CONTACT INFORMATION

- CIFASIS - Centro Internacional Franco-Argentino de Ciencias de la Información y de Sistemas. Bv. 27 de Febrero 210 bis, S2000EZP Rosario, Argentina. (+54 341) 4815569.

  e-mail: gianatti@cifasis-conicet.gov.ar

EDUCATION

- Ph.D. in Mathematics, at Universidad Nacional de Rosario (UNR), Argentina.
  October 2017. Average: 10/10.
  Title of the thesis: "Métodos numéricos para resolver problemas de control óptimo", (*Numerical Methods for Solving Optimal Control Problems*). Advisors: Lisandro A. Parente, Pablo A. Lotito.
- Degree in Mathematics, at UNR, Argentina. March 2012. Average: 9.88/10.

RESEARCH

RESEARCH POSITIONS

CURRENT

- Postdoc at CIFASIS, under supervision of J. Frédéric Bonnans and Lisandro A. Parente.
  Fellowship from CONICET, since May 2019.

PREVIOUS

- Postdoc at Centre de Mathématiques Appliquées - École Polytechnique in group COMMANDS, INRIA under supervision of J. Frédéric Bonnans.
  Fellowship from INRIA-Saclay, from May 2018 to April 2019.

PUBLICATIONS

- J. F. Bonnans, J. Gianatti, F. J. Silva: "On the time discretization of stochastic optimal control problems: The Dynamic Programming Approach", *ESAIM - Control, Optimisation and Calculus of Variations*, Vol. 25, Num. 63, 2019, doi:10.1051/cocv/2018045.
- L. S. Aragone, J. Gianatti, P. A. Lotito, L. A. Parente: "An approximation scheme for uncertain minimax optimal control problems", *Set-Valued and Variational Analysis*, Vol. 26, Num. 4, pp. 843-866, 2018, doi:10.1007/s11228-017-0450-7
- J. F. Bonnans, J. Gianatti, F. J. Silva: "On the convergence of the Sakawa-Shindo algorithm in stochastic control", *AIMS-Mathematical Control and Related Fields*, Vol. 6, Num. 3, September 2016, pp. 391-406, doi:10.3934/mcrf.2016008.

- J. Gianatti, L. S. Aragone, P. A. Lotito, L. A. Parente: "Solving minimax control problems via nonsmooth optimization", *Operations Research Letters, Elsevier*, Vol. 44, Num. 5 (2016), pp. 680-686, doi:10.1016/j.orl.2016.08.001.

PREPRINTS

- J. F. Bonnans, J. Gianatti: "Optimal control of an age-structured system with state constraints", pre-publication, HAL-INRIA, June 2019, https://hal.inria.fr/view/index/docid/2164310.

ARTICLES IN CONFERENCE

- J. F. Bonnans, J. Gianatti. "Una condición de optimalidad para un problema de control óptimo de un sistema estructurado en edad con restricciones de estado". Matemática Aplicada, Computacional e Industrial, 7 (2019), pp. 569-572.
- L. S. Aragone, J. Gianatti, P. A. Lotito, L.A. Parente. "Stochastic descent vs. sample average in uncertain minimax control problems". Matemática Aplicada, Computacional e Industrial, 6 (2017), pp. 508-511.
- L. S. Aragone, J. Gianatti, P. A. Lotito, L.A. Parente. "A discrete sample average approximation for uncertain minimax optimal control problems". Matemática Aplicada, Computacional e Industrial, 6 (2017), pp. 512-515.
- L. S. Aragone, J. Gianatti, P. A. Lotito. "A numerical method for a minimax optimal control problem". Matemática Aplicada, Computacional e Industrial, 5 (2015). pp. 495-498.
- L. S. Aragone, J. Gianatti, P. A. Lotito. "A Necessary Optimality Condition for a Discrete Time Min-Max Problem". Matemática Aplicada, Computacional e Industrial, 4 (2013), pp. 706-709.

CONTRIBUTED TALKS

- J. F. Bonnans, J. Gianatti. "Optimal Control of State Constrained Age-Structured Problems". Workshop on Optimal Control and Mean Field Games. Rio de Janeiro, Brazil, October 2019.
- J. F. Bonnans, J. Gianatti. "An optimality condition for an age-structured optimal control problem with state constraints". Presented at the session: "Theory of Optimal Control and Applications", at VII Congreso de Matemática Aplicada, Computacional e Industrial. Río Cuarto, Argentina, May 2019.
- L. S. Aragone, J. Gianatti, P. A. Lotito, L. A. Parente. "A discrete sample average approximation for uncertain minimax optimal control problems". Presented at the session: "Theory of Optimal Control and Applications", at VI Congreso de Matemática Aplicada, Computacional e Industrial. Comodoro Rivadavia, Argentina, May 2017.
- J. F. Bonnans, J. Gianatti, F. J. Silva. "On the convergence of the Sakawa-Shindo algorithm in stochastic control". V Latin American Workshop on Optimization and Control, LAWOC 2016, Tandil, Argentina, July 2016.
- J. F. Bonnans, J. Gianatti, F. J. Silva. "The Sakawa-Shindo Algorithm in Stochastic Control". SIAM Conference of Control and its Applications. Paris, France, July 2015.

- L. S. Aragone, J. Gianatti, P. A. Lotito. "A numerical method for a minimax optimal control problem". V Congreso de Matemática Aplicada, Computacional e Industrial. Tandil, Argentina, May 2015.
- L. S. Aragone, J. Gianatti, P. A. Lotito. "Solving a Min-max Control Problem via an Associated Discrete Problem". X Brazilian Workshop on Continuous Optimization. Florianópolis, Brasil, March 2014.
- L. S. Aragone, J. Gianatti, P. A. Lotito. "Optimality Conditions for a Min-Max Control Problem". Reunión anual de la Unión Matemática Argentina. Rosario, Argentina, September 2013.
- L. S. Aragone, J. Gianatti, P. A. Lotito. "A Necessary Optimality Condition for a Discrete Time Min-Max Problem". IV Congreso de Matemática Aplicada, Computacional e Industrial. Buenos Aires, Argentina, May 2013.

SCIENTIFIC STAYS

- Research group COMMANDS of INRIA - Saclay, at CMAP - École Polytechnique, France. Advisor: Dr. Frédéric Bonnans. From the 1st of June to the 30th of July 2016, granted by: Programa BEC.AR de Jefatura de Gabinete de Ministros, República Argentina. From the 1st of July to the 30th of November 2015, granted by: Laboratoire de Finance des Marchés de l'Energie and INRIA - Saclay. And from the 1st of September to the 6th of December 2014, granted by: INRIA - Saclay.
- Research group MOD "Modelling, Optimization, Dynamics" - Université de Limoges, Limoges, France. Advisor: Francisco J. Silva. From 13th to 17th of July 2015 and from 18th to 22nd of March 2019, granted by: INRIA - Saclay.

SCHOLARSHIPS

- PhD Scientific Research Scholarship granted by the Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), from 2012 to 2017.
- Postdoc Scholarship granted by CONICET, from 2019 to 2021.

TEACHING

- 01/04/2017 - present: Adjunct Professor at Department of Mathematics (DM-EFB), FCEIA, UNR.
- 08/03/2010 - 30/04/2018: Assistant Professor at Department of Mathematics (DM-ECEN), FCEIA, UNR.
- 18/04/2007 - 31/03/2012: Training for the Mathematical Olympiads secondary students at Instituto Politécnico Superior: "Gral. San Martín", UNR.
- 01/03/2004 - 28/02/2006: Training for the Mathematical Olympiads primary students at the Escuela N°.69, "Dr. Gabriel Carrasco", Rosario, Argentina.

ACADEMIC MANAGEMENT AND ORGANISATION

- Assistant secretary of the Asociación Argentina de Matemática Aplicada, Computacional e Industrial (ASAMACI). Since May 2019.
- Assistant treasurer of ASAMACI. May 2013 - April 2019.
- Jury of thesis of Master in Applied Mathematics, Universidad Nacional De Rio Cuarto, Facultad de Ciencias Exactas Físico-Química y Naturales, of Lic. Carolina María Bollo. December 2019.
- Jury of the final degree thesis of Computer Sciences, FCEIA, UNR of Carolina Gonzalez, March 2017.
- Jury of the Argentinean Mathematical Olympiad, at the zonal competition. From 2011 to 2017.
- Member of the organizing committee of "V Congreso de Matemática Aplicada, Computacional e Industrial". Tandil, Argentina, 2015.
- Member of the organizing committee of the "V Festival de Matemática" at the Reunión Anual de la Unión Matemática Argentina. Rosario, 2013.
- Collaborator of "Muestra Interactiva : Por qué la Matemática", Unesco - Centre Sciences de Orleans, France, Universidad Tokay, Japan. At FCEIA, UNR, December 2008.

AWARDS

- Gold Medal (best average) of the year 2012 of the Universidad Nacional de Rosario.
- First prize at the monograph competition organized by Unión Matemática Argentina, in 2011, with the tittle "El Teorema de la Convergencia Monótona" written by Justina Gianatti, Dana Pizarro and Julieta Bollati.

LANGUAGES

- Spanish: Mother tongue.
- English: Advanced level (B2). ("First Certificate in English", University of Cambridge, 2012).
- French: Advanced level (B2).