology Trends, Universidad Técnica de Babahoyo – Ecuador, August 2019.
- **Confusion Detection in Code Reviews**, invited by Jens Krinke for the CREST Open Workshop (COW), University College London – UK, November 2017.
- **Confusion Detection in Code Reviews**, invited for the BENEVOL 2017 (BELgian-NEtherlands software eVOLution symposium), University of Antwerp – Belgium, April 2017.

Reviewer of
Journals

- Transactions on Software Engineering (TSE)
- Empirical Software Engineering (EMSE)
- Journal of Systems & Software (JSS)
- Software Engineering and Methodology (TOSEM)
- IEEE Software
- Science of Computer Programming (Original Software Publications)
- Institution of Engineering and Technology (IET) Software

Program
Committee
Member

- Mining Software Repositories Conference (**MSR 2022**):
 - Technical track
 - Shadow PC mentoring
- International Conference on Software Maintenance and Evolution (**SANER 2022**):
 - Technical track
- International Conference on Program Comprehension (**ICPC 2022**):
 - Technical track
- International Conference on the Quality of Information and Communications Technology (**QUATIC 2022**)
- International Conference on Software and Systems Processes (**ICGSE 2022**)
- International Workshop on Recruiting Participants for Empirical Software Engineering (**RoPES 2022**)
- Workshop sobre Aspectos Sociais, Humanos e Econômicos de Software (**WASHES 2022**)
- XXXVI Brazilian Symposium on Software Engineering (**SBES 2022**):
 - Insightful Ideas & Emerging Results track
- 21st Belgium-Netherlands Software Evolution Workshop (**BENEVOL 2022**)
- X Workshop on Software Visualization, Evolution and Maintenance (**VEM 2022**)
- International Conference on Software Maintenance and Evolution (**ICSME 2021**):
 - New Ideas and Emerging Results (NIER) track
 - Artifact Evaluation track

- Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (**ESEC/FSE 2021**):
 - Artifact Evaluation track
- Mining Software Repositories Conference (**MSR 2021**):
 - Technical track
 - Data Showcase track
 - Registered Reports track
- International Conference on Automated Software Engineering (**ASE 2021**):
 - Late Breaking Results track
 - Artifact Evaluation track
- 15th Brazilian Symposium on Software Components, Architectures, and Reuse (**SBCARS 2021**)
- International Conference on Software Maintenance and Evolution (**ICSME 2020**):
 - Doctoral Symposium track
- Joint European Software Engineering Conference and Symposium on the Foundations of Software Engineering (**ESEC/FSE 2020**):
 - Student Research Competition track
- Seminar Series on Advanced Techniques & Tools for Software Evolution (**SATToSE 2020**)
- XIV Brazilian Symposium on Software Components, Architectures, and Reuse (**SBCARS 2020**)
- VIII Workshop on Software Visualization, Evolution and Maintenance (**VEM 2020**)
- XXXIII Brazilian Symposium on Software Engineering (**SBES 2019**):
 - Insightful Ideas & Emerging Results track
- XIII Brazilian Symposium on Software Components, Architectures, and Reuse (**SBCARS 2019**)
- VII Workshop on Software Visualization, Evolution and Maintenance (**VEM 2019**)
- The 4th International Conference on Technology Trends (**CITT 2018**)
- The 3rd International Conference on Technology Trends (**CITT 2017**)

Organizing
Committee

- Hybridization co-chair: Mining Software Repositories Conference (**MSR 2022**)
 - Chairs: David Lo, Shane McIntosh, Nicole Novielli
- Co-chair: 2nd Workshop on Automated Support to Improve code Readability (**AeSIR 2022**)
 - Collocated with ASE 2022
 - Chairs: Felipe Ebert, Fernanda Madeiral, Simone Scalabrino, Marcelo Maia
- Steering committee: 10th Workshop on Software Visualization, Evolution and Maintenance (**VEM 2022**)
 - Collocated with CBSoft 2022
 - Chairs: Ivan Machado, Luciana Lourdes
- Publicity chair: SEN Symposium 2022 (**SEN 2022**)
 - Chairs: Eleni Constantinou, Arnd Hartmanns, Andrea Capiluppi
- Co-chair: 1st Workshop on Automated Support to Improve code Readability (**AeSIR 2021**)
 - Collocated with ASE 2021
 - Chairs: Felipe Ebert, Fernanda Madeiral, Simone Scalabrino, Fernando Castor, Rocco Oliveto
- Co-chair: 9th Workshop on Software Visualization, Evolution and Maintenance (**VEM 2021**)
 - Collocated with CBSoft 2021
 - Chairs: Fernanda Madeiral, Felipe Ebert

Student Volunteer	<ul style="list-style-type: none"> Systems, Programming, Languages and Applications: Software for Humanity (SPLASH 2016) 	
Master student Co-Advisor	<p>Rafael Borba Costa dos Santos <i>Master Project</i> Topic: "Understanding how the combination of atoms of confusion affect program comprehension", Federal University of Pernambuco (with Prof. Fernando Castor).</p> <p>Mariska Jacobs <i>Master Project</i> Topic: "Understanding how questions influence code reviews", Eindhoven University of Technology (with Prof. Alexander Serebrenik, Prof. Nicole Novielli, and Prof. Reed Milewicz).</p> <p>Eric Arts <i>Individual Research Project (Capita Selecta)</i> Topic: "Investigating the usage of the TODO Bot", Eindhoven University of Technology (with Prof. Alexander Serebrenik).</p> <p>Tianyu Liu <i>Individual Research Project (Capita Selecta)</i> Topic: "Confusion analysis in code reviewing", Eindhoven University of Technology (with Prof. Alexander Serebrenik).</p>	<p>2021 – today</p> <p>2021 – 2022</p> <p>2020</p> <p>2018</p>
Bachelor student Co-Advisor	<p>Davide Russo <i>Bachelor Research Project</i> Topic: "Sentinel: A dashboard to fight labor exploitation", Università degli Studi del Molise (with Prof. Rocco Oliveto).</p> <p>Linh Nguyen <i>Bachelor Research Project</i> Topic: "Investigating the relationship between atoms of confusion and developer's expression of confusion in code reviews", Eindhoven University of Technology (with Prof. Alexander Serebrenik, Prof. Fernando Castor, and Prof. Mauricio Aniche).</p> <p>Victoria Bogachenkova <i>Bachelor Research Project</i> Topic: "Investigating the relationship between atoms of confusion and developer's expression of confusion in code reviews", Eindhoven University of Technology (with Prof. Alexander Serebrenik, Prof. Fernando Castor, and Prof. Mauricio Aniche).</p>	<p>2022</p> <p>2021 – 2022</p> <p>2021 – 2022</p>
Thesis and Dissertation Committees	<p>Gabrielle Amorim Porto <i>Bachelor thesis – Computer Science</i> <i>Informatics Center - Federal University of Pernambuco (UFPE)</i> Topic: "Uma Análise Comparativa Entre Ferramentas de Controle de Fluxo de Informação Para Sistemas Java" (A Comparative Analysis Between Information Flow Control Tools for Java Systems).</p>	<p>November 2020</p>

Advisor: Rodrigo Cardoso Amaral de Andrade

Willer Amorim Sabino de Araujo

July 2019

Bachelor thesis – Computer Engineering

Informatics Center - Federal University of Pernambuco (UFPE)

Topic: “Análise do potencial de revisão de código em detectar defeitos” (Analysis of the potential for code review to detect defects).

Advisor: Paulo Henrique Monteiro Borba

Languages

- **Dutch** (beginner – in progress)
- **English** (fluent)
- **Portuguese** (native language)

Courses

Teaching Skills

November 2021

Eindhoven University of Technology
UTQ/BKO training program
Workload: 20 hours (in progress)

Evaluation

November 2021

Eindhoven University of Technology
UTQ/BKO training program
Workload: 14 hours

Designing Courses and Projects

November 2021

Eindhoven University of Technology
UTQ/BKO training program
Workload: 16 hours

Supervising MSc-Students

March 2021

Eindhoven University of Technology
Workload: 6 hours

Teaching Skills for PhD students

September 2020

Eindhoven University of Technology
Workload: 12 hours

Teaching & Learning in Higher Education

June 2020

Eindhoven University of Technology
UTQ/BKO training program
Workload: 25 hours

Academic Profiles

- **Google Scholar:** https://scholar.google.com/citations?user=0_kRyLwAAAAJ
- **DBLP:** <https://dblp.uni-trier.de/pers/hd/e/Ebert:Felipe>

Social Profiles

- **Twitter:** https://twitter.com/felipe_fifo
- **LinkedIn:** <https://www.linkedin.com/in/felipe-ebert-1830401b3>

References'
contacts

1. **Prof. Alexander Serebrenik:**
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Phone: +31 40 247 3595 (office)
Website: <https://www.win.tue.nl/~aserebre>

2. **Prof. Fernando Castor:**
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Information and Computing Sciences
Utrecht University (UU)
Address: Heidelberglaan 8, 3584 CS - Utrecht, The Netherlands
Website: <https://sites.google.com/a/cin.ufpe.br/castor>

3. **Prof. Nicole Novielli:**
E-mail: nicole.novielli@uniba.it
Department of Computer Science
University of Bari
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