

---

## Editorial

---

### Sandro Nižetić

LTEF-Laboratory for Thermodynamics and Energy Efficiency,  
Faculty of Electrical Engineering,  
Mechanical Engineering and Naval Architecture,  
University of Split,  
Rudjera Boskovicica 32,  
Split, 21000, Croatia  
Email: snizetic@fesb.hr

**Biographical notes:** Sandro Nižetić is an Associate Professor at the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture (FESB) at University of Split (Croatia). He obtained his PhD at University of Split at 2009 and was the youngest PhD in the history of the Faculty and received state prize for the research for 2016. He served as the vice dean for the research at faculty of FESB and also as the deputy minister in the Croatian government. He is Head of the Laboratory for Thermodynamics and Energy Efficiency (LTEF-Laboratory) at University of Split.

---

It is more than clear that the general impact of humanity is complex and certainly followed by numerous intertwined factors. Thus, there is no doubt that the population will experience, and has already experienced, unpredictable scenarios that cause devastations, leading to economic and environmental issues. Energy related issues are in the epicentre of the 21st century and directly linked to the global economic growth and environmental footprint of the population. Evaluation and analysis of novel, or existing, energy systems, processes and components is crucial in order to be able to ensure increase in efficiency and to reduce any harmful impact to the environment. With respect to the previous issue, an exergy analysis represents a precise and flexible approach for efficient evaluation of energy systems, components and processes and evaluation of their impact to the environment. From a thermodynamic point of the view the exergy term is complex as it is linked to energy and entropy, but on the other side it is a precious engineering tool that ensures a necessary integral approach that should be applied in order to ensure a proper and correct analysis of different engineering issues and tasks. Finally, the role of exergy is undeniable and it should be a starting point for any analysis, and in some sense it is the foundation of sustainability.

This special issue is related to selected papers from the *9th International Exergy, Energy and Environment Symposium (IEEEES-9)* that was held in Split, Croatia on 14–17 May, 2017. The IEEEES-9 conference was multidisciplinary, where diverse engineering disciplines were represented. The conference primarily focused on hot topics from the field of exergy and energy based analyses with a clear connection to economic and environmental issues as crucial issues for the population. The IEEEES-9 conference was a successful event with more than 200 presentations and over 250 delegates from

almost 40 different countries. The latest research findings were elaborated and presented, followed by attractive discussions raised by researchers, professionals and engineers. The applied research was the focus of the discussions with particular stress on the role and importance of exergy in different engineering applications. Novel energy solutions were also discussed as well as the general improvements of existing energy technologies that will ensure a sustainable future and their development.

Finally, I would like to express my sincere appreciation to the keynote and invited speakers, to the technical program committees, session chairs, reviewers and to the valuable authors for their general contribution, as well as to the complete IEEEES9 organisation team who made this event possible. Special thanks to the conference founder Dr. Ibrahim Dincer for his general support and efforts during the conference preparation and organisation. Dr. Sandro Nižetić would also like to acknowledge the general support provided by the Faculty of Electrical Engineering, Mechanical Engineering and Naval Architecture together with the University of Split.