IEEE SSCI'17 Special Session

Title:
Computational Intelligence Methodologies for Environmental Sustainability and Sustainable Development: Theory and Applications.

Organisers:
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Scope and Motivation:
Environmental sustainability has become a topic of particular interest - and concern in - in the last 20 years. Environmental sustainability is focused upon responsible decision-making and action-taking for the protection of the environment, and - thus - its ability to continue to support life. At the same time, environmental sustainability tackles the issue of developing optimal practices that will reduce - and eventually minimise - the negative impact on the environment. Further to pollution, waste, and energy reduction, environmental sustainability aims at developing processes that will lead to human societies becoming completely sustainable in the future. The use of non-parametric, noise-resistant, and learn-by-example approaches are pertinent to this end, and constitute the focus of this IJCNN'15 Special Session.

Topics:
Environmental sustainability
Sustainable development
Decision making
Action taking
Optimisation
Long-, medium- and long-term impact assessment
Human activity and the environment
Product life-cycle
Evaluation of environmental sustainability (e.g. indices; country rankings /groupings)

Relevance for IEEE SSCI:
Computational intelligence nethodologies have demonstrated their superiority over other traditional approaches when applied to inexact, ill- or partially-defined, time-varying problems. In that sense, IEEE SSCI and - in particular - the "Special Session on Computational Intelligence Applications to Environmental Sustainability and Sustainable Development: Theory and Applications" shall prove to be a focus of attention of leaders as well as of researchers of environmental sustainability and sustainable development.

Short Resumes of Organisers:
Tatiana Tambouratzis: Associate professor at the department of Industrial Management & Technology, University of Piraeus, Greece; held positions at the Institutes of Informatics and Nuclear Technology & Radiation Protection, NCSR "Demokritos", and at the Department of Nuclear Engineering, Chalmers University of Technology, Goteborg, Sweden; a Greek State Scholarship Foundation National Research Institute (Greece), Royal Society and SERC (U.K.), and Fulbright (U.S.A.) scholar; Fellow of the Institute of Mathematics and its

Applications; evaluator of national and EU-funded projects; is on the advisory and/or editorial board, and has acted as a reviewer of peer-reviewed international scientific journals and of conferences; organiser of international scientific conferences and special sessions; supervisor, internal examiner and member of the Examination Board of PhD theses in Greece, Italy, and Sweden, of M.SC. as well as of B.Sc. dissertations; author or co-author of 43 publications in peer-reviewed international scientific journals, 51 international scientific conference proceedings, and five technical reports; invited speaker at various universities in Greece, Europe and the United States, as well as at conferences; main research interests in artificial and computational Intelligence, brain function, natural and artificial vision, psychophysics and cognitive psychology, optimisation, monitoring and prediction, wavelets, signals and systems, energy systems, safety, environmental sustainability.

Christos Douligeris: Professor at the department of Informatics, University of Piraeus, Greece; held positions with the Department of Electrical and Computer Engineering at the University of Miami; was an associate member of the Hellenic Authority for Information and Communication Assurance and Privacy; has published extensively in the networking scientific literature and has participated in many research and development projects; co-editor of a book on ''Network Security'' published by IEEE Press/John Wiley; is on the editorial boards of several scientific journals as well as on the technical program committees of major international conferences; main research interests in the areas of communications, networking security, medical informatics and emergency response operations.

Mikko Kolehmainen: Professor of Bioinformatics and Environmental Sciences, University of Eastern Finland, Finland; leader of the Research Group of Environmental Informatics and Modelling; leader of projects concerning environmental safety and security as well as sustainable energy systems; lecturer and course developer on environmental data mining, environmental bioinformatics and ecological risk assessment; main research interests in the areas of environmental safety and security as well as sustainable energy systems, modeling complex systems in the environment and in medicine.

Stefanos Kollias: Professor at the School of Electrical and Computer Engineering, National Technical University of Athens, Greece; director of the Image, Video and Multimedia Systems Laboratory; has been a member of the Technical or Advisory Committee and/or invited speaker in 40 international conferences; has published more than 120 papers, 50 of which in international journals; reviewer of 10 IEEE Transactions and of 10 other journals; supervisor of 25 PhD students; has participated in 38 European and National projects.

Andreas-Georgios Stafylopatis: Professor at the School of Electrical and Computer Engineering, National Technical University of Athens, Greece; director of the Intelligent Systems Laboratory; Head of the School (2010-2013); main research interests in the modelling and performance evaluation of computer, intelligent systems and computational intelligence, with application to pattern recognition, classification and diagnosis, data mining and knowledge extraction; supervisor of 24 PhD students; leader or key researcher in more than 50 national and EU-funded research projects; author or coauthor of approximately 180 refereed papers, of which more than 60 in international journals, with about 1000 citations; chairman of a many international scientific conferences; invited speaker/author in many conferences/books and journals; associate editor of scientific journals and reviewer for a large number of scientific journals and conferences; evaluator of research proposals for national and international organisations; book evaluator for Greek and international publishers; has served as scientific consultant and member of advisory/evaluation committees concerning large computer system projects in various ministries and public sector organizations; has acted as a Director of the Computer Science Section of the School, as a Coordinator of the Graduate Studies Program of the School; is a member of the Technical Chamber of Greece, IEEE Computer Society, IEEE Computational Intelligence Society, IEEE Systems, Man, and Cybernetics Society, and the Association for Computing Machinery (ACM).