4th International Symposium on Sustainable Mobility and Renewable Energy Sources

Green Mobility and Renewable Energy Sources Applications: Integrating Technologies, Infrastructures and Business Model Innovations for urban and rural development

Democritus University of Thrace

31st May – 1st June 2017

Xanthi, Greece

The Symposium Objectives

Transportation, once considered as a driver and an indicator of economic growth now, is often referred to as one of the largest sources of air pollution and global warming. Especially in an increasing urbanization environment there is a need for an integrate approach to technologies, infrastructures and business models to lead innovative solutions for enhancing sustainable mobility. Transport systems that are resource-efficient, climate- and environment-friendly for the benefit of all citizens, the economy and the society are required to sustain a healthy environment.

Renewable energy technologies can at the same time be successfully integrated into buildings or industrial developments reducing the CO_2 emissions and/or creating competitive advantages by reducing energy costs. The integration of Renewable Energy into large supply chains within both rural and urban economies (i.e. agriculture, forestry, manufacturing tourism etc) call for experimenting and implementing innovative business models that can contribute to the transformation of our economies to closed loop systems. Circular economy principles promise opportunities for industry/business but it also involves practical implications.

The 4th International Symposium on Sustainable Mobility and Renewable Energy Sources focuses on the themes of Intelligent and Smart Mobility and Renewable Energy Applications investigating the following angles: Technological Innovation for Sustainable Transportation; Renewable Energy Generation; Business Model Innovation within a Circular Economy framework.

Technological Innovation for Sustainable Transportation– innovation and trends in technology and their integration in the urban environment

Over the past two decades, there have been major changes in the transportation sector. Enabled by advances in embedded computing and power electronics, it has become possible to implement complex-yet-reliable powertrains and advanced engines.

Innovation on equipment and systems for vehicles, aircraft and vessels makes them smarter, more automated, cleaner and quieter, while reducing the use of fossil fuels. Hybrid and electric vehicles were once considered niche products, and they are rapidly becoming mainstream.

Innovation on smart infrastructure solutions deploys traffic management and information systems, advanced traveller services, efficient logistics, construction and maintenance technologies.

Technology is rapidly turning towards increased connectivity and autonomy: travellers already have access to sophisticated route planning systems, and most high-end passenger cars have a degree of partial autonomy in the form of 'Advanced Driver Assistance Systems' (ADAS). As well as progressing towards higher levels of autonomy.

Current research is exploring the technologies required for a wider view of personal transportation and movement of goods that is mode-agnostic and integrated, while providing an excellent consumer experience.

Renewable Power Generation –integrated power generation systems

Technological innovation on renewable technologies progresses the efficiency and cost of renewables to become a competitive alternative to fossil fuel power generation.

The electrification of vehicles sets great pressure on power generation and networks of distribution. Innovative schemes of locally-produced electricity are now well established in several countries. The challenge of storage, management and integration in the grid providing stable energy when and where it is needed is still a challenge.

Integrated RE applications imply a new paradigm for urban and rural development. Taking into account the needs of local economies RE provide a way to capitalise investments and create more competitive economies.

Management systems to control and manage the distributed power generation, information system driven services analysing and managing power distribution among different users, power generation and management policies, extended and standardised infrastructure, storage systems, fast and safe rechargeable batteries are just few areas that are involved in the sectors of sustainable transportation and sustainable industrial/business development.

Business Model Innovation - utilisation of resources

Business models open substantial opportunities for enhancing the sustainability of transportation, such as: (i) Providing incentives for reducing externalities of value creation through performance contracting or trading of emission rights; (ii) sharing transportation assets or networks, e.g. car-sharing, ridesharing, public transportation or intermodal integration (e.g. web-based travel-information and booking systems); (iii) using IT-driven services for enhancing the efficiency and reducing emissions caused by transportation; (iv) provide alternative ways of generating revenues, reducing the upfront cost of capital investment or operational cost.

Renewable Energy within a Circular Economy offers industry and business new profit mechanisms, systems optimisation, and multiple value creation opportunities. Business driven studies based on product-level modeling demonstrate significant material cost saving opportunities for EU industry from circular economy approaches and a potential to boost EU GDP by creating new markets and new products and creating value for business. Companies are continually working to improve resource management. Plans and legislation are adopted to increase resource efficiency stimulating circular models and eliminating market barriers.

Despite evidence and public interest in those business models, there is little systematic research in business model innovation in sustainable transportation and Renewable Energy applications. Against

this background, the purpose of this strand is to identify systematic and effective approaches of business model innovation for encouraging the market uptake of sustainable transportation and Renewable Energy solutions.

In parallel it addresses whether there are any 'technology gaps' that are potentially limiting the exploration of sustainable transportation or Renewable Energy deployment, using as a driver for learning from the other two strands considering the current trends in technology, infrastructure and power generation to design innovative business models.

Call for Papers

Against this background, we are inviting researchers, managers, policy makers, administrators and other stakeholders to present work that is relevant for the systematic and effective approaches of technology and business model innovation for enhancing of sustainable transportation and renewable energy applications to achieve resource efficiency. We will give special priority to contributions which advance the interaction of business and technology in innovative business models. We will evaluate papers based on:

1. their contribution to the conference key theme,
2. conceptual rigour,
3. the soundness of evidence and analysis,
4. potential impact on knowledge and decision making.

We welcome papers from multiple disciplines not only from engineering, managerial and economic disciplines, social sciences or public policy. Papers should make a systematic contribution, based on theory, and/or sound quantitative or qualitative empirical research.

Important Deadlines

Submission of abstracts: February 24th to March 23th, 2017
Acceptance Notification: March 31, 2017
Full paper submission: May 08, 2017

For general and technical inquiries, and abstracts/ papers submission, please send us an email at: sustainable_mobility_2017@ntu.ac.uk

or visit our websites:

- https://www4.ntu.ac.uk/nbs/
- http://duth.gr

DEMOCRITUS UNIVERSITY OF THRACE

NOTTINGHAM BUSINESS SCHOOL
Nottingham Trent University

Registration is NOW OPEN at: : https://goo.gl/forms/bIWNRJnVXPcPAZfF3

Registration and abstract submission by Thursday 17:00 (CET), 23rd March 2017.

Symposium Registration Fees payable by Monday 17:00 (CET), 8th May 2017, with full paper submission.

Symposium Fees

Symposium Registration Fee: **150 Euros**
Discounted Registration Fee for PhD students: **80 Euros**
Student Attendance only Fee: **20 Euros**
Gala ticket: **25 Euros**

Account Name: Special Account of Research Funds
IBAN: GR71 0172 3520 0053 5204 5052 151
Currency: EURO
SWIFT CODE/BIC: PIRBGRAA
Bank Name: PIRAEUS BANK SA

Or

Through EasyPay (you will need to register first)
https://www.easypay.gr/SpeAccResFund.pay?lang=2

Please make sure you include the following reference to your payment
Ref: Project Id – 81867, 4th International Symposium on Sustainable Mobility and Renewable Energy Sources

Submission Details and Format

Format of the abstract: extended abstract of 500 words, describing research problem, methods and key contribution. To submit your abstract register here: https://goo.gl/forms/bIWNRJnVXPcPAZfF3

Format of the full paper:
Manuscripts may be submitted electronically by e-mail attachment to sustainable_mobility_2017@ntu.ac.uk

The text file format should be word doc for PC, with Times New Roman, with font size 12 points, with 2cm margins, and formatted as A4 (or 8 x 11) paper size. Each page of the manuscript should be consecutively numbered. The manuscript should contain the article type (please see the aim and scope section of the Journal), title of the article, name(s) of the author(s), affiliation(s) address(es), abstract, 3-5 keywords, and will continue with the rest of the text. The text should be formatted double spaced. The text should not be interrupted by figures or tables. The text may be divided into sections with instructive headings, starting with Introduction and closing with Conclusion.

References and notes should be listed at the end of the manuscript in a separate page. Notes should be treated as the references. In the text references and notes should be numbered consecutively at

the time they first appear and should be given in brackets before punctuation marks (e.g. …free energy is given by Gibbs [1]: or Cahn [2], Haller et al. [3], and Cahn and Hilliard [4], and many others discussed…). In the references and notes list, a journal reference should comprise initial(s) and name(s) for all authors, name of journal, volume number in bold, first pages, and year in parenthesis. A book reference should comprise initials and name for all authors, full title, initial(s) and name(s) of the editor(s) if applicable, publisher, place of publication, page if applicable, and year in parenthesis. A note gives an explanation which the author(s) does not desire to include in the text. References may be grouped under the same number, in this case they divided from each other by semi-columns (;). A note may also contain references. Styles for conference paper, patent, thesis, standards, and web addresses are given too. Examples:

1. D.J.Salley, A.J.Weith Jr, A.A.Argyle, and J.K.Dixon, Proc.Roy.Soc. (London) A203, 42 (1950).
2. D.H.Everett and J.M.Haynes, J.Coll.Interface Sci. 38, 125 (1972).
3. A.W.Adamson, Physical Chemistry of Surfaces, Wiley, New York p.7-10 (1982).
4. Since Γ is independent form the location of the dividing surface it is possible to dispense the geometric interpretation of excess quantities and formulate a suitable algebraic method; i.e. without explicit reference to a dividing surface. For both geometric and algebraic methods see also: R.S.Hansen, J.Phys.Chem. 66, 410 (1962); F.C.Goodrich, Trans. Faraday Soc. 64, 3403 (1968).
5. L.Jones, and D.Brown, Proc. Int. Conf. Systems Biology, Stockholm, Sweden, pp.1-7 (2006).
6. F.Brown, British Patent 123456 (2004).
7. N.L.Abbott, PhD thesis, MIT (2005).
8. BS1234 (2006).
9. www.jestr.org

Word Limit: Papers should not be over 7000 words including references

Publication Opportunities

Selected full papers will be considered to be published in **a special issue of 'The Journal of Engineering Science and Technology Review' or an edited book** on the themes of the Symposium.

Organising Committee

Professor Pantelis N. Botsaris, Department of Production Engineering and Management, Democritus University of Thrace

Dr Kostas Galanakis, Programme Director, Nottingham Business School, Nottingham Trent University

Dr. Paraskevi Giourka, Department of Production Engineering and Management, Democritus University of Thrace

Paraskevi Dimitriadou, Department of Production Engineering and Management, Democritus University of Thrace

Scientific Committee

Eleni Apostolidou, Department of Engineering Technology of oil and gas and Mechanical Engineering, Technical Educational Institute of East Macedonia and Thrace

Professor Dimitrios Badekas, Department of Electrical Engineering, Technical Educational Institute of East Macedonia and Thrace

Professor Pantelis N. Botsaris, Department of Production Engineering and Management, Democritus University of Thrace

Assistant Professor Georgios Botzoris, Department of Civil Engineering, Democritus University of Thrace

Assistant Professor John Dermetzoglou, Department of Electrical Engineering, Technical Educational Institute of East Macedonia and Thrace

Dr Kostas Galanakis, Programme Director, Nottingham Business School, Nottingham Trent University

Professor Vasileios Profilidis, Department of Civil Engineering, Democritus University of Thrace

Dr Michael Zhang, Reader, Nottingham Business School, Nottingham Trent University

About Xanthi

Xanthi, the noble Lady of Thrace

Amphitheatrically built on the foot of Rodopi mountain chain, Xanthi is located in Thrace (Northern Greece), the crossroads of the Black Sea and the Aegean, Europe and Asia. **Kosynthos River divides the city** into the west part, where the old and the modern town are located, and the east part, the "Samakov district", that boasts a rich natural environment. Both parts still preserve their **traditional flair**, mesmerizing visitors with their nobility and magnificence. The cobbled narrow streets of the **Old Town** are decorated by gorgeous mansions, whose architectural style is a marvelous blend of local and ottoman architecture as well as Greek Neoclassicism architectural style. Together with the Byzantine churches and the picturesque squares, the city's Old Town could be said to be **an open museum**, the glory of which remains untouched through the years. The modern part of the city boasts a beautiful square with a Clock and the renovated tobacco warehouses including the famous "Π», on Kapnergaton str., which took its name from the shape of the 1890's edifices. **Don't forget to visit** the flea market with its distinctive local flavor taking places every Saturday at Zoagoras Square!

Get a deeper insight into the rich history of the area through your **visit to the Folk Art Museum**, the **Natural History Museum**, the Municipal Gallery and **Avdera Archaeological site**.
Colourful **cultural events** organized throughout the year provide another strong reason for visiting Xanthi; experience the party atmosphere of the renowned **Carnival of Xanthi**, standing out for its focus on the traditions and folklore of the region through a modern approach; the **Old Town Festival** in September, during which all events take place in the narrow paved streets of Xanthi's Old Town; the Youth Festival and River Nestos (Music) Festival in summer, particularly popular among young people.

Nature lovers will discover that Xanthi is an **unspoiled paradise**: the serpentine **river Nestos**, its Delta (the unique aquatic forest of Europe) and its passes, the Drymos Forest (or Haidou), **Lake**

Vistonida, the forest village of Erimanthos and Rodopi mountain range with its virgin forests and traditional villages are only some of this destination's gems. Among the mountain villages stand out the "Pomakohoria", a cluster of approximately 40 villages north of Xanthi, renowned for their cultural and architectural uniqueness.

Action fans and nature lovers will feel excited by the variety of possibilities offered: canoe-kayak in Nestos passes, hiking, cycling, bird watching, archery, off-road driving and horseback riding are only a few of the activities that someone can pursue in Nestos, Livaditis or Vistonida area.

Whether you are a history or tradition fan, a lover of nature, a gastronomy specialist wanting to indulge in delicious **local specialties** and eastern type sweets, or even an entertainment addict seeking to experience the city's vibrant night life, the region of Xanthi will definitely satisfy even the most demanding ones amongst you. Take the chance to discover this unspoiled destination and let your spirit free to **enjoy sounds and colours that will uplift your senses**.

City of Xanthi official site: **www.cityofxanthi.gr**

ACCOMMODATION

- **Elisso Xenia Hotel Du Nord**
  http://hotelelisso.gr/

- **Hotel Z Palace & Congress Center**
  https://zpalace.gr/el/z-palace/

- **Elena Hotel**
  http://elenahotel.gr/

- **Hotel Xanthippion**
  http://www.hotelxanthippion.gr/

TRAVEL INFORMATION

There are many ways to travel to Xanthi:

By Air to Kavala and Alexandroupoli and then by car to Xanthi.

- Direct flights from Athens: at least 2 flights per day during summer time (approximately 50 minutes)
- Direct flights from different European Cities

By Car/Bus from Thessaloniki

Useful Telephone Numbers:

Greece phone code: +30

VISA INFORMATION:

Greece follows the Schengen Agreement provisions and the subsequent acquis concerning short term visa issues. Countries applying the Schengen acquis in full (EU countries plus associated EFTA countries) follow a common visa policy for short-term stays of up to three (3) months in the Schengen area. The citizens of these countries are not subjected to border controls within the common area (airlines or other carriers require identification – I.D. Card or passport or any other piece of identification issued by a public authority).