
Editorial

Peter Groumpos*

Department of Electrical and Computer Engineering,
University of Patras,
Panepistimioupoli Rion,
Patra, TK 26500, Greece
Email: groumpos@ece.upatras.gr
*Corresponding author

Nikitas Assimakopoulos

Department of Informatics,
University of Piraeus,
80, Karaoli & Dimitriou Str.,
GR-185 34 Piraeus, Greece
Email: assinik@unipi.gr

Athanasios Kriemadis

Department of Management Science and Technology,
University of Peloponnese,
Thesi Sechi, Tripoli, TK 22100, Greece
Email: thkriemadis@yahoo.com
Email: thanosk@uop.gr

John Thanopoulos

Department of Business Administration,
IST College,
Syngrou 68, Athens, TK 11742, Greece
Email: thania@otenet.gr
Email: jt@unipi.gr

Rallis Antoniadis

Department of Informatics,
University of Piraeus,
80, Karaoli & Dimitriou Str.,
GR-185 34 Piraeus, Greece
Email: arisantiadis@gmail.com

Biographical notes: Peter Groumpos received his BSc, MSc and Doctoral degrees from the State University of N.Y. at Buffalo. He has been teaching for more than 40 years in the scientific fields of electrical and computer engineering. His research areas of interest are intelligent control, deep and machine learning, neural networks, fuzzy control, energy efficiency of buildings, smart grids, fuzzy cognitive maps and their application to scientific fields. He has more than 400 publications. His h-Googel citation index is 38 and has more than 6800 citations. He has been included on the top 2% of scientists worldwide in artificial intelligence for two consecutive years (2019 and 2020).

Nikitas Assimakopoulos is a Professor in the Department of Informatics at the University of Piraeus, Greece. His research interests include systemic methodologies, systems approaches to management and informatics, and applied operations research techniques. He has published over 150 papers in refereed journals, 120 papers in conference proceedings and has participated in over 130 conferences with papers. He is an Associate Editor in five international journals and reviewer in 12 well-known journals which are associated with the four international societies where he serves as an active member. He is the founder and elected President of the Hellenic Society for Systemic Studies (HSSS) (<http://www.hsss.gr>). He is the founder and the coordinator of the first international Post-Graduate Professional Program Certified Systemic Analyst Professional (CSAP) (<http://www.csap.gr/>) which is supported by the HSSS.

Athanasios Kriemadis is a Professor in the School of Economics and Management at the University of Peloponnese, teaching principles of management, total quality management and business excellence, strategic management, and human resource management. He is the Quality Auditor for Quality Management Systems (ISO 9001:2015). He was a Quality Assessor of the EFQM Excellence Award promoted by the European Foundation for Quality Management (EFQM) specialised in Small and Medium Enterprises and the Public Sector-Education. Before moving to academia, he held several management posts in both the public and private sectors in the USA and Greece. In USA, he worked in the Department of Quality Assurance in Motorola, Inc. using the Six-Sigma methodology, a variety of total quality management principles and practices and the Deming Management System. His research interests include total quality management and strategic management issues applied in service organisations.

John Thanopoulos studied in Greece, France and England before receiving his Doctoral degree in Marketing from the University of Arkansas, in the USA. He started his career as a business practitioner having achieved by the age of 26 more than \$25,000,000 in sales. Eventually, however, he joined the academe and, from 1983, the University of Akron in Ohio as a Director of the International Business Programs where he taught Marketing and International Business. He also served to various other positions, including Associate Dean for the American College of Greece and Co-chair of the Executive Committee of the Greater Akron Export Association. Moreover, he joined the University of Piraeus, as a Professor of International Business where he served in a variety of roles, including Vice Chairman of the Department of Business Administration. Currently, he is Professor of International Business and Dean of the Business and Economics Division of IST College, a private institution of university level learning in Athens, Greece. During his academic life he received various awards and recognitions, such as: World Education Congress, Best Professor in International Business (2012).

Rallis Antoniadis holds a BSc degree in Mathematics, an MSc degree in Information and Systems Science, an MSc degree in Applied Mathematics and he is a PhD candidate at the University of Piraeus (Department of Informatics). He is also a certified systemic analyst e-business professional. His research interests include systemic approaches in management and information technology, systems simulation and modelling, systemic methodologies and applied techniques in operational research. He has a 25-year professional career as systems analyst and as IT manager in the banking sector. He is an elected member of the board of the Hellenic Society for Systemic Studies (HSSS) and he is also assistant editor and reviewer in an international journal.

The Hellenic Society for Systemic Studies (HSSS) organised the 15th HSSS National and International Conference in Piraeus of Greece on November 29–30 of 2019. The theme of the conference was ‘systemics and business intelligence’ under the auspices of the Department of Informatics of the University of Piraeus. The main theme of the Conference was to present the dynamic scientific area of ‘systemics’ with applications in organisations and enterprises across a wide spectrum of both service and production industry sectors. In addition, this dynamic systemics area was related to business intelligence (BI) and how it affects the overall performance of a business organisation.

‘Systemics’ refers to something that is spread throughout, system-wide, affecting a group or a system, such as a body, economy, market or society as a whole. – Looks at circular or reciprocal influence rather than linear influence. – Systemic thinking has been influenced by natural science, mathematics, chaos theory, physics, systems theory, psychoanalysis, anthropology and evolutionary psychology. Circular causality: Looks at the way conflict occurs in the context of others who are causing reciprocal grief.

Creativity is essential, but in many cases not sufficient to explore the many possible candidate solutions. A more systematic and methodical approach can help to overcome many of the problems that arise during conceptualising in design decision making support systems (DMSS). Use of appropriate methods to enhance the search for solutions can expand the solution field. A systematic approach based on interdisciplinary science has been shown to enhance understanding, good recordkeeping, and traceability for the business process. Several systemic theories when are brought into mutual context, they refer to memory and thinking operations, expertise, human action modes, and competencies.

‘BI’ is a technology-driven process for analysing data and presenting actionable information which helps executives, managers and other corporate end users make informed business decisions. ‘The processes, technologies and tools needed to turn data into information and information into knowledge and knowledge into plans that drive profitable business action. BI encompasses data warehousing, business analytics and knowledge management’. BI leverages software and services to transform data into actionable insights that inform an organisation’s strategic and tactical business decisions. BI tools access and analyse data sets and present analytical findings in reports, summaries, dashboards, graphs, charts and maps to provide users with detailed intelligence about the state of the business.

The term BI often also refers to a range of tools that provide quick, easy-to-digest access to insights about an organisation’s current state, based on available data. BI technologies can handle large amounts of structured and sometimes unstructured data to help identify, develop, and otherwise create new strategic business opportunities. Among

myriad uses, BI tools empower organisations to gain insight into new markets, to assess demand and suitability of products and services for different market segments, and to gauge the impact of marketing efforts.

Given the dynamic nature of this challenging 'business' area, 'systemics' can bridge the gap between theory and practice and can promote the use of effective methodologies and multi-methodologies in managing today's organisational complexity for organisational intelligence. World's interdisciplinary international community has the scientific systemic tools and powerful specialised software to tackle up-to-date multi-dimensional strategic complex problems and to manage their complexity in different applied areas of practice.

This 15th HSSS National and International Conference has addressed many of these topics. It had invited prominent national and international scientists and academicians in the scientific program. It organised exciting professional panels, professional round table discussions, special sessions, approved only 70% of the submitted papers and held three professional workshops. All these attracted many people to attend the conference, especially more than 100 graduate students from Greece attended it. Furthermore, for the first time the organisers invited and had the participation of the International Federation for Systems Research (IFSR) members, the International Academy of Systems and Cybernetic Sciences (IASCYS) members, the European Union of Systemics together with renowned consultancy firms of national and international stature. All these made the 15th HSSS National and International Conference a very successful and memorable one in the history of HSSS Conferences.

From the presented papers several papers were selected and were sent for peer review for this special issue. Finally, eight papers were accepted for this special issue. These papers were grouped to two main thematic areas.

The first thematic area is referred as 'Quality management as a systemic tool for business transformation' and includes five papers.

- 1 In the paper, 'Exploring quality models applied to small and medium enterprises', George Sainis, Athanasios Kriemadis and Ioanna Thomopoulou explored the most important quality management models for SMEs. The EFQM model, the MBNQA model, the Joiner's model (the triangle-1995), the Juran's model (the trilogy-1989), the Oakland's overall framework for excellence model, the Deming's innovative model, and the ISO 9001:2015 model as well as the Saunders and Preston S-P model are some of the models presented in this paper that have been considered as systemic management models suitable for all different size of companies and to SMEs in particular.
- 2 The authors Georgios Mandellos and Dimitris Tsipianitis, in the paper 'Business intelligent connection between quality and evaluation methods: a case study' are trying to find helpful tools on the BI area. So, they have used paper and online questionnaire's administration in order to evaluate a project's quality and check the reliability differences –mentioning the human responses- between the two methods and have reported very interesting and promising results.
- 3 Anastasia Sioutou, Thanos Kriemadis, Antonios K. Travlos and Athanasios Verdis in their paper 'Implementing the Deming management method in public administration: a systemic approach' examined the extent to which the Deming management method (DMM) was implemented in public administration. William Edwards' (DMM), as a

systemic theorist of quality management, captured the essence of his quality philosophy in 14 points for management, establishing a structured management system for continuous improvement of procedures, leadership for change, satisfaction of internal and external customers, empowering human resources, continuous training, encouraging self-improvement and setting the framework of total quality management (TQM). The findings of this study showed that (DMM) was applied to a mediocre extent in Greek public administrations, and thus, recommendations for further improvement were introduced.

- 4 The author Vasiliki Messini of the paper ‘Employer branding in the retail industry: a systems approach’ examines, by a systemic approach, the performance and potential impact of the adoption and implementation of employer branding trends and show to be an important way for the whole business transformation and superiority. The adoption of new concepts in the pursuit of business excellence and continuity always contains an inherent complexity proportional to the separate stakeholders taking part in major decisions referring to strategic, tactical, and operational targets.
- 5 The paper: ‘The value of formative evaluation in an education program’ is very interesting. In this paper the authors, Dimitris Tshipianitis and Georgios Mandellos have examined the formative evaluation method as a process which could be used by trainers and trainees in order to provide feedback on updating teaching and learning methods improving the trainer’s achievement in relation of teaching goals. The aim of the study was to extract conclusions and opinions about the education program’s value, the achievement goals and the organisation implementation requirements.

The second thematic area is named as ‘Systemic tools for business advancement’ and includes three papers.

- 1 The author Eleftherios Kakavoulis in the paper ‘Systems structuring with DCSYM: case study of an SME active in media business’ using the bottom-up approach shows the applicability of the design and control systemic methodology (DCSYM) in a small to medium enterprise (SME) environment. In a case study the authors demonstrate how DCSYM can help improve business performance by simulating the processes, thus enabling the prediction of the company’s response to different circumstances.
- 2 The authors Panagiotis Papaioannou, Rallis Antoniadis and Nikitas Assimakopoulos in the paper ‘Organisational resilience through the adaptation of process-aware information systems – a System Dynamics approach’ address the operation of Organisations from the sociotechnical aspects. They point out the importance of the resilience aspect and how it affects the whole organisation. They demonstrate that a systemic dynamic approach provides the means to create models that describe and simulate the resilience dynamics of the whole system. Their study shows clearly that resilience and adaptation are a matter of knowledge leverage, while the simulation model highlights the effect of knowledge leverage in the adaptation process.
- 3 The paper ‘The architecture of non-local semantics for artificial general intelligence’ provides for the first time how artificial intelligence (AI) is used in structuring business architectures using also the concepts of non-local cognitive semantics. The author Alexander Raikov of this paper, addresses the issue of providing artificial

intelligence (AI) models by the non-local semantics that reflects non-formalisable and weak formalisable aspects of human consciousness and unconsciousness. Emotions, feelings, thoughts, insights, and transcendental state of mind cannot be mathematically formalised. The authors have tried to represent these aspects using traditional cognitive architectures, logical ontology, knowledge base, and so on are finishing in a formalised way. They conclude that this approach requires to introduce the concepts of non-local cognitive semantics. They finally suggest an approach by which this idea can be implemented during modelling in advanced AI, or artificial general intelligence (AGI).

The conference had four keynote speakers and held a two hours very interesting and challenging professional round table with six international known participants. The topic of the round table was, BI and the systemics approach: from data to wisdom. Each participant presented his/her thoughts on the topic and then a lively discussion followed.

In closing this special invited issue, the need for further research on the topics covered by the 15th HSSS conference must be emphasised. Especially now that we all are searching for, new sustainable and humanised economic and business models in the after COVID-19 era. Perhaps, it is time to bring to our research effort wise thinking and cognitive theories. BI will not be enough to solve the challenging problems that our planet is faced. Our only hope is WISDOM.