

Carlos Casorrán Amilburu, Ph.D.

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Personal statement

I am a Ph.D. with **strong technical skills** in **Applied Mathematics**, **Computer Science** and **Operations Research**, with **strong interpersonal skills**. I have experience with, and cherish, working in **multidisciplinary** and **multinational teams** whose output has a positive, quantifiable impact.

Work Experience

Postdoctoral Researcher (EQF level 8)	Universidad de Chile	10.2017-12.2017
<ul style="list-style-type: none">✓ Conducted research on Operations Research, specifically on Stackelberg games✓ Applied my research in a multidisciplinary border security project for Carabineros de Chile to minimize transnational crime along the Chilean border✓ Wrote scientific articles to be published in top-level peer reviewed journals✓ Gave presentations at international conferences and disseminated my research		
Pre-doctoral Researcher (EQF level 8)	Université Libre de Bruxelles/Universidad de Chile	07.2013-10.2017
<ul style="list-style-type: none">✓ Dissertation: <i>Formulations and Algorithms for General and Security Stackelberg Games</i>✓ Joint Ph.D. in Computer Science and Systems Engineering✓ Proposed new mathematical formulations and computational solution procedures for security problems✓ Conducted research in a multidisciplinary border security project for Carabineros de Chile✓ Published scientific articles in top-level peer reviewed journals✓ Taught Graph Theory classes for Computer Science Master's students✓ Gave presentations at international conferences and disseminated my research		

Education

Postdoctoral Researcher (EQF level 8)	Universidad de Chile	11.2017-12.2017
<ul style="list-style-type: none">✓ Domain: Applied Mathematics, Operations Research, Optimization		
Doctoral Researcher (EQF level 8)	Université Libre de Bruxelles/Universidad de Chile	07.2013-10.2017
<ul style="list-style-type: none">✓ Dissertation: <i>Formulations and Algorithms for General and Security Stackelberg Games</i>✓ Domain: Computer Science, Systems Engineering, Operations Research		
Master's student (EQF level 7)	Universidad de Murcia	10.2011-07.2012
<ul style="list-style-type: none">✓ Dissertation: <i>Applications of Combinatorial Optimization to Computational Biology</i>✓ Research oriented M.Sc. in Advanced and Professional Mathematics✓ Strong focus on Optimization and Statistics		
Undergraduate student (EQF level 7)	Universidad de Alicante	09.2005-07.2011
<ul style="list-style-type: none">✓ 5 year undergraduate degree in Mathematics✓ Fourth year studied abroad at the University of Edinburgh through an ERASMUS grant		

Teaching

Teaching assistant for Graph Theory in the Masters of Computer Science at ULB	09.2013-06.2015
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Select publications

Title: 'Building Real Stackelberg Security Games for Border Patrols'.

Authors: Bucarey V., Casorrán C., Figueroa O., Rosas K., Navarrete H., Ordóñez F.

Proceedings: Rass S., An B., Kiekintveld C., Fang F., Schauer S. (eds) Decision and Game Theory for Security. GameSec 2017. Lecture Notes in Computer Science, vol. 10575. Springer, Cham.

Year: 2017

Title: 'A study of general and security Stackelberg game formulations'.

Authors: Casorrán C., Fortz B., Labbé M., Ordóñez F.

Type of publication: Technical report.

Year: 2017.

Select conferences

Speaker at the GameSec 2017 conference on Decision and Game Theory for Security	10.2017-10.2017
Austrian Institute for Technology	
Speaker at the EURO 2016 conference on Operations Research	07.2016-07.2016
Poznan University of Technology	
Speaker at the ISMP 2015 conference on Mathematical Programming	07.2015-07.2015
Carnegie Mellon University, University of Pittsburgh	

Grants and Awards

Postdoctoral grant	Instituto de Sistemas Complejos de Ingeniería (ISCI)	11.2017-12.2017
FRIA pre-doctoral grant	Fond National de la Recherche Scientifique (FNRS)	01.2014-09.2017
M.Sc. tuition grant	Faculty of Mathematics, University of Murcia	10.2011-06.2012
Honorable mention for academic excellence	Faculty of Sciences, University of Alicante	08.2011
Internship grant	Dept. of Stat. and O. R., University of Alicante	02.2011-07.2011
ERASMUS grant	Bancaixa bank	09.2008-08.2009

Language Skills

	Level(CEFR)	Diploma
Spanish	C2 – Native-level proficiency	
English	C2 – Native-level proficiency	
French	B1 – Independent user	
Dutch	A2 – Basic user	

Job-related Skills

- ✓ **Problem solving and abstract thinking skills.** Obtained through my training as a mathematician
- ✓ **Adaptable.** Studying in different domains has allowed me to readily adapt to new material
- ✓ **Technical and scientific writing skills.** Wrote scientific publications and book chapters as well as a Ph.D. dissertation
- ✓ **Project management skills.** Actively participated in both research and applied projects during my Ph.D.
- ✓ **Organizational skills.** Structured and methodic researcher and administrator
- ✓ **Time management skills.** Simultaneously worked on projects while respecting deadlines and producing results
- ✓ **Goal oriented.** Skilled at setting goals during my Ph.D., enabling me to work towards, and attain, said goals
- ✓ **Communication and presentation skills.** Acquired through disseminating my research at international conferences

Volunteer work

Board Member	TeatroBe, ASBL	06.2018-Present
✓ Coordinate the artistic direction of the theatre company alternating between classical and contemporary works		
✓ Assist in the different needs of a theatrical production: as actor; stagehand, stage manager or director		
Artistic Director	TeatroBe, ASBL	04.2018-10.2018
✓ Directed the mainstage production <i>El anzuelo de Fenisa</i> by Lope de Vega—This involved a cast of 15 and a crew of 15		
✓ Coordinated crew involved in set building, set decoration, light design, costume creation, etc.		
✓ Produced the show. Was financially responsible for the costs involved in the production		
Treasurer of the student delegation	Faculty of Sciences, University of Alicante	09.2010-07.2011
✓ Coordinated financial aspects of the student delegation and assigned funds to the organization of conferences and events		

IT Skills

Text editing	Optimization solvers
✓ Word, LaTeX	✓ CPLEX, GUROBI, XPRESS
Spreadsheet software	Programming
✓ Excel	✓ Python, C, C++, Matlab, S-Plus, SPSS, Maple,
Presentation software	Mathematica, Mosel, AMPL
✓ Keynote, LaTeX, PowerPoint	

Miscellanea

Actor
✓ Participated in numerous theatre productions in Belgium and Spain
✓ Worked in English, Irish, American and Spanish groups
✓ Have done film work
Judoka
✓ Brown belt. Have practiced Judo on and off for the last 15 years