

Carmen AMO ALONSO

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RESEARCH INTERESTS

- Robust and Distributed Optimal Control, Convex Optimization, Parallel Programming.
- Mathematical Linguistics, Computational Linguistics.

EDUCATION

California Institute of Technology <i>Ph.D. in Control and Dynamical Systems</i> – <i>Advisor:</i> John C. Doyle – <i>Thesis topic:</i> “Distributed and Localized Model Predictive Control and its applications to extending Flux Balance Analysis”	Pasadena, CA 2017 – Present
California Institute of Technology <i>M.Sc. in Space Engineering</i>	Pasadena, CA 2016 – 2017
Polytechnic University of Madrid <i>B.Sc. in Aerospace Engineering</i>	Madrid, Spain 2012 – 2016

SELECTED RESEARCH EXPERIENCE

Control and Dynamical Systems, California Institute of Technology <i>Graduate Research Assistant with Dr. John Doyle</i>	Pasadena, CA 2017 – Present
Space Propulsion Laboratory, Massachusetts Institute of Technology <i>Undergraduate Research Assistant with Dr. Manuel Martinez-Sanchez</i>	Cambridge, MA Winter 2016
Applied Mathematics Department, Polytechnic University of Madrid <i>Undergraduate Research Assistant with Dr. Ignacio Gomez</i>	Madrid, Spain 2015-2016
Computational Mechanics Group, California Institute of Technology <i>Undergraduate Research Assistant with Dr. Michael Ortiz</i>	Pasadena, CA Summer 2015
Turbocharger Research Group, Imperial College of London <i>Undergraduate Research Assistant with Dr. Ricardo Martinez-Botas</i>	London, UK Summer 2014

TEACHING AND MENTORING EXPERIENCE

Undergraduate Mentoring, California Institute of Technology <i>Mentor of summer student Sabina Gutheim</i>	Pasadena, CA Summer 2019
Undergraduate and Graduate Teaching, California Institute of Technology <i>Teaching Assistant of CDS 231 (Robust Control Theory)</i> <i>Head of Teaching Assistants of ACM 95/100 (Introductory Methods of Applied Mathematics)</i> <i>Head of Teaching Assistants of ACM 116 (Introduction to Probability Models)</i> <i>Teaching Assistant of ACM 95/100 (Introductory Methods of Applied Mathematics)</i>	Pasadena, CA Winter 2020 Winter 2019 Fall 2019 Winter 2018

SELECTED HONORS AND AWARDS

D.E. Shaw Exploration Fellowship	2019
Foster and Coco Stanback Fellowships in Engineering and Applied Science	2016
UPM-MIT Exchange Fellowship	2016
Undergraduate Research Collaboration Fellowship - <i>Awarded by the Department of Education of Spain</i>	2015
Summer Undergraduate Research Fellowship - <i>Awarded by California Institute of Technology</i>	2015
Undergraduate Researcher Fellowship - <i>Awarded by Polytechnic University of Madrid</i>	2015
Undergraduate Research Opportunity Program - <i>Awarded by Imperial College London</i>	2014
Gold Medal at the XXV Competition of Young Researchers in Spain	2012
University Access Exam Excellence Award - <i>Awarded by the Department of Education of Madrid</i>	2012

CONFERENCE PUBLICATIONS

- [C1] **C. Amo Alonso**, N. Matni, and J. Anderson, “Explicit distributed and Localized Model Predictive Control via System Level Synthesis,” in *Proceedings of the 59th IEEE Conference on Decision and Control*. IEEE, 2020
- [C2] **C. Amo Alonso** and N. Matni, “Distributed and Localized Model Predictive Control via System Level Synthesis,” in *Proceedings of the 59th IEEE Conference on Decision and Control*. IEEE, 2020
- [C3] S.-H. Tseng, **C. Amo Alonso**, and S. J. Han, “System Level Synthesis via Dynamic Programming,” in *Proceedings of the 59th IEEE Conference on Decision and Control*. IEEE, 2020
- [C4] **C. Amo Alonso**, D. Ho, and J. M. Maestre, “Distributed linear quadratic regulator robust to communication dropouts,” in *21st IFAC World Congress*. IFAC, 2020
- [C5] N. Olsman, **C. Amo Alonso**, and J. C. Doyle, “Architecture and trade-offs in the heat shock response system,” in *Proceedings of the 57th IEEE Conference on Decision and Control*. IEEE, 2018

ACADEMIC SERVICE

Peer Reviewer

IEEE Conference on Decision and Control, IEEE American Control Conference