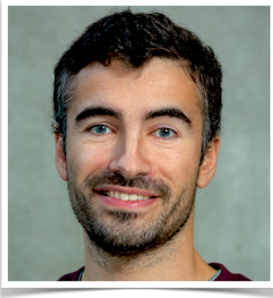


# Luís Cruz – Curriculum Vitæ



**FULL NAME**  
Luís Miranda da Cruz

**DATE OF BIRTH**  
January 15, 1989

**ADDRESS**  
Lange Geer 62A  
2611 PW Delft  
Netherlands

**EMAIL**  
[l.cruz@tudelft.nl](mailto:l.cruz@tudelft.nl)

**2ND EMAIL**  
[luismirandacruz@gmail.com](mailto:luismirandacruz@gmail.com)

**WEBPAGE**  
<https://luiscruz.github.io>

**TWITTER**  
[@luismcruz](https://twitter.com/luismcruz)

**PHONE**  
+351 253 837 449

**MOBILE (PT)**  
+351 912 554 147

**MOBILE (NL)**  
+310 640 222 135

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## Profile

I am passionate about learning new things and I am very dedicated to everything I do in my life. I am a motivated person and I like to do stuff that challenge creativity. Easy going and honest.

## Research Interests

**Software Engineering, AI Engineering, Sustainable Software Engineering, Green Computing, Mobile Computing, Energy Efficiency**, Empirical Software Engineering, Software Design Patterns, Automatic Refactoring

## Education

### **INESC-ID and University of Porto | 2013–2019**

Ph.D. in Computer Science - MAP-i doctoral program

Title - *Tools and Techniques for Energy-Efficient Mobile Application Development*

Advisor - Prof. Rui Abreu

### **Faculdade de Engenharia da Universidade do Porto (FEUP) | 2006–2011**

Master in Informatics and Computing Engineering (MIEIC)

Final grade — 17/20 — A on the European Grading Scale

M.Sc. thesis - *Humanoid Robot Nao: Developing Behaviours for Soccer Humanoid Robots*. July, 2011

### **Escola Secundária de Barcelinhos (High School) | 2003–2006**

Science course | Final Grade - 18.4/20

## Working Experience

- **Assistant Professor at TU Delft, November 2020 – to date.**
- **Scientific manager of AI for Fintech Research at ING, January 2020 – to date.**
- Postdoctoral Researcher at TU Delft, September 2019 – October 2020.
- Visiting Researcher at Monash University, 2018
- Junior Researcher at INESC ID, January 2017 – August 2019.
- Assistant Lecturer at IST/University of Lisbon of the unit course Software Engineering in 2017–2019.
- Research Assistant at Palo Alto Research Center (Xerox PARC) May 2015 – December 2015.
- Assistant Lecturer at FEUP of the unit course Software Development Laboratory (LDSO) 2013–2015.
- Software architect and Web developer at Tecla Colorida, Lda., 2012–2013.
- Researcher of 'Escolinhas Criativas' project from University of Porto, September 2011 – March 2012.
- Researcher at AMADEUS project - *Aspects and Compiler Optimizations for Matlab System Development* in August-October 2009 and July – September 2010.
- Junior assistant at FEUP of the unit course Computer Graphics 2009/10.

## Peer-reviewed journal articles

- **Cruz, L.**, Abreu, R. (2019). On the Energy Footprint of Mobile Testing Frameworks. *IEEE Transactions on Software Engineering*
- **Cruz, L.**, Abreu, R., Lo, D. (2019). To the Attention of Mobile Software Developers: Guess What, Test your App!. *Empirical Software Engineering*.
- **Cruz, L.**, Abreu, R. (2019). Catalog of Energy Patterns for Mobile Applications. *Empirical Software Engineering*.

## Articles in conference proceedings

- **Cruz, L.**, Abreu, R., Grundy, J., Li, L., Xia, X. (2019). Do Energy-oriented Changes Hinder Maintainability?. *The International Conference on Software Maintenance and Evolution (ICSME)*.
- **Cruz, L.**, Abreu, R. (2019). To the Attention of Mobile Software Developers: Guess What, Test your App!. *Empirical Software Engineering*.
- **Cruz, L.**, Abreu, R. (2019). EMaaS: Energy Measurements as a Service for Mobile Applications!. *IEEE/ACM 41st International Conference on Software Engineering: New Ideas and Emerging Technologies Results Track (ICSE-NIER)*
- **Cruz, L.**, Abreu, R. (2018). Using Automatic Refactoring to Improve Energy Efficiency of Android Apps. In *CibSE XXI Ibero-American Conference on Software Engineering*. **Best Paper Award**
- **Cruz, L.**, Abreu, R. (2017). Performance-based Guidelines for Energy-efficient Mobile Applications. In *IEEE/ACM International Conference on Mobile Software Engineering and Systems, MOBILESoft*.
- **Cruz, L.**, Abreu, R., Rouvignac J. (2017). Leafactor: Improving Energy Efficiency of Android Apps via Automatic Refactoring. In *IEEE/ACM International Conference on Mobile Software Engineering and Systems, MOBILESoft*.
- **Cruz, L.**, Rubin, J., Abreu, R., Ahern, S., Eldardiry, H., & Bobrow, D. G. (2015). A wearable and mobile intervention delivery system for individuals with panic disorder. In *Proceedings of the 14th International Conference on Mobile and Ubiquitous Multimedia* (pp. 175–182). *ACM*.
- **Cruz, L.**, Reis, L. P., Lau, N., & Sousa, A. (2012). Optimization approach for the development of humanoid robots' behaviors. In *Advances in Artificial Intelligence–IBERAMIA 2012* (pp. 491–500). Springer Berlin Heidelberg.
- **Cruz, L.**, Reis L. P., Rei, L. (2011). Generic Optimization of Humanoid Robots' Behaviours. In *Proceedings of the 15th Portuguese Conference on Artificial Intelligence* (pp. 385–397)
- Strecht, P., **Cruz, L.**, Soares, C., Mendes-Moreira, J., and Abreu, R. (2015). A comparative study of regression and classification algorithms for modelling students' academic performance. In *Educational Data Mining 2015*.

## Skills

### Informatics

- Programming Languages (Python, Ruby, Swift, C/C++, Java, OCAML, JavaScript)
- WEB technologies (Ruby on Rails, Sinatra, NodeJS, Django, AJAX, jQuery, Bootstrap, Neo4J, SQL, AngularJS, D3, Jekyll)
- Mobile applications (Ionic Framework, iOS, Android, Espresso, Responsive Design)
- Data Science (Scikit-learn, SciPy, Pandas, Numpy, Matplotlib, Jupyter Notebooks, R)
- Other (Git, DVC, MLflow, Matlab, LaTeX)

### Languages

- 1st language: Portuguese | 2nd language: English | Work in progress: Dutch

## Awards

- Best Presentation Award (2019) – BENEVOL, The 18th Belgium-Netherlands Software Evolution Workshop.
- Best Paper Award (2018) – ClbSE XXI Ibero-American Conference on Software Engineering.
- Academic Excellence Award (2008) – University of Porto, with a grade of 17.9/20.

## Relevant Training

- Attended the Multidisciplinary Summer School on Design as Inquiry 2011, in Kiel, Germany.
- Attended the Learning Analytics Summer Institutes Local Madrid (LASI-local Madrid 2014)
- Completed the CS190.1x: Scalable Machine Learning online course offered by BerkeleyX
- Completed Data Analyst Nanodegree by Udacity
- Attended the *Second NESUS Winter School 2017* on convergence of Big Data with HPC and Exascale systems
- Visiting Researcher at Monash University in 2019

## Scientific Committees & Others

- Artifact Evaluation Committee of ESEC/FSE 2020
- PC member of the Industry track at ICSME 2020
- PC member of EASEAI 2020
- PC member of SEAA 2020
- PC member of ISEC 2020
- Publicity Co-Chair and PC member of MobileSoft 2020
- Web Chair and PC Member of ICST 2020
- Organisation member of ISMIR2019
- Invited Speaker at FutureOfComputing 2019
- Publicity and Social Media Co-Chair of MOBILESoft 2020
- Web Chair of ICST 2020
- Organizing Member of ISMIR 2019
- Tool Demos & Mobile Apps Co-Chair of MOBILESoft 2019
- Publicity and Social Media Co-Chair of MOBILESoft 2018
- Local Chair of QRS 2018
- Student Volunteer at ClbSE 2018
- Student Volunteer at ICST 2017
- Volunteer at the speakers team of Web Summit Lisbon 2016