

# Dario Piga: curriculum vitæ

Date and place of birth: 11th December, 1982, Alghero, Italy

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## Short Bio

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Dario Piga received his Ph.D. in Systems Engineering from the Politecnico di Torino (Italy) in 2012. He was Assistant Professor at the IMT School for Advanced Studies Lucca (Italy) and since 2017 he has been **Senior Researcher** at the SUPSI-IDSIA Dalle Molle Institute for Artificial Intelligence in Lugano (Switzerland), **founder and head of the “learning and control group”** at IDSIA.

He has co-authored more than **150 peer-reviewed scientific papers** in leading international journals and conferences in the fields of **system identification, control theory, machine learning, and nonlinear optimization**. He has collaborated with international companies and coordinated several research projects for the development of innovative AI-based systems in the manufacturing, transportation, biomedical and chemical industry.

He is **Associate Editor** of the IFAC journal Automatica and the IEEE-CSS Conference Editorial Board. Since 2022 he is an IEEE Senior Member. In 2021 he received the Italian National Scientific **Habilitation as Full Professor in Automatic Control**.

## Current position

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*February 2017 - today*    **Senior Researcher** at the IDSIA - Dalle Molle Institute for Artificial Intelligence, Scuola Universitaria Professionale della Svizzera Italiana, Lugano, Switzerland.

## Previous positions

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*January 2015 - January 2017*    **Assistant Professor** at the IMT School for Advanced Studies Lucca, Lucca, Italy.

*April 2014 - December 2014*    **Postdoc** at the Dalle Molle Institute for Artificial Intelligence, Scuola Universitaria Professionale della Svizzera Italiana, Lugano, Switzerland.

*March 2013 - February 2014*    **Postdoc** at the Department of Electrical Engineering, Eindhoven University of Technology, Eindhoven, The Netherlands.

*February 2012 - February 2013*    **Postdoc** at the Delft Center for Systems and Control (DCSC), Delft University of Technology, Delft, The Netherlands.

*January 2009 – December 2011*    **PhD student** at the Dipartimento di Informatica e Automatica, Politecnico di Torino, Torino, Italy.

May 2008 - December 2008 **Assistant researcher** at the Dipartimento di Informatica e Automatica, Politecnico di Torino, Torino, Italy.

May 2004 - July 2004 **Internship at RSI Sistemi society, Altran Group**, Torino, Italy.

## Visiting positions

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November 2017 **Visiting Researcher** at the IMT School for Advanced Studies, Lucca, Italy. Hosted by Prof. Marco Paggi.

October 2012 - February 2013 **Visiting Researcher** at the Control Systems Group, Department of Electrical Engineering, Eindhoven University of Technology, The Netherlands. Hosted by Prof. Paul Van den Hof.

June 2010 - July 2010 **Visiting PhD student** at the Department of Fundamental Electricity and Instrumentation, Vrije Universiteit Brussel, Brussels, Belgium. Hosted by Prof. Johan Schoukens.

## Education

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**Ph.D in Systems and Control Engineering**, Politecnico di Torino, January 2009 – December 2011. Date of the PhD degree: 16/04/2012. Dissertation title: “A convex relaxation approach to set-membership identification”. Advisor: Prof. Vito Cerone.

**Master of Science Degree in Mechatronics Engineering**, Politecnico di Torino, April 2008. Thesis title: “Performance analysis of KiteGen system: high-altitude wind power generation”. Final grade: 110/110 *summa cum laude*. Advisor: Prof. Mario Milanese.

**Bachelor of Science Degree in Electronics Engineering**, Politecnico di Torino, September 2004. Thesis developed in collaboration with RSI Sistemi society, Altran Group, titled “Nonlinear system modeling from experimental data”. Final grade: 110/110 *summa cum laude*. Advisor: Prof. Mario Milanese.

## Acquisition of research funds, participation to projects, project reviewer

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### Research funds acquired in competitive calls

- *ADELE: AI-powered unmanned advanced monitoring and control for Laser cutting Excellence*, **Innosuisse project**, Swiss Innovation Agency. Project Coordinator, Investigator. May 2025 - April 2027 (local budget: 536'000 CHF, total budget: 1'384'794 CHF).
- *SLIMPEC: A Software suite for Learning-based embedded Model Predictive Control*, **Eureka Eurostars**, Principal Investigator at SUPSI. Co-Applicant at SUPSI with M. Forgione. November 2023 - October 2026 (local budget: 246'000 CHF).
- *HIRA: Hybrid InfraRed System for Affective Computing*, **Eureka Eurostars**, Co-Applicant at SUPSI with M. Forgione. March 2023 - January 2026 (local budget: 277'000 CHF, total budget: 1'597'000 CHF).
- *Learning from wise: a new machine learning paradigm to leverage model rationality*, **Hasler Foundation**, Principal Investigator. October 2022 - April 2023 (total budget: 50'000 CHF).
- *NeO2-Sens: Artificial intelligence for next generation of optical oxygen sensors*, **Hasler Foundation**, Local coordinator. April 2022 - November 2022 (local budget: 25'000 CHF, total budget: 50'000 CHF).
- *HYPER: HYbrid Physical-based and data-driven modelling for least-costly tuning in laser cutting*, **Innosuisse project**, Swiss Innovation Agency. Project coordinator, Investigator. February 2021 - January 2023 (local budget: 509'650 CHF, total budget: 921'906 CHF).
- *ARTISTIC: ARTificial Intelligence for real-time quality estimation and Control in laser cutting*, **Innosuisse project**, Swiss Innovation Agency. Project coordinator, Investigator, September 2020 - August 2022 (local budget: 618'118 CHF, total budget: 1'151'104 CHF).
- *ARES: AI for fluorescence Spectroscopy in oil*, **Hasler Foundation**, Local coordinator. April 2021 - October 2021 (local budget: 22'600 CHF, total budget: 50'000 CHF).
- *VIOLA-II: Transfer learning in self-optimisation*, **Innosuisse project**, Swiss Innovation Agency. Local coordinator. July 2020 - June 2021 (local budget: 203'315 CHF, total budget: 414'075 CHF).
- *VIRTUOUS: Virtual tongue to predict the organoleptic profile of mediterranean ingredients and their effect on human homeostasis by means of an integrated computational multiphysics platform*, **EU H2020 Marie Curie RISE project**. Local coordinator at SUPSI. December 2019 - November 2023 (local budget: 165'000 EUR, total budget: 1'108'000 EUR).
- *SLAM 4.0: Smart Laser Manufacturing for precision industry 4.0*, **Innosuisse project**, Swiss Innovation Agency. Local coordinator at SUPSI. May 2019 - October 2020 (local budget: 419'000 CHF, total budget: 2'661'140 CHF).
- *ADMITTED: Advanced Data Methods for Improved Tiltrotor Test and Design*, **EU H2020-CS2 project**. Local coordinator at SUPSI. Co-investigated at IDSIA with G. Corani and M. Zaffalon. February 2019 - December 2023 (local budget: 482'000 EUR, total budget: 1'718'000 EUR).

- *AI-CARES: A remote engineering service for smart monitoring of ammonia synthesis plants using artificial intelligence*, **CTI project**, Swiss Commission for Technology and Innovation. Local coordinator at SUPSI. April 2018 - September 2019 (local budget: 431'194 CHF, total budget: 807'666 CHF).
- *Data-Driven Modeling of High Complexity Nonlinear Systems*, **Van Gogh Grant**, France/Netherlands academy, 2013, renewed for 2014 (5'000 EUR).

### Participation to other research projects

- Innosuisse project CrazyFinish. From January 2024 to today.
- Innosuisse project ASCENDENT. From October 2020 to July 2021.
- EU H2020 project DAEDALUS. From March 2017 to September 2019.
- EU H2020 project DISIRE. From January 2015 to January 2017.
- EU FP7 project SmarH2O. From April 2014 to December 2014. Work Package leader.
- EU FP7 project AUTOPROFIT. From February 2013 to February 2014.
- National project "High power laser in nano-structured fibres", funded by Piedmont Region. From March 2009 to December 2010.
- National project "Power kites for naval propulsion", funded by Piedmont Region. From May 2008 to December 2008.

### Projects' proposal evaluator

- European Union H2020 Marie Skłodowska-Curie Actions: 3 proposals.
- Italian Ministry of Higher Education and Research: 1 PRIN proposal.
- Netherlands Organisation for Scientific Research: 1 Veni and 1 Vidi Grant proposal.

### Awards

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Italian engineering, architectural and technical economic consulting association (OICE) Studentship as **best Master thesis on renewable energy** for the year 2008.

## Technical association memberships and editorial activities

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### Journals

- Associate Editor for “Automatica”, Journal of IFAC - International Federation of Automatic Control, Elsevier (since 2021).
- Guest Editor (with Prof. A. Bemporad) of the **Special Issue** “*New trends in modelling and control of hybrid systems*” for the International Journal of Robust and Nonlinear Control.

### Conferences

- Organizer (with Marco Forgione) of the 8th Edition of the Workshop on *Nonlinear System Identification Benchmarks*, Lugano, Switzerland, April, 2024.
- Organizer (with Gianvito Grasso) of the Workshop *Machine learning meets molecular dynamics for taste prediction*, Lugano, Switzerland, November, 2022. Link: <https://virtuoussh2020.com/events/second-tok/>
- Guest Editor for the CIRP-CMS 2022, 55th International Conference on Manufacturing Systems, Procedia CIRP.
- Associate Editor for the IFAC World Congress (2020, 2023).
- Associate Editor for the Conference Editorial Board of the European Control Association (since 2019).
- Associate Editor for the Conference Editorial Board of the IEEE Control Systems Society (since 2018).

### Review activities

- Reviewer of about 180 papers submitted to international journals and conferences like: IEEE Transaction on Automatic Control, IEEE Transaction on Control Systems Technology, Automatica, IET Control Theory & Applications, Control Engineering Practice, International Journal of Control, IEEE Conference on Decision and Control, American Control Conference, IFAC World Congress, IFAC Symposium on System Identification.
- Reviewer of 5 books (1 for IEEE-Wiley and 4 for Springer).

### Memberships

- IEEE Senior Member (since 2022).
- Member of the IFAC Technical Committee on Modelling, Identification, and Signal Processing (since 2017).
- Member of the IEEE-CSS Technical Committee on Medical and Healthcare Systems (since 2013).
- Member of the IEEE-CSS Technical Committee on System Identification and Adaptive Control (since 2013).

- Organizer (with Prof. S. Formentin and Dr. Marco Forgione) of the **invited session** “*Data-driven linear modelling and control for nonlinear systems*” for the 19th IFAC Symposium on System Identification, Padova, Italy, 2021.
- Organizer (with Prof. A. Bemporad) of the **invited session** “*Hybrid models: challenges and applications*” for the IEEE Conference on Decision and Control, Miami Beach, Florida, 2018.
- Organizer (with Prof. R. Tóth) of the **invited session** “*Data-driven modeling and control of Linear Parameter-Varying systems*” for the 52nd IEEE Conference on Decision and Control, Florence, Italy, 2013.

## Invited talks and outreach activities

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Interview at the Swiss national television RSI 1 in an episode of the TV program Falò, June, 2023.

Link: <https://tp.srgssr.ch/p/rsi/portal-detail?urn=urn:rsi:video:16309615&autoplay=true&hideendscreen=1>

*Deep learning for system identification, and viceversa*, **Keynote speech**, 7th Edition of the Workshop on Nonlinear System Identification Benchmarks, Eindhoven, The Netherlands, April, 2023.

*Encounters between deep learning and system identification*, Eindhoven, The Netherlands, April, 2023.

*Swiss AI Lab IDSIA: Our Impact on Society and Industry*, Swiss Business Hub Korea, Switzerland Innovation, June 2021. Link: <https://www.s-ge.com/ru/node/102592>

*An artificial sommelier to replicate the magic of taste* (in italian), Magazine OggiScienza, Interview edited by Michela Perrone. Link: <https://oggiscienza.it/2021/04/12/virtuous-marie-curie/>

*Partnership between industry and university: the Swiss case*, Phyd Events, Manufacturing: towards the factory of the future, February 2021.

*VIRTUOUS: una ricerca gustosa*, Podcast produced by Clara Caverzasio, December 2020. Link: <https://www.supsi.ch/home/comunica/podcast.html>

*Artificial Intelligence: challenges and opportunities*, Visionary Day 2020, Lugano, Switzerland, October 2020. Presentation on YouTube: <https://www.youtube.com/watch?v=M5PUUBHFKaU>

*Automated calibration of Model Predictive Controllers*, Universität zu Lübeck, Germany, September 2020.

*Artificial intelligence solves real problems for industry and business*, **Keynote speech**, Workshop on Artificial Intelligence in Photonics, organizers: SwissMEM and Swissphotonics, Brugg Windisch, Switzerland, September 2019.

*Maximum-likelihood for regression and classification: an overview*, IMT School for Advanced Studies Lucca, Lucca, Italy, November 2017.

*Pitfalls and best practices in parametric identification*, IMT School for Advanced Studies Lucca, Lucca, Italy, November 2017.

*Model-free design of linear parameter-varying controllers: a direct data-driven approach*, IMT School for Advanced Studies Lucca, Lucca, Italy, June 2017.

*A hierarchical approach for model-free design of Linear Parameter-Varying controllers*, Università degli Studi di Bergamo, Dalmine, Italy, November 2016.

*Robust and probabilistic  $\mathcal{D}$ -stability analysis of uncertain polynomial matrices*, Università degli Studi di L'Aquila, L'Aquila, Italy, May 2016.

*Encounters between machine learning and Linear Parameter-Varying systems*, IMT School for Advanced Studies Lucca, Lucca, Italy, June 2014.

*LPV model order selection in an LS-SVM setting*, Politecnico di Milano, Milano, Italy, March 2014.

*Advancing LPV data-driven modeling and control via LS-SVM*, Katholieke Universiteit Leuven, Leuven, Belgium, October 2013.

*Bounded-error identification of dynamical systems*, Vrije Universiteit Brussel, Brussels, Belgium, June 2010.



## Teaching Activities

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- **Industrial and Societal Applications of Artificial Intelligence**, Bachelor in Data Science and Artificial Intelligence, SUPSI, 2024 – now. Responsible and Lecturer.
- **Vertical Domain Application in Key Areas**, Bachelor in Data Science and Artificial Intelligence, SUPSI, 2021 – 2023. Responsible and Lecturer.
- **Applied Case Studies of Machine Learning and Deep Learning in Key Areas I - II**, Bachelor in Data Science and Artificial Intelligence, SUPSI, 2022 – now. Responsible.
- **Presentation of the VIRTUOUS project**, PhD Summer School on Advanced Machine Learning for Drug Discovery, SUPSI, 2022. Invited lecturer.
- **Introduction to Machine Learning** External Course for Casale S.A. ([www.casale.ch](http://www.casale.ch)), Longlife Learning, SUPSI, 2019.
- **Data Science**, Bachelor course, SUPSI, 2018/2019.
- **Identification, Analysis and Control of Dynamical Systems** Doctoral course, IMT School for Advanced Studies, 2015/2016, 2016/2017, 2017/2018.
- **Robust Control** Course for Master's degree, Eindhoven University of Technology, 2013/2014.
- **Dynamic programming and model predictive control** Course for 2nd level specializing Master in Automatica and Control Technologies, Politecnico di Torino. 2010/2011, 2011/2012.
- **Advanced control applications** Course for 2nd level specializing Master in Automatica and Control Technologies, Politecnico di Torino, 2010/2011, 2011/2012.
- **Model Predictive Control: theory and practice** Doctoral course, Politecnico di Torino, 2010/2011.
- **Principles of Automatic control** Course for Bachelor's degree in Automotive Engineering, Politecnico di Torino, 2010/2011.
- **Automatic control** Course for Master's degree in Biomedical Engineering, Politecnico di Torino, 2010/2011.
- **Automatic control** Course for Bachelor's degree in Electronics and Informatics Engineering, Politecnico di Torino, 2009/2010, 2010/2011, 2011/2012.

## Responsibility of other researchers' activities and students

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### Leadership of Research Group

Head and founder of the "The LEarning for Optimization and coNtrol" (LEON) Group group at IDSIA USI-SUPSI.

Current members of the group:

- Loris Cannelli, Researcher with PhD
- Marco Forgione, Tenured Researcher with PhD
- Gabriele Maroni, Researcher with PhD
- Manas Mejari, Tenured Researcher with PhD
- Loris Roveda, Senior Researcher with PhD
- Marco Maccarini, Researcher
- Filippo Pura, Researcher

Former members and visitors of the group:

- Federica Gioia (Visiting PhD Student, 2023)
- Lampros Androutsos (Visiting Researcher, 2023)
- Denis Broggini, Currently Data Scientist at Artificaly SA (Switzerland)
- Bojan Mavkov, Researcher with PhD, currently Assistant Professor at Université Côte d'Azur
- Francesco Faccio, Researcher

### Supervised PhD students

- Matteo Rufolo, **PhD student**, USI, Lugano, Switzerland. Co-supervised with Dr. Marco Forgione.
- Manas D. Mejari, **PhD student**, IMT School for Advanced Studied Lucca. Co-supervised with Prof. Alberto Bemporad. Graduated on July 2018. Currently Researcher at SUPSI-IDSIA.
- Valentina Breschi, **PhD student**, IMT School for Advanced Studied Lucca. Co-supervised with Prof. Alberto Bemporad. Graduated on February 2018. Currently Assistant Professor at Eindhoven University of Technology.

### Supervised Master/Bachelor students

- Fabio Loddo, **Bachelor thesis**, IDSIA-SUPSI.
- Federico Weithaler, **Bachelor thesis**, IDSIA-SUPSI.

- Pura Filippo, **Master thesis**, IDSIA-SUPSI.
- Ayaz Mürsel Sinan, **Master thesis**, USI.
- Pura Filippo, **Master thesis**, IDSIA-SUPSI.
- Marco Maccarini, **Master thesis**, IDSIA-SUPSI.
- Luca Scibona, **Master's Thesis**, IDSIA-USI.
- Denis Broggin, **Master thesis**, IDSIA-SUPSI.
- Andrea Vescovi, **Master thesis**, IDSIA-SUPSI.
- Nick van der Sanden, **Master thesis**, Eindhoven University of Technology. Main supervisor: Prof. Roland Tóth.
- René Duijkers, **Master thesis**, Eindhoven University of Technology. Main supervisor: Prof. Roland Tóth.
- Margherita Merio, **Bachelor Thesis**, Politecnico di Torino. Main supervisor: Prof. Carlo Novara.

## Institutional activities

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**Member of the Academic Council** at the IMT School for Advanced Studies, Lucca, as a representative of Researchers and Assistant Professors (January 2016 - February 2017).

**Responsible of the Certificate of Advanced Studies in Generative AI**, Continuing Education, SUPSI, 2024.

### PhD thesis committee member/reviewer

- Davide Previtali, University of Bergamo, Italy
- Nicholas Valceschini, University of Bergamo, Italy
- Francesco Zanini, University of Padova, Italy
- Daniele Masti, IMT Lucca, Italy
- Francesco Cesarone, University of L'Aquila, Italy
- Federico Bianchi, Politecnico di Milano, Italy
- Manas D. Mehari, IMT Lucca, Italy
- Valentina Breschi, IMT Lucca, Italy
- Mogens Graff Plessen, IMT Lucca, Italy
- Mutti Ur Rehman, GSSI Gran Sasso Science Institute, L'Aquila, Italy

## Peer-reviewed publications

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### Journal papers

- [J1] F. Venturini, S. Fluri, M. Mejari, M. Baumgartner, D. Piga, U. Michelucci, "Shedding Light on the Ageing of Extra Virgin Olive Oil Probing the Impact of Temperature with Fluorescence Spectroscopy and Machine Learning Techniques", *LWT Food Science and Technology*, 2023. ISSN 0023-6438.
- [J2] M. Forgione, F. Pura, D. Piga, "From system models to class models: An in-context learning paradigm", *IEEE Control Systems Letters*, 2023. ISSN 2475-1456.
- [J3] M. Mejari, A. Gupta, D. Piga, "Data-Driven Computation of Robust Invariant Sets and Gain-Scheduled Controllers for Linear Parameter-Varying Systems", *IEEE Control Systems Letters*, 2023. ISSN 2475-1456.
- [J4] L. Cannelli, M. Zhu, F. Farina, A. Bemporad, D. Piga, "Multi-agent active learning for distributed black-box optimization", *IEEE Control Systems Letters*, 2023. ISSN 2475-1456.
- [J5] L. Roveda, L. Mantovani, M. Maccarini, F. Braghin; D. Piga, "Optimal Physical Human-Robot Collaborative Controller with User-Centric Tuning", *Control Engineering Practice*, 2023. ISSN 0967-0661.
- [J6] M. Forgione, A. Muni, D. Piga, M. Gallieri, "On the adaptation of recurrent neural networks for system identification", *Automatica*, 2023. ISSN 0005-1098.
- [J7] A. Paolillo, M. Forgione, D. Piga, E. Mingo Hoffman "Fast Predictive Visual Servoing: a Reference Governor-based approach", **Special issue**, *Control Engineering Practice*, 2023. ISSN 0967-0661.
- [J8] A. Gupta, M. Mejari, P. Falcone, D. Piga, "Computation of parameter dependent robust invariant sets for LPV models with guaranteed performance", *Automatica*, Vol. 151, 2023. ISSN 0005-1098.
- [J9] L. Roveda, P. Veerappan, M. Maccarini, G. Bucca, A. Ajoudani, D. Piga " A human-centric framework for robotic task learning and optimization", *Journal of Manufacturing Systems*, Vol. 67, 2023. ISSN 0278-6125.
- [J10] L. Pallante, A. Korfiati, L. Androutsos, F. Stojceski, A. Bompotas, I. Giannikos, C. Raftopoulos, M. Malavolta, G. Grasso, S. Mavroudi, A. Kalogeras, V. Martos, D. Amoroso, D. Piga, K. Theofilatos, M. A. Deriu "Toward a General and Interpretable Umami Taste Predictor using a Multi-Objective Machine Learning Approach", *Nature Scientific Reports*, Vol. 12, 2022. ISSN 2045-2322.
- [J11] G. Maroni, L. Pallante, G. Di Benedetto, M. Deriu, D. Piga, G. Grasso, "Informed classification of sweeteners/bitterants compounds via explainable machine learning", *Current Research in Food Science*, Vol. 5, 2022.

- [J12] L. Pozzi, M. Gandolla, F. Pura, M. Maccarini, A. Pedrocchi, F. Braghin, D. Piga, L. Roveda, "Grasping learning, optimization, and knowledge transfer in the robotics field", *Nature Scientific Reports*, Vol. 12, 2022. ISSN 2045-2322.
- [J13] D. Piga, M. Mejari, M. Forgione, "Learning dynamical systems from quantized observations: a Bayesian perspective", *IEEE Transactions on Automatic Control*, Vol. 67, No. 10, 2022. ISSN 0018-9286.
- [J14] M. Mejari, B. Mavkov, M. Forgione, D. Piga, "Direct identification of continuous-time LPV state-space models via an integral architecture", *Automatica*, Vol. 142, 2022. ISSN 0005-1098.
- [J15] L. Roveda; A. Testa; A. A. Shahid; F. Braghin; D. Piga, "Q-Learning-Based Model Predictive Variable Impedance Control for Physical Human-Robot Collaboration", *Artificial Intelligence*, In press. ISSN 0004-3702.
- [J16] A. Formenti, G. Bucca, A.A. Shahid, D. Piga, L. Roveda, "Improved impedance/admittance switching controller for the interaction with a variable stiffness environment", *Complex Engineering Systems*, Vol. 2, No. 12, 2022. ISSN 2770-6249.
- [J17] L. Roveda, A. Bussolan, F. Braghin, D. Piga, "Robot Joint Friction Compensation Learning Enhanced by 6D Virtual Sensor", *International Journal of Robust and Nonlinear Control*, In press. ISSN 1099-1239.
- [J18] M. Malavolta, L. Pallante, B. Mavkov, F. Stojceski, G. Grasso, A. Korfiati, S. Mavroudi, A. Kalogeras, C. Alexakos, V. Martos, D. Amoroso, G. di Benedetto, D. Piga, K. Theofilatos, M. A. Deriu, "A survey on Computational Taste Predictors", *European Food Research and Technology*, 2022. Doi: <https://doi.org/10.1007/s00217-022-04044-5>. ISSN 1438-2377.
- [J19] F. Bianchi, L. Piroddi, A. Bemporad, G. Halasz, M. Villani, D. Piga, "Active preference-based optimization for human-in-the-loop feature selection", *European Journal of Control*, 2022. ISSN 0947-3580.
- [J20] L. Roveda, A. A. Shahid, N. Iannacci, D. Piga, "Sensorless Optimal Interaction Control Exploiting Environment Stiffness Estimation", *IEEE Transactions on Control Systems Technology*, Vol. 30, No. 1, 2022. ISSN 1063-6536.
- [J21] A. A. Shahid, D. Piga, F. Braghin, L. Roveda, "Continuous control actions learning and adaptation for robotic manipulation through reinforcement learning", *Autonomous Robots*, 2022. ISSN 0929-5593.
- [J22] L. Roveda, M. Maroni, L. Mazzuchelli, L. Praolini, A. A. Shahid, G. Bucca, D. Piga, "Robot End-Effector Mounted Camera Pose Optimization in Object Detection-Based Tasks", *Journal of Intelligent & Robotic Systems*, 2022. ISSN 0921-0296.
- [J23] M. Mejari, D. Piga, "Maximum-a-posteriori estimation of LTI state-space models via efficient Monte-Carlo sampling", *ASME Letters in Dynamic Systems and Control*, Vol. 2, 2022. ISSN 2689-6117.

- [J24] M. Zhu, D. Piga, A. Bemporad, "C-GLISp: Preference-Based Global Optimization under Unknown Constraints with Applications to Controller Calibration", *IEEE Transactions on Control Systems Technology*, 2021. ISSN 1063-6536.
- [J25] L. Roveda, B. Maggioni, E. Maescotti, A. Shahid, A. M. Zanchettin, A. Bemporad, D. Piga, "Pairwise Preferences-Based Optimization of a Path-Based Velocity Planner in Robotic Sealing Tasks", *IEEE Robotics and Automation Letters*, Vol. 6, 2021. ISSN 2377-3766.
- [J26] L. Pallante, M. Malavolta, G. Grasso, A. Korfiati, S. Mavroudi, B. Mavkov, A. Kalogeras, C. Alexakos, V. Martos, D. Amoroso, G. di Benedetto, D. Piga, K. Theofilatos, M. A. Deriu, "On the human taste perception: Molecular-level understanding empowered by computational methods", *Trends in Food Science & Technology*, Vol. 116, 2021. ISSN 0924-2244.
- [J27] A. Benavoli, D. Azzimonti, D. Piga, "A unified framework for closed-form nonparametric regression, classification, preference and mixed problems with Skew Gaussian Processes", *Machine Learning*, Vol. 110, 2021. ISSN 1877-1902.
- [J28] G. Grasso, A. Di Gregorio, B. Mavkov, D. Piga, G. Falvo D'Urso Labate, A. Danani, M. A. Deriu, "Fragmented Blind Docking: a Novel Protein-Ligand Binding Prediction Protocol", *Journal of Biomolecular Structure and Dynamics*, 2021. ISSN 1538-0254 .
- [J29] U. Michelucci, M. Sperti, D. Piga, F. Venturini, M.A. Deriu, "Model-Agnostic Algorithm for Bayes Error Determination in Binary Classification", *Algorithms*, Vol. 14, 2021. ISSN 1999-4893.
- [J30] A. A. Shahid, J. S. V. Sestin, D. Pecioski, F. Braghin, D. Piga, L. Roveda "Decentralized Multi-Agent Control of a Manipulator in Continuous Task Learning", *Applied Science, Special issue*, 2021. ISSN 2076-3417.
- [J31] G. Halasz, M. Sperti; M. Villani, U. Michelucci, P. Agostoni, A. Biagi, L. Rossi, A. Botti, C. Mari, M. Maccarini, F. Pura, L. Roveda, A. Nardecchia, E. Mottola, M. Nolli, E. Salvioni, M. Mapelli, M. A. Deriu, D. Piga, M. Piepoli, "Predicting outcomes in the Machine Learning era: The Piacenza score a purely data driven approach for mortality prediction in COVID-19 Pneumonia", *Journal of Medical Internet Research*, Vol. 23, No. 5, 2021. ISSN 1438-8871.
- [J32] M. Forgione, D. Piga, "Continuous-time system identification with neural networks: model structures and fitting criteria", *European Journal of Control*, Vol. 59, 2021. ISSN 0947-3580.
- [J33] L. Roveda, D. Riva, G. Bucca and D. Piga, "Sensorless Optimal Switching Impact/Force Controller", *IEEE Access*, Vol. 9, 2021. ISSN 2169-3536.
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