Prof. Eng. Roberto Revetria, PhD
Born in Albenga (SV), Italy on 18th December 1972

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Degrees
- Qualified Professional Engineer
- Doctor of Philosophy (PhD) at the University of Parma, "Industrial Plant Management" in the field of Computer Science/Distributed Simulation applied to Industrial Production and Logistics.
- Mechanical Engineering Degree (former university regulations, five-year Master's Degree) graduating *summa cum laude* from the University of Genoa,
- High School Diploma c/o ITC "Boselli" of Loano (SV), Italy, graduating *summa cum laude*

Professional Courses and Certifications
- IPMA Level D Certified Project Manager with specialization in Engineering, Procurement and Construction (EPC) projects.

- Healthcare Adventure @ CMS Harvard, USA

- HLA – High Level Architecture (Distributed Simulation, IEEE1516 Standard)

- ASW Anti-Submarine Warfare (SONAR, Weapon Systems)

- Weapon Systems and Artillery

- Electronics, RADAR and TLC

- Military Communications (COMSEC)

- Organization of Military Services, Procedures and Standards (STANAG)

- VV&A for Military and Industrial Simulations (DOD 5000.59 and DOD 5000.61)

Languages
Mother tongue: Italian
Other languages (Self-Assessment):

	Understanding		Spoken		Written
	Listening	Reading	Interaction	Production	
English	C2	C2	C2	C2	C2
French	C2	C2	C2	C2	C2

Based on the Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR) for levels Basic (A), Independent (B), Proficient (C).

Improving the efficiency of production processes
This line of research regards the application of modelling and simulation techniques to increase the efficiency of production processes both in the industrial and in civilian field in private, public and military sectors. This research topic benefits from a very considerable interaction between businesses and universities, since most of the research is requested directly by industry and Public Administrations. More than 40 consulting and research contracts were stipulated with leading private and government-owned companies and with the military sector, allowing him to publish more than 300 internationally peer-reviewed scientific articles. Especially noteworthy is the decades-long consulting

Prof. Roberto Revetria provides to the Holy See (Administration of the Patrimony of the Apostolic See). The main industrial sectors concerned were:

- the civil and industrial construction sector
- the Engineering, Procurement & Contracting (EPC) sector
- the steel and metallurgical sector
- the chemical sector
- the automotive manufacturing sector
- the oil & gas sector
- the maritime sector
- the logistics sector
- the military sector
- the Public Administration sector This line of research covered, in particular, the main aspects related to Quality Control (including ISO 9000, ISO 14000, Quality Control Chart, Sampling Acceptance Testing, Lean Management, TQM) and Maintenance Management (asset management, procurement, spare part inventory management, diagnostics, RMA, etc.).
- The experience he gained was included in institutional teaching via the publication of various university-course textbooks:
    a. REVETRIA R. Mosca R. (2007) "Distributed Simulation in Industry" chapter 2 from Dr. Evon M. Abu-Taieh, "Simulation and Modelling: Current Technologies and Application" ISBN 978-159904198-8 Idea Group, Inc., Hershey, PA 17033, USA;
    b. REVETRIA R., Tonelli F. (2010) Neural Networks and Regressive KPI Metamodels for Business Corporate Management: Methodology and Case Study, Chapter 22, Part VII in Business Performance Measurement and Management: New Context, Themes and Challenges, Edited by Paolo Taticchi, Springer-Verlag, Berlin. ISBN 978-3-642-04799-2;
    c. Mosca R., Cassettari L., REVETRIA R. (2010) Experimental Error Measurement in Monte Carlo Simulation Chapter 6 in Handbook of Research on Discrete Event Simulation Environments: Technologies and Applications Edited by Evon M. O. Abu-Taieh and Asim Abdel Rahman El Sheikh, Information Science Reference, Hershey, New York, USA, ISBN 978-1-60566-774-4 (hardcover), ISBN 978-1-60566-775-1 (e-book);

Development of innovative methodologies and a new simulation paradigm

In the various fields of engineering application, and in particular in that of port logistics, determining and implementing instruments that can be used to support decision-making in different operating phases are of great interest: from defining the choices of infrastructural scenarios to indicating effective and efficient technical/economic scenarios relevant to the physical and informational aspects of the logistic-production networks. Modelling and simulation of real processes on which the experiments on different scenarios can be carried out is an example of quantitative support. Based on many years of experience applying the simulation to numerous industrial logistic-production projects, Prof. Roberto Revetria developed an original reference model with the ability to adapt to logistic-process modelling better than the traditional approaches currently on the market. The use of modelling and simulation, although generally considered to be an exploratory technique certain to succeed, often clashes with the need to adopt development instruments and commercial software modelling designed for other fields of application such as manufacturing, requiring a greater effort and a degree of approximation not perfectly in line with the real logistic-process needs. He therefore developed an innovative and original approach that was applied and implemented in several modelling tools (i.e. Powersim™, iThink™, Berkeley Madonna™) by which it was possible to reconstruct the transport-operations logic of the terminal logic for both bulk products and for goods in containers and general cargo. The model created has already had numerous practical applications on both national (North Tyrrhenian, Adriatic, etc.) and international (e.g. the Mediterranean and the Indian Ocean, the Atlantic, etc.) scenarios and includes case studies of primary importance. The main characteristic of the original approach proposed is that, in fact, having the ability to conduct modelling in very short times, much shorter than those achieved even using dedicated simulation tools (e.g. AnyLogic™, Flexsim CT™, Witness™, Siemens PLM Plant Simulation™, etc.). Rapidity in modelling means being able to count on the model results while designing the terminal and not waiting until advanced planning stage to receive feedback, perhaps negative, from the simulation. The approach proposed thus calls for two distinct levels of modelling: one quicker and leaner, able to provide answers to the design questions (basic engineering) within the span of a few hours, and a more detailed one with which the plant solutions can be tested as they are consolidated with a higher degree of confidence (detailed engineering). Some publications:

- Giribone, P., Guizzi, G., Murino, T., Romano, E., REVETRIA R., Testa, A., Applications, WSEAS International Conference on Computer Engineering and. (2012). Combined Simulation for improving Operations in LNG Logistics: a Case Study. Paper presented at the Proceeding of 6th WSEAS International Conference on Computer Engineering and Applications, Cambridge, MA, USA.
- Roberto REVETRIA, Alessandro, Testa, Lucia, Cassettari, Winter Simulation Conference, WSC. (2011). A generalized simulation framework to manage logistics systems: A case study in waste management and environmental protection. Paper presented at the Proceedings - Winter Simulation Conference, Phoenix, AZ, USA.
- REVETRIA R., Testa, A., Mosca, R., & Bertolotto, A. (2011). A flexible modeling approach for supporting rapid business simulations, Frontiers in Artificial Intelligence and Applications 231, pp. 267-281 doi:10.3233/978-160750-831-1-267
- REVETRIA R.,7th International Conference on Applied Mathematics, Simulation, Modelling. (2013). Using Systems Dynamics Formalism as Base for an Innovative Hybrid Modeling Approach: Methodology and Case Study. Paper presented at the RECENT ADVANCES in MATHEMATICS, Cambridge, MA, USA.
- R. REVETRIA, A., TESTA, L., CASSETARI, G., GUIZZI, E., ROMANO, M., GALLO, Applications, 6th WSEAS International Conference on Computer Engineering and. (2012). Improving Drilling Operations Management Using Combined Simulation. Paper presented at the Applied Mathematics in Electrical and Computer Engineering, Cambridge MA, USA.
  This innovative paradigm was integrated in the institutional teaching and was published in numerous peer-reviewed international scientific articles and in a university textbook: "*Different approaches for studying interruptible industrial processes: Application of two different simulation techniques*" Handbook of research on computational simulation and modeling in engineering doi:10.4018/978-1-4666-8823-0.ch002.

Proven ability to build bridges and create synergy between his own research and training activities.

Prof Roberto Revetria has created a continuous and strong synergy between his research activities and his educational activities and training. In particular, all theses assigned by Prof. Revetria have always had a strong relation with his correlation with his own activities and, moreover, he has always carefully monitored "contamination" between the industrial-research component and his teaching activities, to provide students with up-to-date applicative examples and information to innovatively resolve problems encountered in real industrial cases. Many of the software and computing systems developed in original research have later been used in the courses. His various experiences include:

- Digital Twin ST Microelectronics Singapore Plant.
- Digital Twin for LEGO Supply Chain (North America)
- Digital Twin for DSV Autostore System
- Digital Twin of Port of Venice Passenger Terminal.
- Price Models for Structured Financial Products in Private Placement OTC Trading
- Digital Twin of Genoa's Harbour Railway Network and Operations
- Digital Twin of new Oman Ore and Bulk Terminal
- Digital Twin of the Michelin Alessandria Tyre Plant Production using Siemens PLM Plant Simulation *(Project with Students)*.
- Simulation model of the Steckel - Mill, MetInvest, Verona
- Simulation model of the Steckel - Mill, a facility designed for Ferrania (SV), BaoSteel
- Simulation model for the steelworks design, Customer Danieli, Udine and tests on Iskenderun plant.
- Simulation model for managing heat-treatment furnaces for NLMK Moscow, Russia
- On-line /real-time simulation model for operating the electric steel plant in Verona for NLMK Moscow, Russia.
- Scheduling model for managing heat-treatment furnaces, rolling and forging for NLMK Moscow, Russia
- Service on the simulation system for Gas transport over the national gas pipeline network, customer Atos Origin, Accenture, Etnoteam on behalf of Snam Rete Gas.
- Development of a detailed simulation model for steel-conversion, casting, and steel treatment processes for the Lucchini Steelworks of Piombino (LI), Italy.
- Development of a simulation model for steel production, ingot casting, stripping, and pit furnace transport for the Ascometal steelworks of Fos-sur-Mer.
- Development of a detailed simulation model of the rolling process for the fourth train of the Tra metal (Malacalza group) company of San Giorgio di Nogaro, Italy.

- Development of new optimisation techniques and integrated packages capable of operating automatically, interfacing with simulators to optimise different business conditions even when running over a distributed HLA (High Level Architecture) network; particularly noteworthy were the WILD and WILD II projects on behalf of the Italian Ministry of Public Education
- The development of the applicative methodologies and the use of AI techniques (Fuzzy logic, neural networks, genetic algorithms) to solve off-line and on-line warehouse management problems (the AMT-SGS project) and Production Planning problems (FRINE Project) on behalf of Marconi Telecommunications.
- Development of a simulation model in System Dynamics for the analysis of Sprint Drift procedures of the new Horizon-class frigate, Customer Fincantieri/Orizzonte Sistemi Navali.
- The development of an infrastructure for distributed immersive HLA simulation to support the training of port operators within the framework of the SITRANET project, client the Region of Lombardy
- The development of human-behaviour simulation models to define the design requirements of on-board industrial canteens (Project in collaboration with CETENA/FINCANTIERI)
- Development of a continuous simulation model to study the risks related to the storage of low-surface-tension hydrocarbons
- Development of an emergency procedures and behaviour model for tunnel accidents on behalf of Autostrade management (A32 Turin-Bardonecchia highway).
- Development of a simulation model of the analysis department for executive management c/o Istituto Giannina Gaslini of Genoa
- Development of decision support systems to evaluate complex equipment availability (DISPOS and POSDIS Projects) in civilian (postal automation) and military fields (WSS&S Project) for weapon systems on behalf of Elsag spa (Leonardo).
- Development of analysis models to support the maintenance of complex power plants within the PUMA (Project for Ultimate Maintenance at Ansaldo) and TARAS (Finmeccanica Group)
- Development of a System Dynamics simulation model of maintenance process for technological systems of the A32 (Turin-Bardonecchia-Frejus) highway on behalf of the Gavio Group.
- Development of a mathematical model to detect hostile vessels with new generation frigates (Orizzonte Sistemi Navali SpA, Fincantieri Group).
- Development of a seaborne chemical-transport fleet planning, simulation and optimisation model on behalf of Enichem (Polimeri Europa SpA) ENI Group.
- Development of models to analyse logistics support for the collection of urban waste via the development of an integrated simulator with GIS (SCOOTER Project) on behalf of Municipal Urban Hygiene Service (AIMU) of Genoa
- Development of a rail-passenger traffic model to optimise the transportation service on the Genoa-Casella metropolitan line
- Development of an integrated simulation model to study inter-modal flows between the port of Genoa (VTE, S.E.C.H. and Messina) and the Dry Port of Alessandria
- Development of the internal logistics model, receiving raw materials and shipping finished products (coils), for the Baosteel plant under construction in Ferrania (SV), Italy.
- Development and integration of logistics, B2B, and B2C support systems on geographical networks with particular reference to the ICARO Project
- Development of a model to optimise the urban waste collection and treatment networks, the extension and application to the case of a differentiated collection with the development of algorithms to discover the optimal path and to size the fleet of waste collection vehicles
- Development of the budgeting system to support management control process in Cognos Planning on Sistema Contabile AS/400 [AS/400 Accounting System].
- Management of SAP module R/3 QM (Quality Management) on behalf of the DIP Consortium/HP Consulting/Waystech c/o the multinational group APTAR.
- Analysis of and redefining the Risk Assessment and Risk Management process (Oil Carrier Simulation) for EGL Italia energy sector.
- Development of instruments to support the power requirements forecasts for telecommunications installations based on neural networks (NeuralComm2 Project) and simulation models (LogisticGE Project) on behalf of Telecom Italia SpA
- Development of an analysis model of sales profiles for the large-scale distribution sector to detect abnormal events resulting from sales promotions within the scope of the DICOSAP project on behalf of Coop Liguria

- Development of a scheduling system for the new surgery department of the Galliera Hospital with an increase in the use of teams from 48% to 75%
- Development of a new management system for recorded video events in the event of an accident on urban and suburban buses for Kolimat USA and Octocam (Octo Telematics Group) *(Project with Students)*.
- Development of an innovative distributed simulation model based on the Jini protocol and military applications on behalf of Boston College.
- Development of an innovative methodology to support the collection of MSW (4 projects: Planago, the City of Termoli, Ingauna Mountain Community, Eco-Net).
- Development of a new modelling and simulation methodology to support complex systems for the oil and gas sector (4 projects: ENEL, SAIPEM, Morocco, LNG-Gazifier).
- Application of the 6-Sigma paradigm to some specific Enel Green Power processes *(Project with Students)*.
- Implementation of a new management system named GAS for AXPO AG based on the AS4 protocol.
- Support managing and optimising processes for the Administration of the Patrimony of the Apostolic See (A.P.S.A.) from the perspective of BPR (3 projects).
- Development of a forecasting model to determine power consumption of complex industrial installations for EGL Italia/AXPO AG.
- Analysis of the steelworks of Mobarakeh Steel Company Isfahan Iran and drafting of the master plant.
- Development of simulation and support to design handling systems at the port of Al Faw, under construction in IRAQ.
- Support in determining scenarios for the military use of plants and components sold in countries at risk, implementing EC Regulation 428/2009 as amended and supplemented and Italian Decree Law no. 96 of 9th April 2003.
- Development of a propagation model for gaseous mixtures in porous media applied to the study of MSW landfills
- Development of an immersive virtual-reality simulation system for training operators on port cranes (9 models, Quay Crane, Mobile Harbour Crane, Straddle Carrier) for PTI Alexandria, Egypt.
- Development of innovative solutions to improve the intrinsic safety of the Generation IV nuclear reactors "Alfred" on behalf of the SIRE Consortium.
- Development of an immersive simulation system in virtual training reality for Barges and Tugs, RESET Project (structural and dynamic model), Region of Lombardy.

CURRICULUM VITAE

Eng. Roberto Revetria graduated with top marks in 1998 and nominated navy officer in the Italian Navy as Sub-lieutenant in the Naval Ordinance Corps / Guardiamarina (AN): NATO Code: OF-1. From July 1998 to July 1999 he was assigned as Chief of Control and Testing Services for the Naval Arsenal of Taranto where he filled the position of Control and Testing Manager for Ground-based entities; during this period he developed vast experience in managing the testing of Technical Systems and Civil Works (re-engineering Field Artillery Maintenance, Testing scaffolding in on-board works, maintenance of weapons systems, maintenance of man-in-the loop simulators) and in reorganizing the Ground-based Entities Control and Testing Service coordinating 15 personnel. In 1999 he won the Cycle XIV PhD Scholarship at the University of Parma - Engineering Department, the degree of which he completed in October 2001, earning a PhD at the University of Parma on 27th February 2002 discussing the thesis "Production systems and industrial plants". He also received 3 scholarships focused on research activity: in 1999 for joint research activity with the University of Michigan, Dearborn, in 2002 from Boston College and in 2004 c/o the Virginia Modeling and Simulation Center (VMASC). In December 2000, he took the Level D Project Manager Certification exam with the International Project Management Association which he passed with effect on 20th December. In November 2000, he also won the competition for the position of researcher at the University in Genoa where he reported for duty c/o the Production Engineering Department. His research immediately focused on the study, development and implementation of complex modeling and simulation systems covering every aspect associated with mechanical engineering and production facilities and systems. With a special focus on Design Automation and Design Optimisation for Construction and Operation management he personally gained a strong experience in constructing models (Digital Twins) and computer analysis tools with multi-purpose languages (C/C++, Java, Tcl/Tk, Python, Php, Fortran, Pascal, VBA) and with dedicated modelling languages (ANSYS, Matlab/Simulink, Simula, AnyLogic, AnyLogistiX, OloBeam, Autodesk Force Effects, Flexsim, Automod, Simul8, ESL, GPSS/H, Arena, Witness, Plant Simulation, Powersim, iThink/Stella, VenSim, Berkeley Madonna). He has experience in many embedded systems used in research projects prototyping and in production systems. He used and developed models in virtual reality for Virtual Design using graphical as well as Web-Oriented environments (Aveva, Atmosphere, Java 3D, Blender, Vega Prime, Multigen-Creator). In March 2004, he also won the

Competition for the position of Associate Professor c/o the University of Parma. He was also Associate Director of the McLeod Institute of Simulation Science (MISS), with headquarters in San Diego CA, USA. From 2008 to 2012, he covered the position of Director of Research of the Simulation Division of the company Iso Systems of Genoa. He won the competition, for the position of Full Professor, held by the Polytechnic University of Milan in July 2010, he reported for duty as Full Professor with effect on 30th December 2011. Since 2012, he has been Director of Research of the International Spin-Off MeVB Consulting GmbH Olten, Canton of Solothurn, Switzerland. From 2011 to 2013, he was Deputy Director of the Italian Centre of Excellence on Integrated Logistics (CIELI). As Full Professor for his scientific sector and related areas, for the Genoa campus, he coordinated the development of research and teaching of professors in his sector and related sectors, he developed and coordinated the reorganisation in the teaching the Bachelor course in Safety Engineering for Transport, Logistics, and Production and in promoting the Double Degree agreement with the Technical University of Moscow Bauman. Since the beginning of his career as a teacher (2002) he has always personally supervised the development of his assigned university courses with direct responsibility in defining the program and the development of the appropriate educational material (slides, lecture notes, books, publications and tutorials). He was the Coordinator of the MIG-DIME (Department of Mechanical, Energy, Managerial and Transportation Engineering) section where he coordinated 33 teachers.

He currently have administrative leadership in the DISPI and experience in higher education serving as the director of a research centre in several private companies (Iso Sistemi, MEVB, Metakol and MESA) as well as serving as Deputy Director of the CIELI Department at University of Genoa with responsibilities that include budgeting, strategic planning, personnel management, performance reviews, promotion and tenure decisions.

He covered the position of Guidance Representative in the University Guidance Committee and Coordinator of the Polytechnic School Guidance Committee (Engineering and Architecture), he actively participated in the Polytechnic School Teaching Committee fostering international exchanges, coordinating student mobility for various Erasmus and extra-LLP agreements for which he is the liaison. Since 2013, he has been Visiting Professor for the "Industrial Safety Principles and Modeling Tools" course at the Technical University of Moscow Bauman. Since 2007, he has been a consultant of the President of the Administration of the Patrimony of the Apostolic See (A.P.S.A.) Dicastery Manager for all the financial and real-estate assets of the Holy See. In 2014, he was mentioned to Italian Foreign Minister Paolo Gentiloni among the three scholars proposed to fill the position of Scientific Attaché at the Embassy of Italy in Ottawa (Canada) (NOTICE OF ASSIGNMENT FOR EXPERT PURSUANT TO ART. 168 OF ITALIAN PRESIDENTIAL DECREE 18/67) during the 2014 selection (from a total of more than 90 candidates).

EXPERIENCE IN ACADEMIA
- (2011-Present) Full professor (Part Time), University of Genoa
- (2023-Present) Visiting Professor at Institute of Management Technology Dubai, U.A.E.
- (2018-Present) Honorary Professor and Fellow at the Sofia Technical University (Технически университет) nominated with Rectoral Decree on March 28th, 2018.
- (2016-Present) Visiting Professor at Bauman Moscow State Technical University, Bauman MSTU (Московский государственный технический университет им. Н. Э. Баумана)

PUBLICATION LIST

International Journals with double blind review

[1]. Damiani, L., Revetria, R., & Giribone, P. (2022). A dynamic simulation model for a heat exchanger malfunction monitoring. Energies, 15(5) doi:10.3390/en15051862

[2]. Battilani, C., Galli, G., Arecco, S., Casarino, B., Granero, A., Lavagna, K., Revetria R., Damiani, L. (2022). Business process re-engineering in public administration: The case study of western ligurian sea port authority. Sustainable Futures, 4 doi:10.1016/j.sftr.2022.100065

[3]. Allahi, F., Fateh, A., Revetria, R., & Cianci, R. (2021). The COVID-19 epidemic and evaluating the corresponding responses to crisis management in refugees: a system dynamic approach. Journal of Humanitarian Logistics and Supply Chain Management, 11(2), 347–366. doi:10.1108/JHLSCM-09-2020-0077

[4]. Damiani, L., Revetria, R., Morra, E. Safety in industry 4.0: The multi-purpose applications of augmented reality in digital factories (2020) Advances in Science, Technology and Engineering Systems, 5 (2), pp. 248-253.

[5]. Damiani, L., Revetria, R., Morra, E., Giribone, P. A smart box for blood bags transport: Simulation model of the cooling autonomy control system (2020) Advances in Science, Technology and Engineering Systems, 5 (1), pp. 249-255.

[6]. Alessandri, A., Bagnerini, P., Cianci, R., Revetria, R. Modeling and Estimation of Thermal Flows Based on Transport and Balance Equations (2020) Advances in Mathematical Physics, 2020, art. no. 9621308, .

[7]. Patrone, C., Kozlova, M.M., Brenta, M., Filauro, F., Campanella, D., Ribatti, A., Scuderi, E., Marini, T., Galli, G., Revetria, R. Hospital warehouse management during the construction of a new building through lean techniques (2020) Advances in Science, Technology and Engineering Systems, 5 (1), pp. 256-262.

[8]. Ivanova, O., Aleksandrov, A., Revetria, R. Modelling of impact caused by flood after water flow optimization at volga-kama river basin (2019) Engineering Letters, 27 (4), pp. 658-662.

[9]. Cassettari, L., Demartini, M., Mosca, R., Revetria, R., Tonelli, F. A multi-stage algorithm for a capacitated vehicle routing problem with time constraints (2018) Algorithms, 11 (5), art. no. 69, .

[10]. Damiani, L., Demartini, M., Guizzi, G., Revetria, R., Tonelli, F. Augmented and virtual reality applications in industrial systems: A qualitative review towards the industry 4.0 era (2018) IFAC-PapersOnLine, 51 (11), pp. 624-630.

[11]. A.G.Bruzzone, R.Mosca, R. REVETRIA, E.Bocca, E.Briano. (2005). Agent Directed HLA Simulation for Complex Supply Chain Modeling. *SIMULATION, 81*, 647-655.

[12]. Arata, Giacomo, Frascheri, Silvana, Roberto REVETRIA, Testa, Alessandro, (2012). *Evaluating Different Scenario in Maritime Coal Supply Chain Using Simulation.* 11th SoMeT_12, Frontiers in Artificial Intelligence and Applications. Volume 246: New Trends in Software Methodologies, Tools and Techniques.

[13]. Bottarelli, M., R. REVETRIA, Taticchi, P., Tonelli, F. (2008). An Agent Based Tool to Support Tactical Dialogues in Industrial Enterprise Networks: model and experimental campaign. *WSEAS TRANSACTIONS ON BUSINESS AND ECONOMICS, 8*, 422-438.

[14]. Briano, E., Caballini, C., Giribone, P., REVETRIA R. (2010). Resiliency and vulnerability in short life cycle products' supply chains: a system dynamics model. *WSEAS TRANSACTIONS ON SYSTEMS, 9*, 328-337.

[15]. Briano, E., Caballini, C., Giribone, P., REVETRIA R. (2010). Two methodologies to support gas turbine power plant availabilty estimation: design of experiment and Montecarlo simulation. *WSEAS TRANSACTIONS ON SYSTEMS, 9*, 937-947.

[16]. Briano, E., Caballini, C., Mosca, R., REVETRIA R. (2010). Using logistic redesigner (Lo.R.D.) software for designing and simulating a steel supply chain. *WSEAS TRANSACTIONS ON SYSTEMS, 9*, 125-135.

[17]. Briano, E., Caballini, C., R.Mosca, REVETRIA R.,Testa, A. (2010). Guidelines and perspectives to enhance Italian port competitiveness. *WSEAS TRANSACTIONS ON SYSTEMS, 9*, 948-958.

[18]. Bruzzone, A. G., R. REVETRIA, Brandolini, M., Massei, M., Simeoni, S. (2004). Models for the Introduction of Mobile Technologies in External Logistics. *SIMULATION SERIES, 36*, 72-80.

[19]. BRUZZONE, A., R., MOSCA, A., ORSONI, REVETRIA R. (2001). Forecasts Modelling in Industrial Applications Based on AI Techniques. *CASYS: INTERNATIONAL JOURNAL OF COMPUTING ANTICIPATORY SYSTEMS*, 245-258.

[20]. Caballini, C., Puliafito, P. P., REVETRIA R., Tonelli, F. (2008). Simulation Based Design for a Railway Logistics Re-Engineering Project. *INTERNATIONAL JOURNAL OF MATHEMATICS AND COMPUTERS IN SIMULATION, 2*, 195-205.

[21]. Capitta, G., Damiani, L., Laudani, S., Lertora, E., Mandolfino, C., Morra, E., Revetria, R. (2017). Structural and operational design of an innovative airship drone for natural gas transport over long distances. ENGINEERING LETTERS, vol. 25, p. 247-254, ISSN: 1816-093X

[22]. Cassettari Lucia, Mosca Roberto, REVETRIA Roberto, Rolando Fabio. (2013). Effectiveness and limits of response surface methodology in application to discrete and stochastic simulation of manufacturing plants. *APPLIED MATHEMATICAL SCIENCES*, 4137-4172.

[23]. Cassettari, L., Mosca, R., R. REVETRIA. (2012). Monte Carlo Simulation Models Evolving in Replicated Runs: A Methodology to Choose the Optimal Experimental Sample Size. *MATHEMATICAL PROBLEMS IN ENGINEERING, 2012*, 1-17.

[24]. Cassettari, Lucia, Demartini, Melissa, Mosca, Roberto, Revetria, Roberto, Tonelli, Flavio (2018). A multi-stage algorithm for a capacitated vehicle routing problem with time constraints. ALGORITHMS, vol. 11, p. 1-14, ISSN: 1999-4893, doi: 10.3390/a11050069

[25]. Chiocca, D., Guizzi, G., Murino, T., Revetria, R., & Romano, E. (2012). A methodology for supporting lean healthcare, Studies in Computational Intelligence 431, pp. 93-99 doi:10.1007/978-3-642-30732-4-12

[26]. Damiani, L., Dellacha, J., Prato, A. Pini, R. REVETRIA. (2014). Simulation model of a nodes for smart grid applications, equipped with photovoltaic panel, energy storage and electric vehicle. Journal of Technology Innovations in Renewable Energy, 2014, 3, 199-213.

[27]. Damiani, L., Giribone, P., Mzoughi, K., Revetria, R. (2017). A hybrid simulation model for hospital complex plants risk evaluation. *Engineering Letters, 25*(2), 214-221.

[28]. DamianiL., P., Prato A., REVETRIA R. (2014). Innovative steam generation system for the secondary loop of "ALFRED" lead-cooled fast reactor demonstrator. *APPLIED ENERGY, 121*, 207-218.

[29].   De Maria, F., Briano C., Brandolini M., Briano E., REVETRIA R. (2010). Simulation models for back-office retail store management integration in ERP. *WSEAS TRANSACTIONS ON SYSTEMS, 9*, 396-408.

[30].   E. BRIANO, C. CABALLINI, P. GIRIBONE, R. REVETRIA. (2010). Resiliency and Vulnerability in Short Life Cycle Products Supply Chains: a System Dynamics Model. *WSEAS TRANSACTIONS ON SYSTEMS, 9 issue 4*, 327-337.

[31].   E. BRIANO, C. CABALLINI, P., Giribone, R. REVETRIA (2010). Objectives and perspectives for improving resiliency in Supply Chains. *WSEAS TRANSACTIONS ON SYSTEMS, 9 issue 2*, 136-145.

[32].   E. Briano, C. Caballini, R. Mosca, R. REVETRIA, A. Testa. (2010). Study of an emergency situation using 2D and 3D simulation models. *WSEAS TRANSACTIONS ON SYSTEMS, 9*, 338-347.

[33].   G. Capitta, L.Damiani, S. Laudani, E. Lertora, C. Mandolfino, E. Morra, and R. REVETRIA, "Structural and Operational Design of an Innovative Airship Drone for Natural Gas Transport over Long Distances," Engineering Letters, vol. 25, no.3, pp247-254, 2017 ISSN: 1816-0948 (online version); 1816-093X (print version).

[34].   Gallo M., REVETRIA R., Romano E. (2012). A pull management model for a production cell under variable demand conditions. *INTERNATIONAL JOURNAL OF MATHEMATICAL MODELS AND METHODS IN APPLIED SCIENCES, 6*, 519-526.

[35].   Giribone P., REVETRIA R., Schenone M., Oliva, F. (2007). Data Driven Simulation in the Health and Hospital Field: a Model for the "G.Gaslini" Clinical Pathology Laboratory Workout. *INTERNATIONAL JOURNAL OF SYSTEMS APPLICATIONS, ENGINEERING DEVELOPMENT*, 112-119.

[36].   Giribone P., REVETRIA R., Schenone,M., Oliva F., Nikolova E., Nikolaeva P., Chavdarova G. (2008). Tools and Techniques for Supporting Reverse Logistics Optimization: Methodology, Case Study and Project Proposal. *INTERNATIONAL JOURNAL OF MATHEMATICS AND COMPUTERS IN SIMULATION, 2*, 125-133.

[37].   L. Damiani, R. REVETRIA. (2014). Numerical Exergetic Analysis of Different Biomass and Fossil Fuels Gasification. *INTERNATIONAL JOURNAL OF RENEWABLE ENERGY BIOFUELS, 2014*, 1-18.

[38].   L. Damiani, R. REVETRIA. (2015). New steam generation system for lead-cooled fast reactors, based on steam re-circulation through ejector. *APPLIED ENERGY, 137*, 292-300.

[39].   L., Cassettari, R., Mosca, R. REVETRIA. (2012). Sizing of a 3,000,000t Bulk Cargo Port through Discrete and Stochastic Simulation Integrated with Response Surface Methodology Techniques. *INTERNATIONAL JOURNAL OF SYSTEMS APPLICATIONS, ENGINEERING DEVELOPMENT, 6*, 87-97.

[40].   Lorenzo Damiani, Pietro Giribone, Roberto REVETRIA, Alessandro Pini Prato. (2015). A passive decay heat removal system for the lead cooled fast reactor demonstrator "Alfred". *PROGRESS IN NUCLEAR ENERGY, 83*, 294-304.

[41].   Lucia Cassettari, Simona Cipollina, Pietro Giribone, Roberto Mosca, Roberto REVETRIA. (2008). Theoretical development and applications of the MSPE methodology in discrete and stochastic simulation models evolving in replicated runs. *JOURNAL OF ENGINEERING, COMPUTING, AND ARCHITECTURE, 2*, 1-25.

[42].   M., CAGETTI, L., CASSETTARI, R., MOSCA, F., OLIVA, R. REVETRIA. (2006). Discrete Event Simulation Applied to a reengineering problem in a railway context. *SIMULATION SERIES, 38*, 171-176.

[43].   MOSCA M., TONELLI F., REVETRIA R., TATICCHI P. (2010). STRATEGIC BUSINESS PROCESS INSOURCING: INSIGHTS OF AN ACTION RESEARCH IN THE RAILWAY SECTOR. *WSEAS TRANSACTIONS ON BUSINESS AND ECONOMICS, 7*, 136-148.

[44].   MOSCA R., REVETRIA R., BRUZZONE A.G., BOCCA E., BRIANO E. (2005). Agent Directed HLA Simulation for Complex Supply Chain Modeling. *SIMULATION, 81*, 647-655.

[45].   N.P. BIANCHI, S. EVANS, REVETRIA R., TONELLI, F. (2009). Influencing Factors of Successful Transitions towards Product-Service Systems: a Simulation Approach. *INTERNATIONAL JOURNAL OF MATHEMATICS AND COMPUTERS IN SIMULATION, 3*, 30-43.

[46].   Paolucci M., REVETRIA R., Tonelli F. (2008). An Agent-based System for Sales and Operations Planning in Manufacturing Supply Chains. *WSEAS TRANSACTIONS ON BUSINESS AND ECONOMICS, 5*, 96-105.

[47].   R. REVETRIA, A.G, BRUZZONE, R, MOSCA, S, RAPALLO. (2000). Risk Analysis in Harbour Environments Using Simulation. *SAFETY SCIENCE, 35*.

[48].   R. REVETRIA, F. TONELLI, C. FORGIA. (2008). Using Nested Simulation for Evaluating Next Period Workload Anticipation Capability of a Control System. *CASYS: INTERNATIONAL JOURNAL OF COMPUTING ANTICIPATORY SYSTEMS*, 261-272.

[49].   R. REVETRIA, G. Guizzi, P. Giribone. (2015). Renewable energy sources integrated with electric power supply in manufacturing companies: A management model. *INTERNATIONAL JOURNAL OF POWER ENERGY SYSTEMS, 35*, 161-166.

[50].   R. REVETRIA, P. GIRIBONE, F. OLIVA, A. CATANIA. (2007). Models For Supporting Sea Transportation Evolution: A Case Study For An International Harbor System. *WSEAS TRANSACTIONS ON SYSTEMS, 6*, 668-677.

[51].　　R. REVETRIA, R. MOSCA, M. SCHENONE. (2005). Improve Supply Chain Management Using Neural Networks And Regressive Kpi Relationship Metamodels. *CASYS: INTERNATIONAL JOURNAL OF COMPUTING ANTICIPATORY SYSTEMS, 19*, 70-84.

[52].　　R. REVETRIA, R. MOSCA, A. BRUZZONE, E. BOCCA, E. BRIANO. (2005). Agent Directed HLA Simulation for Complex Supply Chain Modeling. *SIMULATION, 81*, 647-655.

[53].　　R. REVETRIA. (2014). An Anticipatory Control System Based on On-Line Real-Time Simulation for Supporting Rescheduling of Complex Industrial Plants with High Automation System. *CASYS: INTERNATIONAL JOURNAL OF COMPUTING ANTICIPATORY SYSTEMS*, 211-222.

[54].　　REVETRIA R., BRANDOLINI, M., BRIANO, C., BRIANO, E. (2008). VV&A of Complex Modeling and Simulation Systems: Methodologies and Case Studies. *INTERNATIONAL JOURNAL OF MATHEMATICS AND COMPUTERS IN SIMULATION, 2*, 338-348.

[55].　　REVETRIA R., Briano E. (2008). A Study Of Crowd Behavior In Emergency Tunnel Procedures. *INTERNATIONAL JOURNAL OF MATHEMATICS AND COMPUTERS IN SIMULATION, 2*, 349-358.

[56].　　REVETRIA R., Bruzzone, A. G., Mosca, R., Orsoni, A. (2001). Forecasts Modelling in Industrial Applications Based on AI Techniques. *CASYS: INTERNATIONAL JOURNAL OF COMPUTING ANTICIPATORY SYSTEMS, 11*, 245-258.

[57].　　REVETRIA R., CABALLINI C. (2008). A System Dynamics Model For The Simulation of a Non Multi Echelon Supply Chain: Analysis and Optimization Utilizing The Berkeley Madonna Software. *INTERNATIONAL JOURNAL OF MATHEMATICAL MODELS AND METHODS IN APPLIED SCIENCES, 2*, 503-512.

[58].　　REVETRIA R., Caballini, C., Briano, E., Mosca, M. (2009). A System Dynamics Decision Cockpit For A Container Terminal: The Case Of Voltri Terminal Europe. *INTERNATIONAL JOURNAL OF MATHEMATICS AND COMPUTERS IN SIMULATION, 3*, 55-64.

[59].　　Revetria, R., Catania, A., Cassettari, L., Guizzi, G., Romano, E., Murino, T., Improta G., Fujita, H. (2012). Improving healthcare using cognitive computing based software: An application in emergency situation, Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics) 7345 LNAI, pp. 477-490 doi:10.1007/978-3-642-31087-4_50

[60].　　Revetria, R., Testa, A., Mosca, R., & Bertolotto, A. (2011). A flexible modeling approach for supporting rapid business simulations, Frontiers in Artificial Intelligence and Applications 231, pp. 267-281 doi:10.3233/978-1-60750-831-1-267

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