

Ivan Markovsky's Curriculum Vitae



Catalan Institution for Research and Advanced Studies (ICREA)
International Centre for Numerical Methods in Engineering (CIMNE)
post address: Gran Capitàn, 08034 Barcelona, Spain
webpage: <https://imarkovs.github.io>
email: imarkovsky@cimne.upc.edu

DEGREES

- 2/2005, PhD in electrical engineering, Katholieke Universiteit Leuven
- 6/1998, MS in control engineering, Technical University of Sofia
- 6/1997, BS in control engineering, Technical University of Sofia
- 6/1992, National mathematics high school degree, specialization physics, Sofia

CURRENT AND PAST POSITIONS

- 01/2023–present, research professor, International Centre for Numerical Methods in Engineering (CIMNE)
- 10/2022–12/2022, visiting professor, Institut für Automatik (IfA), ETH-Zurich
- 10/2012–09/2022, research professor, Vrije Universiteit Brussel
- 01/2007–09/2012, lecturer, University of Southampton
- 03/2005–12/2006, postdoctoral researcher, Katholieke Universiteit Leuven
- 11/2000–02/2005, research assistant, Katholieke Universiteit Leuven

RESEARCH INTEREST

- [structured low-rank approximation](#)
- system identification in the behavioral setting
- data-driven control

RECENT TEACHING

- 06/2025 “Data-driven fault detection”, Mini-course PhD course for the FRONTIERS network, Barcelona
- 09/2024 “Data-driven systems theory, signal processing, and control”, UKACM-SEMNI Autumn school
- 11/2022 “Behavioral approach to systems theory”, *SOCN graduate school*, Leuven, Belgium
- 2021–22 “System identification”, 2nd year master course, Vrije Universiteit Brussel
- 2018–22 “Nonlinear system identification”, 2nd year master course, Vrije Universiteit Brussel

GRANTS

- 2024–2027 MCIU/AEI project Data-driven and model-based fault detection (48 kEUR)
- 2022–2026 FWO-SNSF project From model-based to data-driven design (540 kEUR)
- 2018–2021 EOS project [Structured low-rank matrix/tensor approximation](#) (540 kEUR)
- 2017–2020 FWO project [Volterra system identification](#) (192 kEUR)
- 2015–2018 FWO project [Decoupling multivariate polynomials](#) (252 kEUR)
- 2011–2015 ERC starting grant [Structured low-rank approximation](#) (783 kEUR)

DISTINCTIONS

- 12/2024, [IEEE Control Systems Magazine outstanding paper award](#)
- 03/2012, 10-year research mandate by the VUB research council
- 08/2010, ERC starting grant “Structured low-rank approximation”
- 06/2008, Householder Prize honorable mention, [XVII Householder Symp.](#), Zeuten, Germany
- 02/2005, PhD with summa cum laude and congratulations of the Board of Examiners

CURRENT PHD STUDENTS

- [Leander Hemelhof](#), co-supervisor, joint with P. Patrinos
- [Jia Wang](#), co-supervisor, joint with P. Patrinos
- [Andras Sasfi](#), co-supervisor, joint with F. Dörfler

MOST IMPORTANT PUBLICATIONS

- J. C. Willems et al. “A note on persistency of excitation”. In: *Control Lett.* 54.4 (2005), pp. 325–329. DOI: [10.1016/j.sysconle.2004.09.003](https://doi.org/10.1016/j.sysconle.2004.09.003)
- I. Markovsky et al. *Exact and Approximate Modeling of Linear Systems: A Behavioral Approach*. SIAM, 2006. DOI: [10.1137/1.9780898718263](https://doi.org/10.1137/1.9780898718263)
- I. Markovsky. *Low-Rank Approximation: Algorithms, Implementation, Applications*. 2nd edition. Springer, 2019. ISBN: 978-3-319-89619-9. DOI: [10.1007/978-3-319-89620-5](https://doi.org/10.1007/978-3-319-89620-5)
- I. Markovsky. “A missing data approach to data-driven filtering and control”. In: *IEEE Trans. Automat. Contr.* 62 (4 2017), pp. 1972–1978. ISSN: 1558–2523. DOI: [10.1109/TAC.2016.2591178](https://doi.org/10.1109/TAC.2016.2591178)
- I. Markovsky and F. Dörfler. “Behavioral systems theory in data-driven analysis, signal processing, and control”. In: *Annual Reviews in Control* 52 (2021), pp. 42–64. DOI: [10.1016/j.arcontrol.2021.09.005](https://doi.org/10.1016/j.arcontrol.2021.09.005)
- I. Markovsky, L. Huang, and F. Dörfler. “Data-driven control based on behavioral approach: From theory to applications in power systems”. In: *IEEE Control Systems Magazine* (2023)