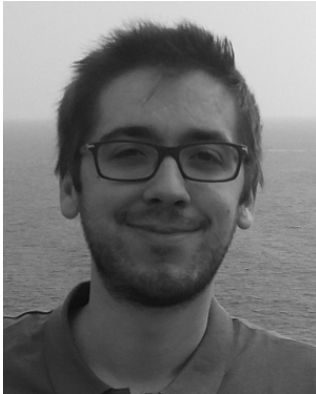


# Frederico Manuel Duarte Cerveira



At the moment, Frederico Cerveira is a student of the PhD course "*Programa de Doutoramento em Ciências e Tecnologias da Informação*" at Universidade de Coimbra, which he enrolled in 2015. He obtained, at the same university, his masters and bachelor degrees. He is also a researcher at CISUC ("*Centre for Informatics and Systems of the University of Coimbra*"). Frederico Cerveira is teaching the "Distributed Systems" course at University of Coimbra, as an invited assistant, since the 2017/2018 academic year. Previously he has lectured a part of the course of Distributed Systems at ISCTEM in Maputo, Mozambique.

## PERSONAL DATA

---

PLACE AND DATE OF BIRTH: Coimbra, Portugal | 28 July 1992  
ADDRESS: Rua Octaviano de Sá, n 17, 3030-027 Coimbra  
PHONE: 931662357 | 239000303  
EMAIL: [fmduarte@dei.uc.pt](mailto:fmduarte@dei.uc.pt)

## WORK EXPERIENCE

---

2017-ONGOING	<b>Invited Assistant at DEI-UC</b> Invited assistant at DEI-UC. Teaching the laboratory component of the 'Distributed Systems' course and practical lessons of the 'Advanced Java Programming' course.
AUGUST 2017	<b>Lecturer at ISCTEM</b> Invited lecturer at ISCTEM, Mozambique, to teach part of the course of 'Distributed Systems'.
SUMMER 2015	<b>Master Thesis at DEI</b> Developed his master thesis "Benchmarking de Infraestruturas de Virtualização para a Cloud", in the area of fault tolerance in virtualized systems. One of the produced artifacts was a SWIFI (Software Implemented Fault Injection) tool capable of injecting register and memory faults in Linux-based systems, as well as other fault injection tools for the Xen hypervisor.
SPRING 2010	<b>Intern at ACTIVE SPACE TECHNOLOGIES S.A</b> Internship attributed under the course plan of "Curso Tecnológico de Informática". Internship consisted of developing a website to support project marketing to the public, using PHP, MySQL and HTML/CSS.
2009	<b>Contributor to ADONTHELL</b> During his free-time, took part in the development of the open-source RPG game <i>Adonthehell</i> . His contributions consisted on the development of the pathfinding (A*) code that allowed the game's NPCs to freely move between locations. This code also supported different terrain and per-NPC costs, which were configured in Python scripts and then accessed by the C++ code base, through <i>SWIG</i> .

## EDUCATION

---

- ONGOING Programa de Doutoramento em Ciências e Tecnologias da Informação, **Universidade de Coimbra**, Coimbra
- SUMMER 2015 Mestrado em Engenharia Informática, **Universidade de Coimbra**, Coimbra  
FINAL GRADE: 17
- JULY 2013 Licenciatura em Engenharia Informática, **Universidade de Coimbra**, Coimbra  
FINAL GRADE: 15
- JULY 2010 Curso Tecnológico de Informática, **Escola Avelar Brotero**, Coimbra  
FINAL GRADE: 18

## AREAS OF INTEREST

---

Virtualization & Cloud Computing; Dependability; Fault Injection & Tolerance; Hardware & Software Faults

## PUBLICATIONS (CONFERENCES)

---

- EDCC 2019: "Fast local VM migration against hypervisor corruption"  
Frederico Cerveira, Raul Barbosa, Henrique Madeira
- EDCC 2018: "Evaluating the Inherent Sensitivity of Programming Languages to Soft Errors"  
Frederico Cerveira, Alcides Fonseca, Raul Barbosa, Henrique Madeira  
(DOI: [EDCC.2018.00021](https://doi.org/10.1109/EDCC.2018.00021))
- QRS 2018: "Exploratory Data Analysis of Fault Injection Campaigns"  
Frederico Cerveira, Imre Kocsis, Raul Barbosa, Henrique Madeira, András Pataricza  
(DOI: [QRS.2018.00033](https://doi.org/10.1109/QRS.2018.00033))
- ISSRE 2017: "Experience Report: On the Impact of Software Faults in the Privileged Virtual Machine"  
Frederico Cerveira, Raul Barbosa, Henrique Madeira  
(DOI: [10.1109/ISSRE.2017.39](https://doi.org/10.1109/ISSRE.2017.39))
- EDCC 2017: "On the Emulation of Vulnerabilities through Software Fault Injection"  
Frederico Cerveira, Raul Barbosa, Marta Mercier, Henrique Madeira  
(DOI: [10.1109/EDCC.2017.28](https://doi.org/10.1109/EDCC.2017.28))
- PRDC 2017: "Soft Errors Susceptibility of Virtualization Servers"  
Frederico Cerveira, Raul Barbosa, Henrique Madeira  
(DOI: [10.1109/PRDC.2017.26](https://doi.org/10.1109/PRDC.2017.26))
- QoSA 2016: "Modeling the Failure Pathology of Software Components"  
João M. Franco, Frederico Cerveira, Raul Barbosa, Mário Zenha-Rela  
(DOI: [10.1109/QoSA.2016.15](https://doi.org/10.1109/QoSA.2016.15))
- EDCC 2015: "Recovery for Virtualized Environments"  
Frederico Cerveira, Raul Barbosa, Henrique Madeira, Filipe Araujo  
(DOI: [10.1109/EDCC.2015.26](https://doi.org/10.1109/EDCC.2015.26))

## PUBLICATIONS (JOURNALS)

---

- SPRINGER COMPUTING "Emulating representative software vulnerabilities using field data"  
Raul Barbosa, Frederico Cerveira, Luís Gonçalo, Henrique Madeira  
(DOI: [10.1007/s00607-018-0657-y](https://doi.org/10.1007/s00607-018-0657-y))
- IEEE TSUSC "Language-Based Expression of Reliability and Parallelism for  
Low-Power Computing"  
Alcides Fonseca, Frederico Cerveira, Bruno Cabral, Raul Barbosa  
(DOI: [TSUSC.2017.2771376](https://doi.org/10.1109/TSUSC.2017.2771376))

## SUPERVISION

---

- MASTER'S THESIS @ **DEI-UC**: *2018/2019*  
Supervision along with Prof. Dr. Raul Barbosa and Prof. Dr. Henrique Madeira of the student Jomar Domingues.  
Thesis title: "Failure Prediction in Cloud Applications: Online Failure Prediction for OpenStack"
- BACHELOR'S THESIS @ **ISEC**: *2018*  
Supervision along with Prof. Dr. Jorge Bernardino and Prof. Dr. Raul Barbosa of the student Bruno Rodrigues.
- BACHELOR'S THESIS @ **ISEC**: *2017*  
Supervision along with Prof. Dr. Jorge Bernardino and Prof. Dr. Raul Barbosa of the student Eduardo Carvalho.
- BOLSAS DE INICIAÇÃO À INVESTIGAÇÃO (BICS): *2016/2017*  
Supervision along with Prof. Dr. Raul Barbosa of the student Marta Mercier under the "Summer Research Grants" activity.

## TALKS

---

- 29 JANUARY 2018 *"Exploratory data analysis of fault injection campaigns"*  
in Minisymposium. ([link](#))  
BME MIT, Budapest, Hungary
- 24 OCTOBER 2017 *"On the Impact of Software Faults in the Privileged Virtual Machine"*  
in 28th International Symposium on Software Reliability Engineering.  
Toulouse, France
- 7 SEPTEMBER 2017 *"On the Emulation of Vulnerabilities through Software Fault Injection"*  
in 13th European Dependable Computing Conference (EDCC 2017).  
Geneva, Switzerland
- 03 MARCH 2017 *"Soft Errors Susceptibility of Virtualization Servers"*  
in Postgraduate Colloquium Series, DEI-FCTUC. Coimbra, Portugal
- 23 JANUARY 2017 *"Soft Errors Susceptibility of Virtualization Servers"*  
in 22nd IEEE Pacific Rim International Symposium on Dependable  
Computing (PRDC 2017). Christchurch, New Zealand
- 22 APRIL 2016 *"Assessing and Improving Reliability of Virtualized Cloud Systems"*  
in Short Presentations, DEI-FCTUC. Coimbra, Portugal
- 08 APRIL 2016 *"Studying Soft Errors in Virtualized Cloud Computing Systems"*  
in Postgraduate Colloquium Series, DEI-FCTUC. Coimbra, Portugal

## CERTIFICATES AND AWARDS

---

- SEPT. 2015 Distinguished Paper Award @ EDCC 2015  
SEPT. 2010 Ministério da Educação's Award of Merit  
APRIL 2010 2<sup>nd</sup> place at programming competition CPAS@CIC 2010  
JUNE 2010 Cambridge English: Advanced (CAE)  
JUNE 2008 Cambridge English: First

## LANGUAGES

---

- PORTUGUESE: Mothertongue  
ENGLISH: Fluent (CEFR level: C1)  
GERMAN: Intermediate Knowledge (CEFR level: B1)  
ITALIAN: Basic Knowledge (CEFR level: A2)  
TURKISH: Basic Knowledge - Self-teaching