

Davide LA TORRE

Professor

Academy: Digitalization

Research center: SKEMA Centre for Analytics and Management Science

Campus: Sophia Antipolis

Email: davide.latorre@skema.edu

Research interests

Applied Mathematics, Artificial Intelligence, Mathematical Modelling, Optimization and Control

Teaching interests

Applied Mathematics, Artificial Intelligence, Mathematical Modelling, Optimization and Control

Education

2023	Certification in the function of University Professor (Full Professor), Economic Theory (13 A1), Italy
2023	Certification in the function of University Professor (Associate Professor), Operations Research (01 A6), Italy
2022	Certification in the function of University-Professor (Full Professor) in Applied Mathematics (CNRS 26), France
2022	Certification in the function of University-Professor (Full Professor), Economics (CNRS 5), France
2022	Certification in the function of University-Professor (Full Professor), Computer science (CNRS 27), France
2021	HDR in Applied Mathematics, Université Côte d'Azur, France
2020	Certification in the function of University Professor (Associate Professor), Mathematical Analysis (01 A3), Italy
2018	Certification in the function of University Professor (Full Professor), Public Economics (13 A3), Italy
2018	Certification in the function of University Professor (Full Professor), Political Economy (13 A2), Italy
2012	Certification in the function of University Professor (Full Professor), Mathematical Methods for Economics and Finance (13 D4), Italy
2002	Ph.D. in Computational Mathematics and Operations Research, University of Milan, Italy
1997	Master in Applied and Industrial Mathematics, University of Milan, Italy
1993	Diploma (60/60) in Computer Science, ITIS Computer Science School, Italy

2022	Certificate in Artificial Intelligence in Health Care, Massachusetts Institute of Technology (MIT), United States of America
2021	Certificate in Quantum Computing Fundamentals, Massachusetts Institute of Technology (MIT), United States of America
2021	Certificate in Machine Learning, Modeling, and Simulation: Engineering Problem-Solving in the Age of AI, Massachusetts Institute of Technology (MIT), United States of America
2021	Certificate in Machine Learning, Modeling, and Simulation Principles, Massachusetts Institute of Technology (MIT), United States of America
2021	Certificate in Applying Machine Learning to Engineering and Science, Massachusetts Institute of Technology (MIT), United States of America
2021	Certificate in Quantum Algorithms for Cybersecurity, Chemistry, and Optimization, Massachusetts Institute of Technology (MIT), United States of America
2017	Certificate in Big Data and Social Analytics, Massachusetts Institute of Technology (MIT), United States of America
2017	Certificate in Project Management, University of Adelaide, Australia
2017	Certificate in Supply Chain Analytics, Massachusetts Institute of Technology (MIT), United States of America

Experience

Full-time academic positions

Since 2019	Full Professor (HDR with CNRS Professeur des Universités qualifications) of Applied Mathematics and Artificial Intelligence, SKEMA Business School, France
Since 2000	University Professor of Artificial Intelligence and Decision Sciences in Health and Medicine, Università degli Studi di Milano "La Statale", Italy
2018 - 2019	Full Professor, Dubai Business School, United Arab Emirates
2017 - 2018	Full Professor and Department Chair, Nazarbayev University, Kazakhstan
2013 - 2016	Associate Professor and Associate Department Chair (cross-appointed), Department of Applied Mathematics and Sciences, and Department of Industrial and System Engineering, Khalifa University, United Arab Emirates

Other academic affiliations and appointments

Since 2024	Member of the Doctoral School in Systems Medicine, Università degli Studi di Milano "La Statale", Italy
Since 2021	Radiomics Board Member, European Institute of Oncology, Italy
Since 2020	Visiting Professor and Member of the Scientific Committee of the Artificial Intelligence Institute, Abu Dhabi School of Management, United Arab Emirates
Since 2019	Track Coordinator - Finance Specialization - Two Year MSc, SKEMA Business School, France
Since 2015	Adjunct Professor, University of Waterloo, Canada
Since 2015	Member of the Doctoral School in Decision Sciences, Insubria University, Italy
2022 - 2023	Associate Dean, SKEMA Business School, France
2020 - 2023	Director of the Artificial Intelligence Institute, SKEMA Business School, France
2007 - 2023	Adjunct Professor, Department of Mathematics and Statistics, University of Guelph, Canada
2019 - 2022	Track Coordinator - L3/M1 PGE in Finance and Quants, SKEMA Business School, France
2020 - 2021	Track Coordinator - L3/M1 PGE in Artificial Intelligence for Managers, SKEMA Business School, France
2019	Visiting Professor, Universidad de Granada, Spain
2017 - 2018	Department Chair, Nazarbayev University, Kazakhstan
2012	Visiting Professor, Australian National University, Australia

Other academic affiliations and appointments

2008	Visiting Professor, Laurentian University, Canada
2008	Visiting Professor, University of York, Great Britain
2007	Visiting Professor, University of York, Great Britain
2007	Visiting Professor, Australian National University, Australia
2003 - 2005	Program Head - Master in International Economics and Finance, University of Milan, Italy
2003 - 2005	Program Head - Master in Data Analysis and Marketing Intelligence, University of Milan, Italy
2001 - 2003	Program Head - Master in Business Intelligence and Data Analysis, University of Milan, Italy

Research grants, Awards and Honors

Awards and Honors

2023	Best contribution to hybridization in AI, SKEMA Business School, France
2022	Most productive scholar award, SKEMA Business School, France
2021	Outstanding research award, SKEMA Business School, France
2015	Outstanding research award, Khalifa University, United Arab Emirates
2015	Outstanding research award, University of Milan, Italy

Research Grants

2013	Khalifa University KUIRF Level 2 (co-principal investigator), Khalifa University, United Arab Emirates
------	--

Publications

Peer-reviewed journal articles

BRUSSET, X., JEBALI, A., LA TORRE, D. and LIUZZI, D. (2025). Production optimization in the time of pandemic: an SIS-based optimal control model with protection effort and cost minimization. *Annals of Operations Research*, 344, pp. 79-102.

FRASCA, M., LA TORRE, D., PRAVETTONI, G. and CUTICA, I. (2025). Combining convolution neural networks with long-short term memory layers to predict Parkinson's disease progression. *International Transactions in Operational Research*, 32(4), pp. 2159-2188.

BROEKAERT, J., HAFIZ, F., LA TORRE, D. and JAYARAMAN, R. (2025). Managing resilience and viability of supranational supply chains under epidemic control scenarios. *Omega*, 133, pp. 103234.

BROEKAERT, J., LA TORRE, D., HAFIZ, F. and BRUSSET, X. (2025). The diverging control policy's hand in supranational supply chain reconfiguration. *International Journal of Production Economics*, 284, pp. 109567.

LA TORRE, D., MARSIGLIO, S. and PRIVILEGGI, F. (2025). A Game of Transboundary Pollution under Endogenous Ecological Uncertainty. *Environmental and Resource Economics*.

LA TORRE, D., MENDIVIL, F. and ROCCA, M. (2024). Modeling portfolio efficiency using stochastic optimization with incomplete information and partial uncertainty. *Annals of Operations Research*, 334(1-3), pp. 241-263.

LA TORRE, D., LIUZZI, D., REPETTO, M. and ROCCA, M. (2024). Enhancing deep learning algorithm accuracy and stability using multicriteria optimization: an application to distributed learning with MNIST digits. *Annals of Operations Research*, 339, pp. 455-475.

BROEKAERT, J., LA TORRE, D. and HAFIZ, F. (2024). Competing control scenarios in probabilistic SIR epidemics on social-contact networks. *Annals of Operations Research*, 336, pp. 2037-2060.

LA TORRE, D., MARSIGLIO, S., MENDIVIL, F. and PRIVILEGGI, F. (2024). Stochastic disease spreading and containment policies under state-dependent probabilities. *Economic Theory*, 77, pp. 127-168.

- LA TORRE, D., MARSIGLIO, S. and PRIVILEGGI, F. (2024). Infectious diseases and social distancing under state-dependent probabilities. *Annals of Operations Research*, 337(3), pp. 993-1008.
- CAMACHO, C., DESBORDES, R. and LA TORRE, D. (2024). A time-space integro-differential economic model of epidemic control. *Economic Theory*, 77(1-2), pp. 307-348.
- LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2024). Epidemic outbreaks and the optimal lockdown area: a spatial normative approach. *Economic Theory*, 77, pp. 349-411.
- HAFIZ, F., BROEKAERT, J., LA TORRE, D. and SWAIN, A. (2024). A multi-criteria approach to evolve sparse neural architectures for stock market forecasting. *Annals of Operations Research*, 167(106680), pp. 1-45.
- BROEKAERT, J., LA TORRE, D. and HAFIZ, F. (2024). The impact of the psychological effect of infectivity on Nash-balanced control strategies for epidemic networks. *Annals of Operations Research*.
- FRASCA, M., LA TORRE, D., PRAVETTONI, G. and CUTICA, I. (2024). Explainable and interpretable artificial intelligence in medicine: a systematic bibliometric review. *Discover Artificial Intelligence*, 4(15), pp. 1-21.
- LA TORRE, D., ZUCCOTTO, M., CASTELLINI, A., MOLA, L. and FARINELLI, A. (2024). Reinforcement learning applications in environmental sustainability: a review. *Artificial Intelligence Review*, 57(88), pp. 1-68.
- MARVASO, G., ISAKSSON, L.J., ZAFFARONI, M., VINCINI, M.G., SUMMERS, P.E., PEPA, M. ... JERECZEK-FOSSA, B.A. (2024). Can we predict pathology without surgery? Weighing the added value of multiparametric MRI and whole prostate radiomics in integrative machine learning models. *European Radiology*, 34, pp. 6241-6253.
- BROEKAERT, J., LA TORRE, D., HAFIZ, F. and REPETTO, M. (2024). A comparative cost assessment of coalescing epidemic control strategies in heterogeneous social-contact networks. *Computers & Operations Research*, 167, pp. 106680.
- BERENQUER, M.I., GAMEZ, D., KUNZE, H., LA TORRE, D. and RUIZ GALAN, M. (2024). Solving direct and inverse problems for Fredholm-type integro-differential equations with application to pollution diffusion modeling. *Mathematics and Computers in Simulation*, 223, pp. 394-404.
- FRASCA, M. and LA TORRE, D. (2024). An extended Daugman's algorithm for iris with eye pathology recognition. *Expert Systems with Applications*, 252, Part A(124160), pp. 1-12.
- DE FRUTOS, J., LA TORRE, D., LIUZZI, D., MARSIGLIO, S. and MARTÍN-HERRAN, G. (2024). Balancing mitigation policies during pandemics: economic, health, and environmental implications. *Annals of Operations Research*.
- LA TORRE, D., MAGGISTRO, R. and MARSIGLIO, S. (2024). Transboundary pollution control under evolving social norms: a mean-field approach. *Decisions in Economics and Finance*.
- FRASCA, M., LA TORRE, D., REPETTO, M., DE NICOLÒ, V., PRAVETTONI, G. and CUTICA, I. (2024). Artificial intelligence applications to genomic data in cancer research: a review of recent trends and emerging areas. *Discover Analytics*, 2(1), pp. 1-10.
- LA TORRE, D. and MAGGISTRO, R. (2024). Multi-agent dynamic financial portfolio management: a differential game approach. *Annals of Operations Research*, pp. 1-22.
- HAFIZ, F., NAIK, C., LA TORRE, D. and SWAIN, A. (2024). Quantification of Nonstationary Power Quality Events: A New Index Based on L_p Norm of Energy. *IEEE Transactions on Systems, Man and Cybernetics: Systems*, 54(12), pp. 7457 - 7471.
- LA TORRE, D. and ROCCA, M. (2024). Distributionally robust multiobjective optimization with application to risk measure theory. *Annals of Operations Research*, pp. 1-20.
- BRYSON, B., KUNZE, H., LA TORRE, D. and LIUZZI, D. (2023). A Generalized Multiple Criteria Data-Fitting Model With Sparsity and Entropy With Application to Growth Forecasting. *IEEE Transactions on Engineering Management*, 70(5), pp. 1900-1911.
- BEN ABDELAZIZ, F. and LA TORRE, D. (2023). Robust generalized Merton-type financial portfolio models with generalized utility. *Annals of Operations Research*, 330, pp. 55-72.
- LA TORRE, D., COLAPINTO, C., DUROSINI, I. and TRIBERTI, S. (2023). Team Formation for Human-Artificial Intelligence Collaboration in the Workplace: A Goal Programming Model to Foster Organizational Change. *IEEE Transactions on Engineering Management*, 70(5), pp. 1966-1976.

- BRUSSET, X., JEBALI, A. and LA TORRE, D. (2023). Production optimisation in a pandemic context. *International Journal of Production Research*, 61(5), pp. 1642-1663.
- BRUSSET, X., DAVARI, M., KINRA, A. and LA TORRE, D. (2023). Modelling ripple effect propagation and global supply chain workforce productivity impacts in pandemic disruptions. *International Journal of Production Research*, 61(8), pp. 2493-2512.
- TRIBERTI, S., LA TORRE, D. and RIVA, G. (2023). The Artificial Face (ART-F) Project: Addressing the Problem of Interpretability, Interface, and Trust in Artificial Intelligence. *Cyberpsychology, Behavior, and Social Networking*, 26(4), pp. 318-320.
- BUCCI, A., LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2023). A network-based economic growth model with endogenous migration and poverty traps. *Metroeconomica*, 74(4), pp. 833-857.
- HAFIZ, F., BROEKAERT, J., LA TORRE, D. and SWAIN, A. (2023). Co-evolution of Neural Architectures and Features for Stock Market Forecasting: A Multi-objective Decision Perspective. *Decision Support Systems*, 174, pp. 114015.
- BRUSSET, X., IVANOV, D., JEBALI, A., LA TORRE, D. and REPETTO, M. (2023). A dynamic approach to supply chain reconfiguration and ripple effect analysis in an epidemic. *International Journal of Production Economics*, 263, pp. 108935.
- BERENQUER, M.I., GAMEZ, D., GARRALDA-GUILLEM, A.I., KUNZE, H., LA TORRE, D. and RUIZ GALAN, M. (2023). Solving inverse problems for mixed-variational equations on perforated domains. *Computational and Applied Mathematics*, 42(297).
- VINCINI, M.G., MARVASO, G., ISAKSSON, L.J., ZAFFARONI, M., PEPA, M., CORRAO, G. ... JERECZEK-FOSSA, B.A. (2023). PO-2101 Added Value Of MRI Radiomics To Predict Pathological Status Of Prostate Cancer Patients. *Radiotherapy and Oncology*, 182(1), pp. S1884-S1886.
- VOLPE, S., ZAFFARONI, M., PIPERNO, G., VINCINI, M.G., ZERELLA, M.A., MASTROLEO, F. ... JERECZEK-FOSSA, B.A. (2023). Multi-omics integrative modelling for stereotactic body radiotherapy in early-stage non-small cell lung cancer: clinical trial protocol of the MONDRIAN study. *BMC Cancer*, 23(1), pp. 1236.
- ISAKSSON, L.J., REPETTO, M., SUMMERS, P.E., PEPA, M., ZAFFARONI, M., VINCINI, M.G. ... JERECZEK-FOSSA, B.A. (2023). High-performance prediction models for prostate cancer radiomics. *Informatics in Medicine Unlocked*, 37, pp. 101161.
- VINCINI, M.G., MARVASO, G., ISAKSSON, L.J., ZAFFARONI, M., PEPA, M., CORRAO, G. ... JERECZEK-FOSSA, B.A. (2023). Added value of MRI radiomics to predict pathological status of prostate cancer patients. *European Urology*, 83, pp. S1799-S1800.
- KUNZE, H. and LA TORRE, D. (2022). Solving inverse problems for steady-state equations using a multiple criteria model with collage distance, entropy, and sparsity. *Annals of Operations Research*, 311, pp. 1051-1065.
- LA TORRE, D. and MENDIVIL, F. (2022). Stochastic efficiency and inefficiency in portfolio optimization with incomplete information: a set-valued probability approach. *Annals of Operations Research*, 311, pp. 1085-1098.
- KUNZE, H., LA TORRE, D. and MARSIGLIO, S. (2022). Sustainability and spatial spillovers in a multicriteria macroeconomics model. *Annals of Operations Research*, 311, pp. 1067-1084.
- LA TORRE, D., LIUZZI, D., MAGGISTRO, R. and MARSIGLIO, S. (2022). Mobility Choices and Strategic Interactions in a Two-Group Macroeconomic-Epidemiological Model. *Dynamic Games and Applications*, 12, pp. 110-132.
- LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2022). Geographical heterogeneities and externalities in an epidemiological-macroeconomic framework. *Journal of Public Economic Theory*, 24(5), pp. 1154-1181.
- BRUSSET, X., JEBALI, A., LA TORRE, D. and MAZAHIR, S. (2022). Optimal Pollution Control in a Dynamic Multi-echelon Supply Chain. *Environmental Modeling and Assessment*, 27, pp. 585-598.
- LA TORRE, D., BEN ABDELAZIZ, F. and ALAYA, H. (2021). Dynamic Programming and Optimal Control for Vector-Valued Functions: A State-of-the-art Review. *RAIRO - Operations Research*, 55, pp. 351-364.
- LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2021). Epidemics and macroeconomic outcomes: Social distancing intensity and duration. *Journal of Mathematical Economics*, 93, pp. 102473.

- OTERO, D., LA TORRE, D., MICHAILOVICH, O. and VRSCAY, E. (2021). Optimization of structural similarity in mathematical imaging. *Optimization and Engineering*, 22, pp. 2367-2401.
- LA TORRE, D., MARSIGLIO, S., MENDIVIL, F. and PRIVILEGGI, F. (2021). Public Debt Dynamics under Ambiguity by Means of Iterated Function Systems on Density Functions. *Discrete and Continuous Dynamical Systems Series B*, 26(11), pp. 5873-5903.
- LI, D., LA TORRE, D. and VRSCAY, E. (2021). The intensity-based measure approach to "Weberize" L2-based methods of signal and image approximation. *Optimization and Engineering*, 22, pp. 2321-2347.
- URBANIYAK, I.A., KUNZE, A., LI, D., LA TORRE, D. and VRSCAY, E. (2021). The use of intensity-dependent weight functions to "Weberize" L2-based methods of signal and image approximation. *Optimization and Engineering*, 22, pp. 2349-2365.
- LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2021). Transboundary pollution externalities: Think globally, act locally? *Journal of Mathematical Economics*, 96, pp. 102511.
- KHAN, F. and LA TORRE, D. (2021). Quantum information technology and innovation: a brief history; current state and future perspectives for business and management. *Technology Analysis and Strategic Management*, 33(11), pp. 1281-1289.
- KUNZE, H., LA TORRE, D. and GALÁN, M.R. (2021). Optimization methods in inverse problems and applications to science and engineering. *Optimization and Engineering*, 22(4), pp. 2151-2158.
- COLAPINTO, C., JAYARAMAN, R. and LA TORRE, D. (2020). A goal programming model to study the impact of R&D expenditures on sustainability-related criteria: the case of Kazakhstan. *Management Decision*, 58(11), pp. 2497-2512.
- LA TORRE, D. and MARSIGLIO, S. (2020). A note on optimal debt reduction policies. *Macroeconomic Dynamics*, 24(7), pp. 1850-1860.
- BEN ABDELAZIZ, F., COLAPINTO, C., LA TORRE, D. and LIUZZI, D. (2020). A Stochastic Dynamic Multiobjective Model for Sustainable Decision Making. *Annals of Operations Research*, 293, pp. 539-556.
- LA TORRE, D., MARCOUX, J., MENDIVIL, F. and VRSCAY, E. (2020). Denoising of diffusion magnetic resonance images using a modified and differentiable Monge-Kantorovich distance for measure-valued images. *Communications in Nonlinear Science and Numerical Simulation*, 91, pp. 105456.
- COLAPINTO, C., JAYARAMAN, R., BEN ABDELAZIZ, F. and LA TORRE, D. (2020). Environmental Sustainability and Multifaceted Development: Multi-Criteria Decision Models with Applications. *Annals of Operations Research*, 293, pp. 405-432.
- LA TORRE, D., BOUBAKER, S., PÉREZ GLADISH, B. and ZOPOUNIDIS, C. (2020). Multidimensional Finance, Insurance and Investment. *International Transactions in Operational Research*, 27(5), pp. 2689-2690.
- LA TORRE, D., MALIK, T. and MARSIGLIO, S. (2020). Optimal control of prevention and treatment in a basic macroeconomic-epidemiological model. *Mathematical Social Sciences*, 108, pp. 100-108.
- GARRALDA-GUILLEM, A.I., KUNZE, H., LA TORRE, D. and GALAN, M.R. (2020). Using the Generalized Collage Theorem for Estimating Unknown Parameters in Perturbed Mixed Variational Equations. *Communications in Nonlinear Science and Numerical Simulation*, 91, pp. 105433.
- SHAROMI, O., LA TORRE, D. and MALIK, T. (2019). A multiple criteria economic growth model with environmental quality and logistic population behaviour with variable carrying capacity. *INFOR*, 57(3), pp. 379-393.
- LA TORRE, D., MENDIVIL, F., MARSIGLIO, S. and PRIVILEGGI, F. (2019). A stochastic economic growth model with health capital and state-dependent probabilities. *Chaos, Solitons, and Fractals*, 129, pp. 81-93.
- BUCCI, A., LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2019). Financial contagion and economic development: An epidemiological approach. *Journal of Economic Behavior and Organization*, 162, pp. 211-228.
- COLAPINTO, C., LA TORRE, D. and AOUNI, B. (2019). Goal programming for financial portfolio management: a state-of-the-art review. *Operational Research: An International Journal*, 19, pp. 717-736.
- LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2019). Population and geography do matter for sustainable development. *Environment and Development Economics*, 24(2), pp. 201-223.

- VIE, A., COLAPINTO, C., LA TORRE, D. and LIUZZI, D. (2019). The long-run sustainability of the European Union countries: Assessing the Europe 2020 strategy through a fuzzy goal programming model. *Management Decision*, 57(2), pp. 523-542.
- LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2019). The optimal population size under pollution and migration externalities: a spatial control approach. *Mathematical Modelling of Natural Phenomena*, 14(1), pp. 1-15.
- LA TORRE, D. and MARSIGLIO, S. (2018). Economic Growth and Abatement Activities in a Stochastic Environment: a Multi-Objective Approach. *Annals of Operations Research*, 267, pp. 321-334.
- LA TORRE, D., MARSIGLIO, S., MENDIVIL, F. and PRIVILEGGI, F. (2018). Fractal attractors and singular invariant measures in two-sector growth models with random factor shares. *Communications in Nonlinear Science and Numerical Simulation*, 58, pp. 185-201.
- LA TORRE, D., MARSIGLIO, S. and PRIVILEGGI, F. (2018). Fractal attractors in economic growth models with random pollution externalities. *Chaos: An Interdisciplinary Journal of Nonlinear Science*, 28(5).
- LA TORRE, D. and MENDIVIL, F. (2018). Portfolio optimization under partial uncertainty and incomplete information: a probability multimeasure-based approach. *Annals of Operations Research*, 267, pp. 267-279.
- LA TORRE, D. and MENDIVIL, F. (2018). Stochastic linear optimization under partial uncertainty and incomplete information using the notion of probability multimeasure. *Journal of the Operational Research Society*, 69(10), pp. 1549-1556.
- JAYARAMAN, R., COLAPINTO, C., LA TORRE, D. and MALIK, T. (2017). A Weighted Goal Programming model for planning sustainable development applied to Gulf Cooperation Council Countries. *Applied Energy*, 185(Part 2), pp. 1931-1939.
- LA TORRE, D. (2017). Preface: Multiple criteria optimization and goal programming in science, engineering, and social sciences. *Annals of Operations Research*, 251, pp. 1-5.
- OTERO, D., LA TORRE, D., MICHAILOVICH, O. and VRSCAY, E. (2017). On the theory of function-valued mappings and its application to the processing of hyperspectral images. *Signal Processing*, 134, pp. 185-196.
- ANITA, S., CAPASSO, V., KUNZE, H. and LA TORRE, D. (2017). Optimizing Environmental Taxation on Physical Capital for a Spatially Structured Economic Growth Model Including Pollution Diffusion. *Vietnam Journal of Mathematics*, 45, pp. 199-206.
- JAYARAMAN, R., COLAPINTO, C., LIUZZI, D. and LA TORRE, D. (2017). Planning sustainable development through a scenario-based stochastic goal programming model. *Operational Research: An International Journal*, 17, pp. 789-805.
- LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2017). Pollution Control under Uncertainty and Sustainability Concern. *Environmental and Resource Economics*, 67, pp. 885-903.
- BERENQUER, M.I., KUNZE, H., LA TORRE, D. and RUIZ GALAN, M. (2016). Galerkin method for constrained variational equations and a collage-based approach to related inverse problems. *Journal of Computational and Applied Mathematics*, 292, pp. 67-75.
- LA TORRE, D., MENDIVIL, F. and VRSCAY, E. (2016). Iterated Function Systems On Functions Of Bounded Variation. *Fractals*, 24(2), pp. 1650019.
- LEVERE, K.M., KUNZE, H. and LA TORRE, D. (2015). A collage-based approach to solving inverse problems for second-order nonlinear hyperbolic PDEs. *Communications in Nonlinear Science and Numerical Simulation*, 29(1-3), pp. 283-299.
- ANITA, S., CAPASSO, V., KUNZE, H. and LA TORRE, D. (2015). Dynamics and control of an integro-differential system of geographical economics. *Annals of the Academy of Romanian Scientists: Series on Mathematics and its Applications*, 7(1), pp. 8-26.
- ANITA, S., CAPASSO, V., KUNZE, H. and LA TORRE, D. (2015). Dynamics and optimal control in a spatially structured economic growth model with pollution diffusion and environmental taxation. *Applied Mathematics Letters*, 42, pp. 36-40.
- JAYARAMAN, R., COLAPINTO, C., LA TORRE, D. and MALIK, T. (2015). Multi-criteria model for sustainable development using goal programming applied to the United Arab Emirates. *Energy Policy*, 87, pp. 447-454.

- JAYARAMAN, R., LA TORRE, D., MALIK, T. and PEARSON, Y. (2015). Optimal Work Force Allocation for Energy, Economic and Environmental Sustainability in the United Arab Emirates: A Goal Programming Approach. *Energy Procedia*, 75, pp. 2999-3006.
- LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2015). Pollution Diffusion and Abatement Activities across Space and over Time. *Mathematical Social Sciences*, 78, pp. 48-63.
- LA TORRE, D., MENDIVIL, F., MARSIGLIO, S. and PRIVILEGGI, F. (2015). Self-similar measures in multi-sector endogenous growth models. *Chaos, Solitons, and Fractals*, 79, pp. 40-56.
- LA TORRE, D. and MENDIVIL, F. (2015). The Monge-Kantorovich Metric on Multimeasures and Self-Similar Multimeasures. *Set-Valued and Variational Analysis*, 23, pp. 319-331.
- AOUNI, B., COLAPINTO, C. and LA TORRE, D. (2014). Financial Portfolio Management through Goal Programming: State-of-the-art. *European Journal of Operational Research*, 234(2), pp. 536-545.
- PERTILE, P., FOSTER, M. and LA TORRE, D. (2014). Optimal bayesian sequential sampling rules for the economic evaluation of health technologies. *Journal of the Royal Statistical Society, Series A*, 177(2), pp. 419-438.
- FORSTER, M., LA TORRE, D. and LAMBERT, P. (2014). Optimal control of inequality under uncertainty. *Mathematical Social Sciences*, 68, pp. 53-59.
- AOUNI, B., COLAPINTO, C. and LA TORRE, D. (2013). A cardinality constrained goal programming model with satisfaction function for venture capital investment decision making. *Annals of Operations Research*, 205, pp. 77-88.
- LA TORRE, D. and MENDIVIL, F. (2013). A Chaos game algorithm for generalized iterated function systems. *Applied Mathematics & Computations*, 224, pp. 238-249.
- ANITA, S., CAPASSO, V., KUNZE, H. and LA TORRE, D. (2013). Optimal control and long-run dynamics for a spatial economic growth model with physical capital accumulation and pollution diffusion. *Applied Mathematics Letters*, 26(8), pp. 908-912.
- MARSIGLIO, S. and LA TORRE, D. (2012). A note on demographic shocks in a multi-sector growth model. *Economics Bulletin*, 32(2), pp. 2293-2299.
- BUCCI, A., FLORIO, M. and LA TORRE, D. (2012). Government spending and growth in second-best economies. *Economic Modelling*, 29(3), pp. 654-663.
- MARSIGLIO, S. and LA TORRE, D. (2012). Population growth and utilitarian criteria in the Lucas-Uzawa model. *Economic Modelling*, 29(4), pp. 1197-1204.
- AOUNI, B., BEN ABDELAZIZ, F. and LA TORRE, D. (2012). The Stochastic Goal Programming Model: Theory and Applications. *Journal of Multi-Criteria Decision Analysis*, 19(5-6), pp. 185-200.
- LA TORRE, D., POPOVICI, N. and ROCCA, M. (2011). A note on explicitly quasiconvex set-valued maps. *Journal of Nonlinear and Convex Analysis*, 12(1), pp. 113-118.
- BUCCI, A., COLAPINTO, C., FORSTER, M. and LA TORRE, D. (2011). Stochastic technology shocks in an extended Uzawa-Lucas model: closed-form solution and long-run dynamics. *Journal of Economics*, 103, pp. 83-99.
- LA TORRE, D. and POPOVICI, N. (2010). Arcwise cone-quasiconvex multicriteria optimization. *Operations Research Letters*, 38(2), pp. 143-146.
- LA TORRE, D. and MARSIGLIO, S. (2010). Endogenous technological progress in a multi-sector growth model. *Economic Modelling*, 27(5), pp. 1017-1028.
- CAPASSO, V., ENGBERS, R. and LA TORRE, D. (2010). On a spatial Solow model with technological diffusion and nonconcave production function. *Nonlinear Analysis: Real World Applications*, 11(5), pp. 3858-3876.
- LA TORRE, D., POPOVICI, N. and ROCCA, M. (2010). Scalar characterizations of weakly cone-convex and weakly cone-quasiconvex functions. *Nonlinear Analysis*, 72(3-4), pp. 1909-1915.
- LA TORRE, D., VRSCAY, E., IBRAHIMI, E. and BARNESLEY, M. (2009). Measure-Valued Images, Associated Fractal Transforms, and the Affine Self-Similarity of Images. *SIAM Journal on Imaging Science*, 2(2), pp. 470-507.
- LA TORRE, D. and MENDIVIL, F. (2008). Iterated function systems on multifunctions and inverse problems. *Journal of Mathematical Analysis and Applications*, 340(2), pp. 1469-1479.

LA TORRE, D., KUNZE, H. and VRSCAY, E. (2007). Contractive multifunctions, fixed point inclusions and iterated multifunction systems. *Journal of Mathematical Analysis and Applications*, 330(1), pp. 159-173.

IACUS, S.M. and LA TORRE, D. (2005). A comparative simulation study on the IFS distribution function estimator. *Nonlinear Analysis: Real World Applications*, 6(5), pp. 858-873.

LA TORRE, D. and ROCCA, M. (2004). Mean value theorem for continuous vector functions by smooth approximations. *Applied Mathematics Letters*, 17(7), pp. 791-794.

CRESPI, G., LA TORRE, D. and ROCCA, M. (2003). Mollified derivatives and second-order optimality conditions. *Journal of Nonlinear and Convex Analysis*, (3), pp. 437-454.

LA TORRE, D. and ROCCA, M. (2001). A characterization of $C^{\{k;1\}}$ functions. *Real Analysis Exchange*, 27(2), pp. 515-534.

LA TORRE, D. and ROCCA, M. (2000). Higher Order Uniform Smoothness and Differentiability of Real Functions. *Real Analysis Exchange*, 26(2), pp. 657-667.

LA TORRE, D. and ROCCA, M. (1999). $C^{\{k,1\}}$ Functions and Riemann Derivatives. *Real Analysis Exchange*, 25(2), pp. 743-752.

Books and book editor

BEN-DAVID, S., CURIGLIANO, G., KOFF, D., JERECZEK-FOSSA, B.A., LA TORRE, D. and PRAVETTONI, G. [Eds] (2024). *Artificial Intelligence for Medicine: An Applied Reference for Methods and Applications*. Elsevier, 300 pages.

CORAZZA, M., GARCIA, R., SHAH KHAN, F., LA TORRE, D. and MASRI, H. [Eds] (2024). *Artificial Intelligence and Beyond for Finance*. World Scientific Publishing, 450 pages.

APPIO, F., LA TORRE, D., LAZZERI, F., MASRI, H. and SCHIAVONE, F. [Eds] (2023). *Impact of Artificial Intelligence in Business and Society: Opportunities and Challenges*. Routledge, 294 pages.

KUNZE, H., LA TORRE, D., RICCOBONI, A. and RUIZ GALAN, M. [Eds] (2023). *Engineering Mathematics and Artificial Intelligence Foundations, Methods, and Applications*. Taylor & Francis, 529 pages.

SYDSAETER, K., STROM, A., HAMMOND, P., LA TORRE, D. and CARVAJAL, A. (2021). *Metodi matematici per l'economia*. 5 ed. Pearson, 516 pages.

KUNZE, H., LA TORRE, D., MENDIVIL, F. and VRSCAY, E.R. (2011). *Fractal-Based Methods in Analysis*. New-York: Springer, 408 pages.

Book chapters

DE NICOLÒ, V. and LA TORRE, D. (2024). Global Research Trends of Artificial Intelligence and Machine Learning Applied in Medicine: A Bibliometric Analysis (2012-2022). In: *Artificial Intelligence for Medicine*. 1 ed. Elsevier, pp. 151-177.

SALA, G., LA TORRE, D., REPETTO, M. and CURIGLIANO, G. (2024). AI/ML and drug repurposing in lung cancer: State of the art and potential roles for retinoids. In: *Artificial Intelligence for Medicine*. 1 ed. Elsevier, pp. 47-61.

GARRALDA-GUILLEM, A.I., KUNZE, H., LA TORRE, D. and RUIZ GALAN, M. (2022). A Computational Study for Solving Inverse Problems for Mixed Variational Equations on Perforated Domains. In: Kilgour, D.M., Kunze, H., Makarov, R., Melnik, R., Wang, X. eds. *Recent Developments in Mathematical, Statistical and Computational Sciences*. 1st ed. Cham: Springer, pp. 277-287.

KUNZE, H., LA TORRE, D. and MARSIGLIO, S. (2022). On a Generalized Integro-Differential Spatial Model of Economic Growth. In: Kilgour, D.M., Kunze, H., Makarov, R., Melnik, R., Wang, X. eds. *Recent Developments in Mathematical, Statistical and Computational Sciences*. 1st ed. Cham: Springer, pp. 681-692.

BRUSSET, X., LA TORRE, D. and BROEKAERT, J. (2022). Algorithms, Analytics and Artificial Intelligence - Harnessing Data to Make Supply Chain Decisions. In: Bart MacCarthy, Dmitry Ivanov eds. *The Digital Supply Chain*. 1st ed. Amsterdam: Elsevier, pp. 93-110.

TRIBERTI, S., DUROSINI, I., LA TORRE, D., SEBRI, V., SAVIONI, L. and PRAVETTONI, G. (2022). Artificial Intelligence in Healthcare Practice: How to Tackle the "Human" Challenge. In: Lim, CP., Chen, YW., Vaidya, A., Mahorkar, C., Jain, L.C. eds. *Handbook of Artificial Intelligence in Healthcare. Intelligent Systems Reference Library*. 1st ed. Cham: Springer.

BRUSSET, X., DAVARI, M., KINRA, A. and LA TORRE, D. (2021). Modelling COVID-19 Ripple Effect and Global Supply Chain Productivity Impacts Using a Reaction-Diffusion Time-Space SIS Model. In: Alexandre Dolgui, Alain Bernard, David Lemoine, Gregor von Cieminski, David Romero eds. *Advances in Production Management Systems. Artificial Intelligence for Sustainable and Resilient Production Systems*. 1st ed. Nantes: Springer, pp. 3-12.

KUNZE, H., LA TORRE, D., MENDIVIL, F. and VRSCAY, E. (2021). Differential Equations Using Generalized Derivatives on Fractals. In: *Recent Developments in Mathematical, Statistical and Computational Sciences*. 1st ed. Springer, pp. 81-91.

KUNZE, H. and LA TORRE, D. (2021). Solving Parameter Identification Problems using the Collage Distance and Entropy. In: *Recent Developments in Mathematical, Statistical and Computational Sciences*. 1st ed. Springer, pp. 167-175.

BHASKAR, H., LA TORRE, D. and AL-MUALLA, M. (2017). Exaggeration Quantified: An Intensity-Based Analysis of Posed Facial Expressions. In: Harish Bhaskar, Davide La Torre, Mohammed Al-Mualla eds. *Advances in Face Detection and Facial Image Analysis*. 1st ed. London: Springer, pp. 101-128.

KUNZE, H. and LA TORRE, D. (2017). Computational Aspects of Solving Inverse Problems for Elliptic PDEs on Perforated Domains Using the Collage Method. In: H. Kunze, D. La Torre eds. *Mathematical and Computational Approaches in Advancing Modern Science and Engineering*. 1st ed. London: Springer, pp. 113-120.

Guest editor of a journal special issue

LA TORRE, D., BOUBAKER, S., PÉREZ GLADISH, B. and ZOPOUNIDIS, C. (2023). Preface to the Special Issue on Multidimensional Finance, Insurance, and Investment. *International Transactions in Operational Research*, 30(5), pp. 2137-2138.

BEN ABDELAZIZ, F., LA TORRE, D., KUNZE, H. and SINCLAIR-DESGAGNE, B. (2022). Guest editorial: Artificial intelligence and machine learning in business and management. *Journal of Modelling in Management*, 17(3), pp. 849-852.

Editorials of a journal

LA TORRE, D. (2022). Multiple criteria decision making in health and medicine. *Journal of Multi-Criteria Decision Analysis*, 29(1-2), pp. 3-4.

KACEM, I., LA TORRE, D. and MASRI, H. (2021). Preface: Recent advances in multiple objective optimization and goal programming. *Annals of Operations Research*, 296, pp. 1-5.

TRIBERTI, S., DUROSINI, I., LIN, J., LA TORRE, D. and RUIZ GALÁN, M. (2021). Editorial: On the "Human" in Human-Artificial Intelligence Interaction. *Frontiers in Psychology*, 12, pp. 808995.

Conference proceedings

FRASCA, M., LA TORRE, D., PRAVETTONI, G. and CUTICA, I. (2024). Automatic Lymphocyte Detection on Breast Cancer Histological Images Using Deep Learning. *IEEEExplore, 2024 ASU International Conference in Emerging Technologies for Sustainability and Intelligent Systems (ICETSI)*, pp. 644-648.

DE NICOLÒ, V. and LA TORRE, D. (2024). Italian Physicians' Trust Towards Artificial Intelligence: a Multicentric Cross-Sectional Study. *IEEEExplore, 2024 ASU International Conference in Emerging Technologies for Sustainability and Intelligent Systems (ICETSI)*, pp. 1621-1625.

FRASCA, M. and LA TORRE, D. (2024). A Synthetic Dataset for Deep Learning Recognition of Pathological Iris Affected by Coloboma. *IEEEExplore, 2024 ASU International Conference in Emerging Technologies for Sustainability and Intelligent Systems (ICETSI)*, pp. 639-643.

REPETTO, M. and LA TORRE, D. (2022). Federated Multicriteria Learning: A Goal Programming Perspective (DASA2022, IEEEExplore). pp. 790-794.

LA TORRE, D. and REPETTO, M. (2022). Making It Simple? Training Deep Learning Models Toward Simplicity (DASA2022, IEEEExplore). pp. 784-789.

REPETTO, M., LA TORRE, D. and TARIQ, M. (2022). Goal Programming in Federated Learning: an Application to Time Series Forecasting (DASA2022, IEEEExplore). pp. 1672-1677.

- REPETTO, M. and LA TORRE, D. (2022). Breast Cancer Detection and Prediction using Federated Multicriteria Machine Learning. *IEEEExplore*, pp. 1-4.
- REPETTO, M. and LA TORRE, D. (2022). Federated Learning through Goal Programming: a Computational Study in Cancer Detection. *IEEEExplore*, pp. 341-346.
- ABONAMAH, A., LA TORRE, D., POULIN, M. and REPETTO, M. (2022). Explainable Artificial Intelligence in Human Resources: a Computational Study. *IEEEExplore*, pp. 1-6.
- COLAPINTO, C., LA TORRE, D., LAGANA, I.R. and LIUZZI, D. (2021). Modeling Shock Propagation on Supply Chain Networks: A Stochastic Logistic-Type Approach. pp. 23-31.
- BROEKAERT, D. and LA TORRE, D. (2021). A vector logistic dynamical approach to epidemic evolution on interacting social-contact and production-capacity graphs. pp. 13-22.
- BRUSSET, X., DAVARI, M., KINRA, A. and LA TORRE, D. (2021). Modelling COVID-19 Ripple Effect and Global Supply Chain Productivity Impacts Using a Reaction-Diffusion Time-Space SIS Model. pp. 3-12.
- BROEKAERT, J. and LA TORRE, D. (2021). A Vector Logistic Dynamical Approach to Epidemic Evolution on Interacting Social-Contact and Production-Capacity Graphs. *Springer*, 633.
- REPETTO, M., LA TORRE, D. and LIUZZI, D. (2020). A Robust Goal Programming Model For Transfer Pricing Risk Hedging: Preliminary Results. pp. 19082326.
- LA TORRE, D., LI, D. and VRSCAY, E. (2019). Existence, Uniqueness and Asymptotic Behaviour of Intensity-Based Measures Which Conform to a Generalized Weber's Model of Perception., 11662, pp. 297-308.
- GHISLETTI, M., LA TORRE, D. and COLAPINTO, C. (2019). Measuring the Internationalization of Italian Universities using a Network Approach based on Co-Authorship: A Preliminary Analysis. pp. 19082322.
- LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2019). A Note on Stochastic Logistic Shocks and Economic Growth. pp. 19082276.
- OTERO, D., LA TORRE, D., MICHAILOVICH, O. and VRSCAY, E. (2018). Alternate Direction Method of Multipliers for Unconstrained Structural Similarity-Based Optimization., 10882, pp. 20-29.
- LA TORRE, D., LI, D. and VRSCAY, E. (2018). The Use of Intensity-Based Measures to Produce Image Function Metrics Which Accommodate Weber's Models of Perception., 10882, pp. 326-335.
- LA TORRE, D., MAKI, E., MENDIVIL, F. and VRSCAY, E. (2018). Inverse Problems Using Iterated Function Systems with Place-Dependent Probabilities., 259, pp. 115-125.
- LA TORRE, D., LIUZZI, D. and MARSIGLIO, S. (2018). Population and Pollution Interactions in a Spatial Economic Model., 259, pp. 543-552.
- KUNZE, H. and LA TORRE, D. (2018). Inverse Problems and Total Variation Minimization for Iterated Function Systems on Maps., 259, pp. 93-103.
- KUNZE, H., LA TORRE, D. and RUIZ GALAN, M. (2018). Using the Collage Method to Solve Inverse Problems for Vector-Valued Variational Problems on a Perforated Domain in Reflexive Banach Spaces., 259, pp. 105-114.
- KUNZE, H., MENDIVIL, F., LA TORRE, D. and VRSCAY, E. (2018). Collage theorem-based approaches for solving inverse problems for differential equations: A review of recent developments., 1047, pp. 12004.
- KUNZE, H. and LA TORRE, D. (2018). An inverse problem for a system of steady-state reaction-diffusion equations on a porous domain using a collage-based approach.
- KUNZE, H. and LA TORRE, D. (2017). An inverse problem for a 2-D system of steady-state reaction-diffusion equations on a perforated domain., 1798, pp. 20089.
- ELSOKKARY, N., SHAH KHAN, F., LA TORRE, D., HUMBLE, T. and GOTTLIEB, J. (2017). Financial Portfolio Management using D-Wave Quantum Optimizer: The Case of Abu Dhabi Securities Exchange.
- LA TORRE, D., MENDIVIL, F. and VRSCAY, E. (2017). Total variation denoising of probability measures using iterated function systems with probabilities., 1798, pp. 20091.

KUNZE, H., LA TORRE, D. and LIN, J. (2017). IFSM fractal image compression with entropy and sparsity constraints: A sequential quadratic programming approach., 1798, pp. 20090.

LA TORRE, D., MENDIVIL, F., MICHAILOVICH, O. and VRSCAY, E. (2017). Total Variation Minimization for Measure-Valued Images with Diffusion Spectrum Imaging as Motivation., 9730, pp. 131-137.

OTERO, D., LA TORRE, D. and VRSCAY, E. (2016). Image Denoising Using Euler-Lagrange Equations for Function-Valued Mappings., 9730, pp. 110-119.

OTERO, D., LA TORRE, D. and VRSCAY, E. (2015). Structural Similarity-Based Optimization Problems with L1 - Regularization: Smoothing Using Mollifiers., 9164, pp. 33-42.

JARAYAMAN, R., LA TORRE, D., MALIK, T. and PEARSON, Y. (2015). A polynomial goal programming model with application to energy consumption and emissions in United Arab Emirates. pp. 15077528.

BHASKAR, H., LA TORRE, D. and AL-MUALLA, M. (2015). Posed Facial Expression Detection Using Reflection Symmetry and Structural Similarity., 9164, pp. 218-228.

Other research activities

Chief editor

2012 - 2020 International Journal of Applied Nonlinear Science

Senior or associate editor

Since 2024 Annals of Operations Research

Since 2022 Engineering Management Journal

Editorial board member

Since 2024 PLOS ONE

Since 2024 Scientific Reports

Since 2022 Discover Artificial Intelligence

Since 2022 Journal of Modelling in Management

Since 2022 Mathematics

Since 2022 International Transactions in Operational Research

Since 2021 Data Science in Finance and Economics

2013 - 2020 Mathematical Problems in Engineering

2012 - 2020 International Journal of Computing Science and Mathematics

2009 - 2019 International Journal of Mathematics and Statistics

2012 - 2018 Data Envelopment Analysis and Decision Science

2011 - 2014 International Journal of Portfolio Analysis and Management

Reviewer for:

Annals of Operations Research, Chaos, Solitons, and Fractals, Computational Economics, Journal of the Operational Research Society

PhD supervision

2023 S. VOLPE, Universita' degli Studi di Milano "La Statale", PhD thesis, Thesis Reviewer

2023 M. FITZSIMMONS, University of Waterloo, PhD thesis, Thesis Reviewer

2023 Y. MAKHLOUF, Université de Lorraine, PhD thesis, Thesis Reviewer

2023 M. ABOU MJAHER, NEOMA Business School, PhD thesis, Thesis Reviewer

2022 I. R. LAGANA, Università degli Studi Mediterranea di Reggio Calabria, PhD thesis, Thesis co-director

2019 K. WANG, Dalhousie University , PhD thesis, Thesis Reviewer

2018 N. BAGHERI, The University of Dubai, PhD thesis, Thesis Reviewer

2015 D. LIUZZI, Università degli Studi di Milano "La Statale", PhD thesis, Thesis director

2012 K. LEVERE, University of Guelph, PhD thesis, Thesis co-director

2012 M. DEMERS, PhD thesis, Thesis co-director

2012 E. C. RICCI, PhD thesis, Thesis co-director

2011 S. MARSIGLIO, Università degli Studi di Milano "La Statale", PhD thesis, Thesis director

2008 L. ORSI, Università degli Studi di Milano "La Statale", PhD thesis, Thesis director