Rodrigo A. González
Control Systems Technology
Department of Mechanical Engineering
Eindhoven University of Technology, The Netherlands

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Personal Information

Full name: Rodrigo Alejandro González Vidal
Date of birth: 24th of September of 1992
Place of birth: Viña del Mar, Chile
Citizenship: Chilean
Professional Degree: Ingeniero Civil Electrónico (Electronics Engineer)

Education

- **KTH Royal Institute of Technology** Stockholm, Sweden
  Ph.D. in Electrical Engineering *Oct. 2017 - May 2022*
  - Title: *Continuous-time System Identification: Refined Instrumental Variables and Sampling Assumptions*
  - Supervisor: Prof. Cristian R. Rojas
  - Opponent and Committee: Prof. Marion Gilson (Université de Lorraine, France), Dr. ir. John Lataire (VUB, Belgium), Prof. Tomas McKelvey (Chalmers, Sweden), Assoc. Prof. Roland Toth (TU Eindhoven, The Netherlands)
- **KTH Royal Institute of Technology** Stockholm, Sweden
  Licentiate of Electrical Engineering *Oct. 2017 - June 2020*
  - Title: *Consistency and Efficiency in Continuous-time System Identification*
  - Supervisor: Prof. Cristian R. Rojas
  - Opponent: Prof. Hugues Garnier (Université de Lorraine, Nancy, France)
- **Universidad Técnica Federico Santa María** Valparaíso, Chile
  Master of Science of Electronic Engineering (Major: Automatic Control) *Mar. 2015 - Nov. 2016*
  - Title: *Imposition of Causality and Passivity in Spectral Analysis* (in Spanish)
  - Supervisor: Prof. Ricardo A. Rojas
  - Committee: Ph.D. Ricardo A. Rojas (UTFSM, Chile), Ph.D. Cristian R. Rojas (KTH, Sweden), Ph.Dc. Patricio E. Valenzuela (KTH, Sweden), Ph.D. Daniel Sbárbaro (U. Concepción, Chile)
- **Universidad Técnica Federico Santa María** Valparaíso, Chile
  Electronics Engineering Degree (6-year degree) *Mar. 2011 - Nov. 2016*
  - Supervisor: Prof. Ricardo A. Rojas
  - GPA: 92% (Maximum: 100%). Ranking: 1st out of 70 students

Research Experience

- **Assistant Professor** — Eindhoven, The Netherlands
  Department of Mechanical Engineering, TU/e — *March 2024 -*
  - Working in the Control Systems Technology Section.
- **Member Technical Committee**
  IFAC — *2025 -*
  - Member of Technical Committee IFAC 1.1 on Modeling, Identification and Signal Processing.
- **Visiting Researcher** — Valparaíso, Chile
  Department of Electronics, UTFSM, and AC3E — *Decs. 2022-2024*
  - Three 4-week research visits to the group of Prof. J. C. Agüero during December 2022, 2023, and 2024. Also visited the Advanced Center for Electrical and Electronic Engineering (AC3E).
  - Funded by the Chilean National Agency for Research and Development (ANID), grant ANID-FONDECYT 1211630.
- **Postdoctoral researcher** — Eindhoven, The Netherlands
  Department of Mechanical Engineering, TU/e — *June 2022 - February 2024*
  - Worked with Prof. Tom Oomen, as part of the Control Systems Technology Section.
- **Ph.D. student** — Stockholm, Sweden
  Division of Decision and Control Systems, KTH — *Oct. 2017 - May 2022*
  - Under the supervision of Prof. Cristian R. Rojas.
- **Visiting Researcher** — Newcastle, NSW, Australia
  School of Electrical Engineering and Computing, University of Newcastle — *Nov. 2019 - Dec. 2019*
  - 5-week research visit to the group of Assoc. Prof. James Welsh.
  - Funded by the Complex Dynamic Systems and Control (CDSC) Scholarship.
- **Reviewer**
  IEEE-IFAC-ANID — *2017 -*
  - Reviewer for IFAC Automatica Journal, Elsevier Signal Processing Journal, IEEE Transactions on Automatic Control, International Journal of Control, IEEE Control Systems Letters, International Journal of Robust and Nonlinear Control, IEEE Transactions on Control Systems Technology, IEEE/ASME Transactions on Mechatronics, Biomedical Signal Processing and Control, Control Engineering Practice, IFAC World Congress, IFAC Symposium on System Identification, , IEEE Conference on Decision and Control (CDC), American Control Conference (ACC), European Control Conference (ECC), and IEEE Conference on Control Technology and Applications (CCTA).
  - Reviewer for the Fondecyt Research Initiation and Regular Projects Competition, ANID, Chile.
  - External reviewer of MSc. Theses of the following students: Cristóbal Huidobro, defended on January 3rd, 2024, at UTFSM, Valparaíso, Chile; Jacky Li, defended on October 30th, 2024, at TU/e, Eindhoven, The Netherlands; Tim Janssen, defended on December 6th, 2024, at TU/e, Eindhoven, The Netherlands; Fernando Sanhueza, defended on January 20th, 2025, at UTFSM, Valparaíso, Chile, Radu Pirvan, defended on April 14th, 2025, at TU/e, Eindhoven, The Netherlands; Luuk Thelen, defended on June 24th, 2025, at TU/e, Eindhoven, The Netherlands; Sudarshan Raghuraman, defended on July 1st, 2025, at TU/e, Eindhoven, The Netherlands; Yidan Zhu, defended on July 3rd, 2025, at TU/e, Eindhoven, The Netherlands.
  - External reviewer of PhD. Thesis of Max van Haren, at TU/e, Eindhoven, The Netherlands.
- **Research Assistant** — Valparaíso, Chile
  Department of Electronics, UTFSM — *Feb. 2017 - Sept. 2017*

- Hired by Project FONDECYT 1161241, 'Optimal estimation and control over communication channels subject to data loss'.
- Under the supervision of Prof. Francisco Vargas.
- Output: One conference paper (ECC2018), two journal papers (TAC and L-CSS).

- **Visitor** Stockholm, Sweden
  Division of Decision and Control Systems, KTH *Mar. 2016*
  - 2-week research visit to the System Identification Group of KTH, invited by Prof. Cristian Rojas.

- **Research Intern** Berlin, Germany
  Control Systems Group, TU Berlin *Jan. 2016 - Feb. 2016*
  - 8-week internship.
  - Funded by CONICYT's 'Scholarship for short internships abroad'.

Teaching and Supervision Experience

- **Lecturer** TU/e, The Netherlands
  4CA20 'Signals and Systems' (BSc. Course) *Springs 2024-2025*
- **Guest Lecturer** TU/e, The Netherlands
  4CM40 'Physical and Data-driven Modelling' (MSc. Course) *Spring 2025*
- **Supervisor of PhD students** TU/e, The Netherlands
  Mechanical Engineering *2025*
  - Enrico Dozzi.
  - Maarten van der Hulst (main supervisor: Tom Oomen).
  - Arturo Morales (main supervisor: Niek Doelman).
- **Supervisor of MSc. Theses** TU/e, The Netherlands
  Master Program in Systems and Control *2024-2025*
  - Thesis 2025: Gijs van Meerbeeck (with ASML).
  - Thesis 2024: "Direct Bayesian identification of inverse systems" by Rikuto Suzuki.
  - Thesis 2024: "Modal Identification of Multivariable Motion Systems" by Maarten van der Hulst (with ASML).
- **Supervisor of MSc. Internship** TU/e, The Netherlands
  Mechanical Engineering *2025*
  - Internship 2025: Pieter Versteeg.
  - Internship 2025: Romain Mellouët, from Université de Poitiers, France.
  - Internship 2025: "Estimating the Parameters of Truncated Gaussian Noise Using EM Algorithm and SMC Techniques" by Tuna Homurlu.
- **Supervisor of BSc. Project** TU/e, The Netherlands
  Mechanical Engineering *2025*
  - Project 2025: "Analysis and Software Control Design of Cascaded Mass-Spring-Damper Systems: Application to an Education Setup" by Nam Nguyen.
- **Teaching Assistant** TU/e, The Netherlands
  4CM40 'Physical and Data-driven Modelling' (Masters Course) *Springs 2023-2024*

- **Teaching Assistant** — TU/e, The Netherlands
  4SC070 'Learning control' (Masters Course) — *Spring 2023*
- **Teaching Assistant** — KTH, Sweden
  EL2820 'Modelling of Dynamical Systems' (Masters Course) — *Autumns 2018-2021*
- **Supervisor of BSc. Theses** — KTH, Sweden
  Bachelor Thesis Course, Electrical Engineering Program — *Springs 2018-2020*
  - Project 2020: 'Stock Market Prediction with Deep Learning' by Kiar Fatah and Tariq Nazar.
  - Project 2019: 'Evaluating LASSO and ARIMA algorithms for financial forecasting', by Oskar Erlandsson and Andrej Wilczek.
  - Project 2018: 'Evaluating different algorithms for detecting change-points in time series', by Henrik Eriksson and Victor Löfgren.
- **Supervisor of MSc. Theses** — KTH, Sweden
  Master Program in System, Control and Robotics — *2018-2021*
  - Thesis 2021: 'Current Control and Modelling of an Inspiration Valve' by Astrid Lindstedt (with Getinge).
  - Thesis 2021: 'System Identification of continuous-time systems with quantized output data using indirect inference' by Frida Persson.
  - Thesis 2020: 'Inertial Domain Transfer using Generative Adversarial Networks' by Saieshwar Radhakrishnan (with Scania)
  - Thesis 2020: 'Adaptive Model Predictive Control for Reference Tracking Vehicle Motion' by Sven Grenholm (with Transrail)
  - Thesis 2019: 'Online maximum capacity estimation of a propulsion battery on heavy duty vehicles', by Nikolaos Karavalakis (with Scania)
  - Thesis 2018: 'Hydraulic Closed Loop Control', by Maria Elfving (with Volvo)
- **Teaching Assistant** — Department of Electronics, UTFSM, Chile
  ELO-370 'Automatic Control II'(Digital Control) — *2nd Semester 2016*
- **Teaching Assistant** — Department of Electronics, UTFSM, Chile
  ELO-104 'Linear Systems Analysis' (four times) — *2015 - 2016*
- **Teaching Assistant** — Department of Mathematics, UTFSM, Chile
  MAT-024 'Multivariable Integration and PDEs' — *2nd Semester 2015*
- **Teaching Assistant** — Department of Mathematics, UTFSM, Chile
  MAT-023 'Multivariable Differential Calculus and ODEs' — *1st Semester 2014*
- **Teaching Assistant** — Department of Physics, UTFSM, Chile
  FIS-120 'Electromagnetism' — *2nd Semester 2013*
- **Teaching Assistant** — Department of Mathematics, UTFSM, Chile
  MAT-021 'Algebra and Elementary Calculus' — *1st Semester 2013*
- **Teaching Assistant** — Department of Mathematics, UTFSM, Chile
  MAT-022 'Linear Algebra and Single Variable Integration' (twice) — *2nd Semester 2012-2013*

Other working experience

- **Track coordinator High-tech Systems and Robotics, AI&ES MSc.** — Eindhoven, The Netherlands
  TU/e — *2025-*

- **Core organizer of the Symposium 'Identification, Control and Applications'** Valparaíso, Chile
  UTFSM/AC3E *2023-2025*
  - Organizer of all three symposia, which have been held in January at UTFSM, Valparaíso, Chile.
  - Over 25 presentations from industrial partners, professors, researchers and PhD/MSc students from Lund University (Sweden), TU/e (The Netherlands), UTEM, USACH, UTFSM, U. Chile, PUC, PUCV (Chile).
- **Volunteer in the organizing crew of SYSID'18** Stockholm, Sweden
  KTH Royal Institute of Technology *2018*
  - In charge of solving technical issues and support during the IFAC Symposium on System Identification (SYSID'18), held in Stockholm.
- **Report Assistant** Valparaíso, Chile
  Department of Electronics, UTFSM *2016*
  - Report assistant and member of the committee of the accreditation process of the Master of Science degree in Electronic Engineering.
  - After 1 year of work, we obtained 2 extra years of accreditation of the program (from 6 to 8).
- **Vicepresident of the Student Union** Valparaíso, Chile
  Department of Electronics, UTFSM *2015*
  - Vicepresident of the association of all ∼650 students of Electronic and Telematic Engineering of the UTFSM. The position lasted one year.
- **Summer intern** Ventanas, Chile
  Codelco, Ventanas Division *Jan. 2015 - March. 2015*
  - Summer intern for 8 weeks in the Refinement section of Codelco (National Corporation of Copper).
- **Summer intern** Santiago, Chile
  Honeywell Chile S.A. *Jan. 2014 - March. 2014*
  - Summer intern for 8 weeks in Honeywell Chile S.A., Advanced Process Control Area.
- **PSU practice test corrector** Valparaíso, Chile
  Admission team, UTFSM *2011 - 2016*
  - In charge of the validation and listing of format and mathematical errors of the PSU (National University Selection Test) practice tests of the UTFSM.
  - Over 30 practice exams validated.

Courses

- **Teaching Courses taken at TU/e, The Netherlands**
  - TEACH340-45, Evaluation (Spring 2025)
  - TEACH320-58, Assessment (Spring 2025)
  - TEACH1003-20, Supervising (Spring 2025)
  - TEACH760-25, Teaching Skills (Autumn 2024)
  - TEACH720-25, Designing Courses & Projects (Autumn 2024)
  - TEACH950, Foundations (Spring 2024)
  - YEARTH Academy, Interpersonal Communication (Spring 2024)
  - AVK, Focus your online work - Inbox zero (Spring 2024)

- TEACH890, Learn to Teach (Autumn 2023)

- **Ph.D. Courses taken at KTH, Sweden:**
  - FJL3380, Theoretical Foundations of Machine Learning (Spring 2019)
  - FAK3127, The Sustainable Scientist (Spring 2019)
  - FEL3202, Data Driven Modeling - Extended Course (Spring 2019)
  - FEL3370, Mathematical Method in Signals, Systems and Control (Spring 2019)
  - FAK3014, Theory and Methodology of Science (Spring 2019)
  - FEM3200, Optimal Filtering (Autumn 2018)
  - FEM3220, Matrix Algebra (Spring 2018)
  - FDS3103, Introduction to Scientific Writing (Spring 2018)
  - FSF3862, Nonlinear Systems, Analysis and Control (Spring 2018)
  - FLH3000, Basic Communication and Teaching (Spring 2018)
  - FEL3210, Multivariable Feedback Control Systems (Autumn 2017)
  - FEF3301, Computational Game Theory (Autumn 2017)

- **MSc./Ph.D. Courses taken at UTFSM, Chile:**
  - MAT235, Functional Analysis (attended lectures Semester 2017-1)
  - MAT379, Optimization and Control (attended lectures Semester 2017-1)
  - MAT263, Probability Theory and Stochastic Processes (attended lectures Semester 2016-1)
  - MAT226, Measure Theory (attended lectures Semester 2015-2)
  - MAT235, Complex Variables (Semester 2015-2)
  - IPD476, Multivariable Control (Semester 2015-2)
  - MAT225, Real Analysis (Semester 2015-1)
  - IPD469, Models for Control (Semester 2015-1)
  - IPD462, Advanced Design of Control Systems (Semester 2015-1)
  - IPD468, System Dynamics (Semester 2014-2)
  - IPD460, Information Theory (Semester 2014-2)
  - IPD431, Probability and Random Processes (Semester 2014-1)
  - IPD410, Mathematical Methods in Automatic Control (Semester 2013-2)

Merits and Awards

- **Recipient of the 'Esfuerzo es Progreso' Award** Valparaíso, Chile
  UTFSM *2019*
  - Testamentary donation/award given to the best Electronic Engineering student of UTFSM graduated in 2016.
- **Recipient of Complex Dynamic Systems and Control (CDSC) Scholarship** Newcastle, Australia
  University of Newcastle, Australia *2019*
  - Research scholarship of AUD $5000 for visiting the University of Newcastle during November 2019.

- **Recipient of grant by The Ericsson Research Foundation** Stockholm, Sweden
  Ericsson *2019*
  - Grant of 10000 SEK to attend the 2019 Summer School of High Dimensional Probability and Algorithms, held in Paris, France, July 1-5th.
- **Recipient of the 'Marcos Orrego Puelma' Award** Santiago, Chile
  Institute of Engineers of Chile *2017*
  - Award given to the best Engineering student of UTFSM graduated in 2016 (among $\sim$1000 students).
- **Recipient of the 'Mejor Titulado Ing. Civil Electrónica Promoción 2016' award** Valparaíso, Chile
  School of Engineers of Chile *2017*
  - Distinction given to the best Electronic Engineer of UTFSM graduated in 2016, in recognition of his academic performance and his conditions of leadership and participation.
- **Recipient of the Academic Distinction 'Federico Santa María'** Valparaíso, Chile
  UTFSM *2016*
  - Award given to the best student of Electronics Engineering graduated in 2016.
- **Outstanding student of Master studies in Electronic Engineering** Valparaíso, Chile
  UTFSM *2016*
  - Award given to the best student of Master of Science of Electronic Engineering graduated in 2016.
- **Recipient of the CONICYT 'Scholarship for Master studies in Chile'** Santiago, Chile
  CONICYT *2015-2016*
  - National scholarship given to approximately 250 students in Chile per year to economically support their MSc. studies in a Chilean university.
  - Achieved the third highest score in the scholarship selection process (out of more than 2500 applicants).
- **Recipient of the CONICYT 'Scholarship for short internships abroad'** Santiago, Chile
  CONICYT *2015*
  - National scholarship given to approximately 60 students in Chile per year to afford a short internship in a university abroad.
- **1st place in the Honor list** Valparaíso, Chile
  UTFSM *2014 and 2015*
  - Honor given to the student with the best academical performance of all the University (among $\sim$10000 students).
- **2nd place in the Honor list** Valparaíso, Chile
  UTFSM *2013 and 2016*
  - Honor given to the student with the second best academical performance of all the University (among $\sim$10000 students).
- **Recipient of the Academic Merit of the Electronics Department Award** Valparaíso, Chile
  Department of Electronics, UTFSM *2012-2017*
  - Award given to all the students of the Electronics Department with average academic qualifications of over 80 out of 100 (95th percentile approximately).
  - Award won six consecutive times (all the times possible).
- **Recipient of the 'Premio al Mérito Académico UTFSM'** Valparaíso, Chile
  UTFSM *2012-2016*
  - Award given to the two students with highest academic qualifications of all their generation in the University (around 1000 students per generation).
  - Award won five consecutive times (all the times possible).

- **'Puntaje Nacional' Scholarship** Valparaíso, Chile
  UTFSM *2011-2016*
  - Full undergraduate and postgraduate scholarship given to the student with perfect score in any PSU test (National University Selection Test) of 2010.
- **Highest PSU score of the UTFSM in 2011** Valparaíso, Chile
  UTFSM *2011*
  - Honor given to the student with highest average PSU (National University Selection Test) score who entered the UTFSM in 2011.
- **Perfect PSU score in Mathematics** Valparaíso, Chile
  Ministry of Education of Chile *2010*
  - Honor given to the student with perfect score in the PSU (National University Selection Test) of Mathematics of 2010.
  - Only 450 students achieved this score in 2010 (out of more than 250000).

Skills

- **Computer Skills**: MATLAB (advanced), LaTeX(advanced), Python (Intermediate), HTML (Basic).
- **Languages**: Spanish (native), English (fluent).
- Hold a Chilean driver's license (B).

Publications

Journal papers

[J21] **Rodrigo A. González** and Angel L. Cedeño. "Simultaneous Input and State Estimation under Output Quantization: A Gaussian Mixture approach". *IEEE Control Systems Letters*, 9(1): 1946 - 1951, 2025.

[J20] Rikuto Suzuki, Tom Oomen and **Rodrigo A. González**. "Direct Bayesian identification of inverse systems". *IEEE Control Systems Letters*, 9(1): 1478 - 1483, 2025.

[J19] Maarten van der Hulst, **Rodrigo A. González**, Koen Classens, Nick Dirkx, Jeroen van de Wijdeven and Tom Oomen. "Identification of additive multivariable continuous-time systems". *IEEE Control Systems Letters*, 9(1): 547 - 552, 2025.

[J18] Koen Classens, **Rodrigo A. González** and Tom Oomen. "Recursive Identification of Additive Systems: An Instrumental-Variable Approach with Application to Modal Mechanical Systems". *European Journal of Control*, Article 101238, 2025.

[J17] **Rodrigo A. González**, Koen Classens, Cristian R. Rojas, James S. Welsh and Tom Oomen. "Identification of Additive Continuous-time Systems in Open and Closed-loop". *Automatica*, Article 112013, 2025.

[J16] **Rodrigo A. González**, Max van Haren, Tom Oomen and Cristian R. Rojas. "Sampling in Parametric and Nonparametric System Identification: Aliasing, Input Conditions, and Consistency". *IEEE Control Systems Letters*, 8(1): 2415-2420, 2024.

[J15] **Rodrigo A. González**, Koen Classens, Cristian R. Rojas, James S. Welsh and Tom Oomen. "Statistical Analysis of Block Coordinate Descent Algorithms for Linear Continuous-time System Identification". *IEEE Control Systems Letters*, 8(1): 388-393, 2024.

[J14] **Rodrigo A. González**, Siqi Pan, Cristian R. Rojas and James S. Welsh. "Consistency analysis of refined instrumental variable methods for continuous-time system identification in closed-loop". *Automatica*, Article 111697, 2024.

[J13] Angel L. Cedeño, **Rodrigo A. González**, Rodrigo Carvajal and Juan C. Agüero. "Identification of Wiener state-space models utilizing Gaussian sum smoothing". *Automatica*, Article 111707, 2024.

[J12] **Rodrigo A. González**, Koen Tiels and Tom Oomen. "Kernel-based identification using Lebesgue-sampled data". *Automatica*, Article 111648, 2024.

[J11] **Rodrigo A. González**, Cristian R. Rojas, Siqi Pan and James S. Welsh. "On the relation between discrete and continuous-time refined instrumental variable methods". In *IEEE Control Systems Letters*, 7(1): 2233-2238, 2023.

[J10] Angel L. Cedeño, **Rodrigo A. González**, Boris I. Godoy, Rodrigo Carvajal and Juan C. Agüero. "On filtering and smoothing algorithms for linear state-space models having quantized output data". In *Mathematics*, 11(6): 1327, 2023.

[J9] Siqi Pan, James S. Welsh, **Rodrigo A. González** and Cristian R. Rojas. "Consistency Analysis and Bias Elimination of the Instrumental Variable Based State Variable Filter Method". *Automatica*, Article 110511, 2022.

[J8] **Rodrigo A. González**, Cristian R. Rojas, Siqi Pan and James S. Welsh. "Refined instrumental variable methods for unstable continuous-time systems in closed-loop". *International Journal of Control*, 96(10): 2527–2541, 2022.

[J7] **Rodrigo A. González**, Cristian R. Rojas, Siqi Pan and James S. Welsh. "Theoretical and practical aspects of the convergence of the SRIVC estimator for over-parameterized models". *Automatica*, Article 110355, 2022.

[J6] **Rodrigo A. González**, Cristian R. Rojas, Siqi Pan and James S. Welsh. " Consistent identification of continuous-time systems under multisine input signal excitation". *Automatica*, Article 109859, 2021.

[J5] Siqi Pan, James S. Welsh, **Rodrigo A. González** and Cristian R. Rojas. "Efficiency Analysis of the Simplified Refined Instrumental Variable Method for Continuous-time Systems". *Automatica*, Article 109196, 2020.

[J4] Siqi Pan, **Rodrigo A. González**, James S. Welsh and Cristian R. Rojas. "Consistency Analysis of the Simplified Refined Instrumental Variable Method for Continuous-time Systems". *Automatica*, Article 108767, 2020.

[J3] Francisco J. Vargas and **Rodrigo A. González**. "On the existence of a stabilizing solution of Modified Algebraic Riccati Equations in terms of standard Algebraic Riccati Equations and Linear Matrix Inequalities". In *IEEE Control Systems Letters*, 4(1): 91-96, 2019.

[J2] **Rodrigo A. González**, Francisco J. Vargas and Jie Chen. "Necessary and sufficient conditions for mean square stabilization over MIMO SNR-Constrained channels with colored and spatially correlated additive noises". In *IEEE Transactions on Automatic Control*, 64(11): 4825-4832. 2019.

[J1] **Rodrigo A. González**, Patricio E. Valenzuela, Cristian R. Rojas and Ricardo A. Rojas. "Optimal enforcement of causality in non-parametric transfer function estimation". In *IEEE Control Systems Letters*, 1(2): 268-273, 2017.

Conference papers

[C20] **Rodrigo A. González**, Angel L. Cedeño, Koen Tiels and Tom Oomen. "Truncated Gaussian Noise Estimation in State-Space Models", 64th IEEE Conference on Decision and Control (CDC'25), 2025.

[C19] Angel L. Cedeño, **Rodrigo A. González**, Boris I. Godoy and Juan C. Agüero. "Filtering in Multivariate Systems with Quantized Measurements using a Gaussian Mixture-Based Indicator Approximation", 64th IEEE Conference on Decision and Control (CDC'25), 2025.

[C18] Maarten van der Hulst, **Rodrigo A. González**, Koen Classens, Paul Tacx, Nick Dirkx, Jeroen van de Wijdeven and Tom Oomen. "Frequency domain identification of additive multivariable transfer function models: Applied to a prototype wafer-stage system", Joint IFAC Symposium on Mechatronic Systems & Robotics, Paris, France, July 2025.

[C17] Giulia Sonzogni, **Rodrigo A. González**, Koen Tiels, Mirko Mazzoleni, Tom Oomen and Fabio Previdi. "Motion control tuning for time-delayed systems with integral action", Joint IFAC Symposium on Mechatronic Systems & Robotics, Paris, France, July 2025.

[C16] **Rodrigo A. González** and Paulina Quintanilla. "Grey-box Recursive Parameter Identification of a Nonlinear Dynamic Model for Mineral Flotation", 10th International Conference on Control, Decision and Information Technologies (CoDIT), Valletta, Malta, July 2024.

[C15] Angel L. Cedeño, **Rodrigo A. González** and Juan C. Agüero. "Gaussian sum filtering for Wiener state-space models with a class of non-monotonic piecewise nonlinearities", 20th IFAC Symposium on System Identification (SYSID'24), 2024.

[C14] Augustus Elton, **Rodrigo A. González**, James S. Welsh, Cristian R. Rojas and Minyue Fu. "Parametric Continuous-Time Blind System Identification". 62nd IEEE Conference on Decision and Control (CDC'23), 2023.

[C13] Max van Meer, **Rodrigo A. González**, Gert Witvoet and Tom Oomen. "Identification of Nonlinear Dynamics in Switched Reluctance Motors through Linear Bayesian Estimation". 62nd IEEE Conference on Decision and Control (CDC'23), 2023.

[C12] Augustus Elton, **Rodrigo A. González**, James S. Welsh, Tom Oomen and Cristian R. Rojas. "Blind non-parametric estimation of SISO continuous-time systems". In *Proceedings of the IFAC World Congress 2023 (IFAC WC 2023)*, 2023.

[C11] **Rodrigo A. González**, Cristian R. Rojas, Siqi Pan and James S. Welsh. "Parsimonious identification of continuous-time Systems: A block-coordinate descent approach". In *Proceedings of the IFAC World Congress 2023 (IFAC WC 2023)*, 2023.

[C10] **Rodrigo A. González**, Koen Tiels and Tom Oomen. "Identifying Lebesgue-sampled continuous-time impulse response models: A kernel-based approach". In *Proceedings of the IFAC World Congress 2023 (IFAC WC 2023)*, 2023.

[C9] **Rodrigo A. González**, Angel L. Cedeño, María Coronel, Juan C. Agüero and Cristian R. Rojas. "An EM algorithm for Lebesgue-sampled state-space continuous-time system identification". In *Proceedings of the IFAC World Congress 2023 (IFAC WC 2023)*, 2023.

[C8] **Rodrigo A. González**, Cristian R. Rojas, Siqi Pan and James S. Welsh. "The SRIVC algorithm for continuous-time system identification with arbitrary input excitation in open and closed loop". In *Proceedings of the 60th IEEE Conference on Decision and Control (CDC'21)*, pages 3004-3009, 2021.

[C7] **Rodrigo A. González**, Cristian R. Rojas and Håkan Hjalmarsson. "Non-causal regularized least-squares for continuous-time system identification with band-limited input excitations". In *Proceedings of the 60th IEEE Conference on Decision and Control (CDC'21)*, pages 114-119, 2021.

[C6] **Rodrigo A. González** and Cristian R. Rojas. "A finite-sample deviation bound for stable autoregressive processes". In *Proceedings of the 2nd Conference on Learning for Dynamics and Control (L4DC)*, Berkeley, USA, pages 191-200, 2020.

[C5] **Rodrigo A. González**, James S. Welsh and Cristian R. Rojas. "Enforcing stability through ellipsoidal inner approximations in the indirect approach for continuous-time system identification". In *Proceedings of the 21st IFAC World Congress (IFAC'2020)*, Berlin, Germany, pages 566-571, 2020.

[C4] **Rodrigo A. González** and Cristian R. Rojas. "Finite sample deviation and variance bounds for first order autoregressive processes". In *Proceedings of the 45th International Conference on Acoustics, Speech, and Signal Processing (ICASSP'20)*, Barcelona, Spain, pages 5380-5384, 2020.

[C3] **Rodrigo A. González**, James S. Welsh and Cristian R. Rojas. "An asymptotically optimal indirect approach to continuous-time system identification". In *Proceedings of the 57th IEEE Conference on Decision and Control (CDC'18)*, Miami Beach, FL, USA, pages 638-643, 2018.

[C2] **Rodrigo A. González** and Cristian R. Rojas. "A fully Bayesian approach to kernel-based regularization for impulse response estimation". In *Proceedings of the 18th IFAC Symposium on System Identification (SYSID'18)*, Stockholm, Sweden, pages 186-191, 2018.

[C1] **Rodrigo A. González**, Francisco J. Vargas and Jie Chen. "Stabilization of MIMO systems over additive correlated noise channels subject to multiple SNR-constraints". In *Proceedings of the 16th European Control Conference (ECC'18)*, Limassol, Cyprus, pages 1493-1498, 2018.

Submitted Journal papers

[SJ5] Max van Meer, **Rodrigo A. González**, Noa van Rijt, Emre Deniz, Gert Witvoet and Tom Oomen. "Identification of the Torque-Current-Angle Relation of Switched Reluctance Motors Without Torque Sensors" (submitted for publication), 2025.

[SJ4] **Rodrigo A. González**, Maarten van der Hulst, Koen Classens and Tom Oomen. "Statistically Optimal Structured Additive MIMO Continuous-time System Identification" (submitted for publication), 2025.

[SJ3] Luis Severino, Marco A. Gordon, **Rodrigo A. González**, Alejandro I. Maass and Francisco J. Vargas. "Filtering Scheme for Platoons over Additive Noise Channels: Variance Reduction with String Stability Guarantee" (submitted for publication), 2025.

[SJ2] Zhihe Zhuang, **Rodrigo A. González**, Hongfeng Tao, Wojciech Paszke and Tom Oomen. "Data-enabled iterative learning control: A zero-sum game design for varying time-scale task" (submitted for publication), 2024.

[SJ1] Angel L. Cedeño, **Rodrigo A. González** and Juan C. Agüero. "The Quadrature Gaussian Sum Filter and Smoother for Wiener Systems" (submitted for publication), 2024.

Submitted Conference papers

[SC1] Luis Severino, Marco A. Gordon, **Rodrigo A. González**, Alejandro I. Maass and Francisco J. Vargas. "Kalman Filtering for Predecessor Following Platoons Under Additive Noise Communication Channels", (submitted for publication), 2025.

Theses

[T3] **Rodrigo A. González**, *Continuous-time System Identification: Refined Instrumental Variables and Sampling Assumptions*. Ph.D. Thesis, KTH Royal Institute of Technology, May 2022. Supervisor: Prof. Cristian R. Rojas.

[T2] **Rodrigo A. González**, *Consistency and Efficiency in Continuous-time System Identification*. Licentiate of Engineering Thesis, KTH Royal Institute of Technology, June 2020. Supervisor: Prof. Cristian R. Rojas.

[T1] **Rodrigo A. González**, *Enforcement of Causality and Passivity in Spectral Analysis* (in Spanish). Master's Thesis, Universidad Técnica Federico Santa María, Valparaíso, Chile, November 2016. Supervisors: Prof. Ricardo A. Rojas, Prof. Cristian R. Rojas and Patricio E. Valenzuela.

Books

[B1] **Rodrigo A. González**, *Exercise Compendium of Linear Systems Analysis* (in Spanish). July 2019.

Others

[P21] **Rodrigo A. González**. "Two applications of the EM algorithm in system identification". Presentation lunch colloquium Control System Technology Section, TU/e, June 2025, Eindhoven, The Netherlands.

[P20] **Rodrigo A. González**, Max van Haren, Tom Oomen and Cristian R. Rojas. "Implications of Undersampling in System Identification". Presentation at the 44th Benelux Meeting on Systems and Control, March 2025, Egmond aan Zee, The Netherlands.

[P19] Maarten van der Hulst, **Rodrigo A. González**, Koen Classens, Paul Tacx, Nic Dirkx, Jeroen van de Wijdeven and Tom Oomen. "Modal Identification for Multivariable Motion Systems: Applied to a Prototype Wafer-Stage". Presentation at the 44th Benelux Meeting on Systems and Control, March 2025, Egmond aan Zee, The Netherlands.

[P18] Giulia Sonzogni, Mirko Mazzoleni, Fabio Previdi, **Rodrigo A. González**, Koen Tiels and Tom Oomen. "Modified Smith Predictor for integrative and delayed time systems". Presentation at the 44th Benelux Meeting on Systems and Control, March 2025, Egmond aan Zee, The Netherlands.

[P17] **Rodrigo A. González**. "Finite sample MIMO identification with multisine excitation: nonparametric, direct, and two-step parametric estimators". Presentation Cyber-Physical Systems Group, March 2025, Wroclaw University of Science and Technology, Poland (online).

[P16] Max van Meer, **Rodrigo A. González**, Gert Witvoet and Tom Oomen. "Estimation and Control of Switched Reluctance Motors". Poster presentation the Third Euspen Special Interest Group Meeting on Precision Motion Systems & Control, 's-Hertogenbosch, The Netherlands, 2024.

[P15] Maarten van der Hulst, Koen Classens, **Rodrigo A. González**, Nick Dirkx, Jeroen van de Wijdeven and Tom Oomen. "Modal identification for multivariable motion systems". Poster presentation the Third Euspen Special Interest Group Meeting on Precision Motion Systems & Control, 's-Hertogenbosch, The Netherlands, 2024.

[P14] **Rodrigo A. González**, Koen Classens, Maarten van der Hulst and Tom Oomen. "Statistically-Optimal Modal MIMO Identification for High-Tech Motion Systems". Presentation at the 2024 Workshop of the European Research Network on System Identification (ERNSI), September 2024, Venice, Italy.

[P13] **Rodrigo A. González**, Koen Classens, Cristian R. Rojas, James S. Welsh and Tom Oomen. "Additive Continuous-time Identification: With Application to Modal Mechanical Systems". Presentation at the 43rd Benelux Meeting on Systems and Control, March 2024, Blankenberge, Belgium.

[P12] **Rodrigo A. González**, Koen Classens, Cristian R. Rojas, James S. Welsh and Tom Oomen. "Additive Continuous-time Identification: With Application to Modal Mechanical Systems" (in Spanish). Presentation at the second Symposium on Identification, Control and Applications at UTFSM, January 2024, Valparaíso, Chile.

[P11] Koen Tiels, **Rodrigo A. González** and Tom Oomen. "Control variates for multivariate truncated probability density functions with application in system identification". Poster at the 2023 Workshop of the European Research Network on System Identification (ERNSI), September 2023, Stockholm, Sweden.

[P10] **Rodrigo A. González**, Angel L. Cedeño, Koen Tiels and Tom Oomen. "Identification of linear state-space models subject to truncated Gaussian disturbances". Poster at the 2023 Workshop of the European Research Network on System Identification (ERNSI), September 2023, Stockholm, Sweden.

[P9] Tom Oomen, Leontine Aarnoudse, Lennart Blanken, Koen Classens, Mathyn van Dael, Nic Dirkx, **Rodrigo A. González**, Max van Haren, Johan Kon, Max van Meer, Maurice Poot, Paul Tacx, Koen Tiels and Gert Witvoet. "Learning in Machines: From Data to Models, Control Performance, and Monitoring". First JSPS-NWO Seminar Research Network on Learning in Machines: New Perspectives for Future Nanoscale Production, July 3-7, 2023 Tokyo, Japan.

[P8] **Rodrigo A. González**, Koen Tiels and Tom Oomen. "Non-parametric continuous-time system identification with Lebesgue-sampled output measurements". Presentation at the 42nd Benelux Meeting on Systems and Control, March 2023, Elspeet, The Netherlands.

[P7] **Rodrigo A. González**, Koen Tiels and Tom Oomen. "Non-parametric Identification of Lebesgue-sampled Continuous-time Systems" (in Spanish). Presentation at the first Symposium on Identification, Control and Applications at UTFSM, January 2023, Valparaíso, Chile.

[P6] **Rodrigo A. González**, Angel L. Cedeño, María Coronel, Juan C. Agüero and Cristian R. Rojas. "Identification of Continuous-Time Systems Utilizing Lebesgue-Sampled Data". Poster at the 2022 Workshop of the European Research Network on System Identification (ERNSI), September 2022, Leuven, Belgium.

[P5] **Rodrigo A. González**, Cristian R. Rojas and Håkan Hjalmarsson. "Non-causal regularized least-squares for continuous-time system identification with band-limited input excitations". Poster at the 2021 Workshop of the European Research Network on System Identification (ERNSI), September 2021, online.

[P4] **Rodrigo A. González**, James S. Welsh and Cristian R. Rojas. *An asymptotically optimal indirect approach to continuous-time system identification*. Internal seminar at the University of Newcastle, December 2019, Newcastle, New South Wales, Australia.

[P3] **Rodrigo A. González**, Siqi Pan, Cristian R. Rojas and James S. Welsh. *Consistency of the Simplified Refined Instrumental Variable Method for Continuous-time Systems: Analysis and Design*. Poster at the 2019 Workshop of the European Research Network on System Identification (ERNSI), September 2019, Maastricht, Netherlands.

[P2] **Rodrigo A. González**, James S. Welsh and Cristian R. Rojas. *An asymptotically optimal indirect approach to continuous-time system identification*. Poster at the 2018 Workshop of the European Research Network on System Identification (ERNSI), September 2018, Cambridge, U.K.

[P1] **Rodrigo A. González** and Cristian R. Rojas. *An asymptotically optimal indirect approach to continuous-time system identification*. Presentation at the 2018 Swedish Control Conference (Reglermötet), June 2018, Stockholm, Sweden.