

# Leandro Ezequiel Nahabedian

Curriculum Vitae

September 18, 2018

## Education

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| 2015–     | <b>Ph.D Candidate in Computer Science</b> , <i>University of Buenos Aires</i> , Argentina |
| 2007–2014 | <b>Master in Computer Science</b> , <i>University of Buenos Aires</i> , Argentina         |
| 2007–2013 | <b>Bachelor in Computer Science</b> , <i>University of Buenos Aires</i> , Argentina       |

## Masters Thesis

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| Title       | <b>Hot-Swap: A technique for generate and update discrete controller Synthesis at runtime</b>  |
| Supervisors | <i>Professor Nicolás D'Ippolito</i>  |
| Description | <p>Continuous operation is a need for sound engineering techniques that can change a system without stopping or disturbing its operation in the face of environment and requirements changes.</p> <p>We address the dynamic controller update problem when the specification (both environment assumptions and requirements) of the current system change.</p> <p>We present a general solution that not only produces a controller that computes a controller for the new specification and handles the transition from one to another but also, unlike existing approaches, assures that the system will reach a state in which such a transition can correctly occur. Indeed, using controller synthesis we show how to automatically build a controller that guarantees both progress towards update and also a safe update.</p> |

## Honors & Awards

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| May 2016   | 🏆 <b>Best Paper Award</b> at <i>International Symposium on Software Engineering for Adaptive and Self-Managing Systems</i> (SEAMS'16).  |
| May 2015 – | 🏆 <b>Ph.D. Scholarship</b> , <i>Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET)</i> , Argentina.   |
| Ago 2012   | 🏆 <b>ICT Scholarship</b> , <i>Ministry of Science and Technology</i> , Argentina  |
| Ago 2014   | I got a scholarship for two years awarded by the Ministry of Science and Technology of the Republic of Argentina to get the degree in master in computer science. The beneficiaries of this plan were chosen based on the number of test taken, the years undertaken in the study and obtained grade point average. |

## Academical Experience

### Publications

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| SEAMS<br>2016 | <b>L.Nahabedian</b> , V.Braberman, N.D'Ippolito, S.Honiden, J.Kramer, K.Tei, S.Uchitel. <b>Assured and Correct Dynamic Controller Update</b> in <i>International Symposium on Software Engineering for Adaptive and Self-Managing Systems</i> , Austin, Texas - <b>Best Paper Award</b> |
| IEEE TSE      | <b>L.Nahabedian</b> , V.Braberman, N.D'Ippolito, S.Honiden, J.Kramer, K.Tei, S.Uchitel. <b>Discrete Event Controller Dynamic Update</b> in <i>IEEE Transactions on Software Engineering</i> .   |
| ICSE 2017     | <b>L.Nahabedian</b> . <b>Dynamic Update of Business Process Management</b> . in <i>International Conference on Software Engineering - Doctoral Symposium</i> , Buenos Aires, Argentina.   |

### Participation in International Conferences

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|----------|--|
| ICSE'17  | <b>Accepted Paper Speaker, Web Chair</b>         |
| ICSE'16  | <b>Student Volunteer</b>                         |
| SEAMS'16 | <b>Accepted Paper Speaker, Student Volunteer</b> |
| IJCAI'15 | <b>Student Volunteer</b>                         |

### Participation in Projects

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|----------|--|
| Mar 2014 | <b>Research Assistant</b> , <i>National Institute of Informatics</i> , Tokyo, Japan  |
| Jun 2014 | Research in Software engineering in controller synthesis with an approach of self-adaptive software. I develop a new technique in the MTSA tool so as to build controllers that allow the change of the environment and ensure new goals without rebooting the system.<br>The work done on my thesis begins from this internship that was held in Tokyo, Japan and supervised by Professors Nicolás D'Ippolito and Kenji Tei. The tool MTSA was developed in JAVA ( <a href="http://mtsa.dc.uba.ar">http://mtsa.dc.uba.ar</a> ). |

### Human Resources Training

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| Mar 2015 – | <b>Director of Master Thesis</b> , <i>Universidad de Buenos Aires</i> , Argentina<br>Victor Wjugow did an internship in the National Institute of Informatics, Japan, extending my master thesis work.<br>Controllers that can manage many updates without having a bloating controller are produced by the technique we are working on. These updates can be updated when the environment in which they are running change, the goals to be satisfy are impossible to achieve or the system acquire new abilities and it needs to exploit them. How to handle many updates without disrupting or stopping the execution is a common question in the self-adaptation software area. |
| Ene 2015   | <b>Director of Master Thesis</b> , <i>Universidad de Buenos Aires</i> , Argentina   |
| Jun 2017   | I directed Ivan Pasquini for getting his Master degree. Title: “Localizacin y modelado simultneos mediante generacin y actualizacin automtica de controladores discretos”.<br>Our work presents a novelty solution for problems where properties of the environment are not completely known. We direct to explore that environment so as to get only the information needed to solve the problem. This work has many applications in the area of robotics, networks, etc.  |

## Teaching Experience

Ago 2015 - **Chief Teaching assitant** *Universidad de Buenos Aires*, Buenos Aires, Argentina  
I am giving lecture for Software Engineering course in University of Buenos Aires.

## Industrial Experience

Nov 2012 **Project Leader / Software engineer**, *National Ministry of Interior*, Argentina  
Apr 2015 I coped with different projects that requires programming in many languages. Mainly, I used to work with PYTHON but also I worked with JAVA and PHP. Then, I also work as a Project leader. We developed a system for assigning the time that each media outlet gave to each political party for their advertising campaign for 2013 and 2015 Argentine elections. Our system also provide a web application that allow the media outlets and the political parties to communicate between them, so as to decide which TV spot they will use and when.

May 2012 **Python developer**, *Core Security Technologies*, Buenos Aires, Argentina  
Oct 2012 Company that develops software for analysis of vulnerabilities. My work consist in developing a system for adding, removing or editing tasks in UNIX crontab file. Another project was to initiate a server in a virtual machine with OPENBSD to be used as a web server. To achieve this goal I had to install all the packages needed to build a web service.

May 2010 **ActionScript2/Python developer**, *MetroGames*, Buenos Aires, Argentina  
Dic 2011 Company that makes video games for social networks. I was one of the developers of a particular game called Fashion World. The design patter that we used to implement that game was MVC and the language was ACTIONSCRIPT2. Afterwards, I worked with PYTHON to make internal systems to be used within the company. These programs were part of the internal infrastructure of the company. For instance, a system that manage the deployment of a project.

Feb 2010 **Web developer**, *Intelligenx*, Buenos Aires, Argentina  
May 2010 I did an internship for this company where I had two projects. Firstly, we produced a tool for web scrapping different pages using XPATH and REGULAR EXPRESSIONS. By doing this, the tool fills a database with information about many companies stores such as address, names, etc. After that, we produced a web page that use obtained data for providing yellow pages service. We used JAVA/HIBERNATE to create the application.

## Languages

**Spanish** | **Mother tongue**  
**English** | **B2** (First Certificate in English 2006)