Industrial Technologies 2014
SMART GROWTH THROUGH RESEARCH AND INNOVATION

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Megaron Conference Centre

Athens, Greece

April 9-11, 2014

Information package

February 2014

FORTH/ICE-HT

SPINVERSE Capital & Consulting

LMS Laboratory for Manufacturing Systems & Automation University of Patras

SEV Hellenic Federation of Enterprises

FUNDED BY THE EUROPEAN UNION – FP7

A GREEK EU PRESIDENCY EVENT, UNDER THE AUSPICES OF THE GENERAL SECRETARIAT OF RESEARCH & TECHNOLOGY (GSRT).

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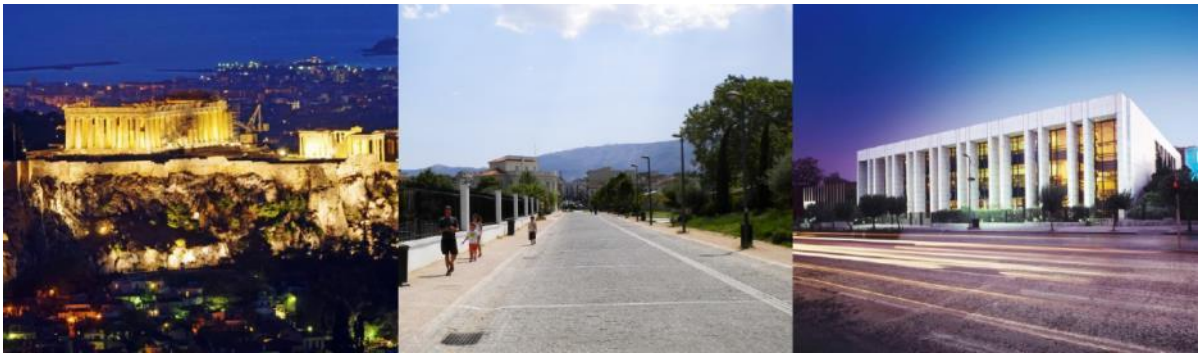
INDUSTRIAL TECHNOLOGIES 2014

The 2014 Industrial Technologies conference is organised in **Athens, Greece on April 9-11th 2014**. It is a Greek EU Presidency event, under the auspices of the GSRT, and follows on from the previous successful Industrial Technologies events in Brussels in 2010 and in Aarhus in 2012. The conference has received funding from the European Union Seventh Framework Programme (FP7/2007-2013) under grant agreements n° 608672 and 609321.

The Industrial Technologies 2014 is expected to attract 1000-1200 visitors over the 3 days, making it the largest networking conference in the field of new production technologies, materials and nanotechnology in Europe. The total number of conference passes available is limited to 1200 – thus early registration helps you ensure that you get your ticket!

More information about the event and the registrations are available on the website http://www.industrialtechnologies2014.eu



Facts

1. The event takes place in the **Megaron conference centre**. It is situated right in the heart of Athens and all public transportations have a stop at the area, named 'Megaron Mousikis'.

2. The conference programme includes **4 plenaries, 17 sessions, and 20 workshops** with high-level speakers from all the areas of NMP+B and commercialisation. The speakers will represent different regions, including the new EU member states, and will come from both industry and research. Also gender equality is taken into account.
    a. **Plenary sessions** are planned in the morning of each day.
    b. **Sessions** will take place on conference days 1 and 2.

c. **Workshops** are selected by the event organisers based on an open call. Most of the workshops take place on event day 3.

3. The **IndustryTech exhibition** is organised in parallel with Industrial Technologies 2014. About 50 exhibitors are expected; representing industry, research and policy.

4. The **Greek Showcase** will highlight excellent Greek research results and innovative companies presenting cutting edge technology and the products of the future.

5. The **FutureFlash** demo centre will showcase best practice examples of European research excellence in NMP with lively and interactive demonstrations.

6. The **Brokerage Day** will be organised on day 3 for matchmaking activities, e.g. building partnerships for future EU projects. More information is available on the event website.

7. There will be full **press programme** at the event, including press conferences with the plenary speakers.

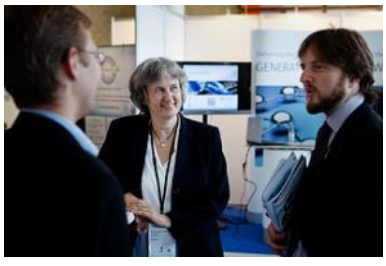
8. **NanoSpots – Nano Short Movie Festival**: Innovative, scientific and creative – the first nano short movie festival took place in Halle, Germany in 2012 and Nanospots will now present their best movies from the last 2 years.

9. **Social events** include a welcome reception at the end of the first day, and the Greek Night including Greek culture, dinner and awards at Zappeion on the evening of the 2nd day.

10. The following will be **awarded** during the event: The Best Projects 2014, the Best Poster 2014, and the the Most Innovative Exhibitor 2014.

11. Over a hundred research **posters** are presented throughout the event and the best one of them will be awarded with the Best Poster Award.

12. **The Best Project award** will be given out to the very best of all the projects launched under the EU Framework Programmes in the field of Industrial Technologies.



OBJECTIVES AND CONFERENCE TOPICS

Industrial Technologies 2014 aims at facilitating a multi-perspective view of European stakeholders on industrial innovation in Europe, including the Horizon2020 framework:

1. **European re-industrialisation through research and innovation in industrial technologies.**

2. **Growth through smart specialization and regional development,** pushing innovation policy further in the new member states – especially in the Balkan and Mediterranean countries.

3. **SMEs as motors of growth:** Analysis of enablers and barriers, deployment / commercialisation of NMP research results, the role of Key Enabling Technologies for innovation, and innovation through international and regional collaboration.

4. **New opportunities in Horizon2020 for Key Enabling Technologies.**

Plenary sessions

1. Re-industrialisation and smart growth through research and innovation in Europe
2. New technologies impacting everyday life
3. Improving Europe's competitiveness through regional development
4. Horizon 2020, NMP and Regional Funds Research Strategies

Parallel sessions

1. **Innovating products for regional growth in Europe**: Co-evolution of products, processes and systems
2. **Low-carbon energy** enabling **sustainable production and technology leadership** across Europe
3. Fostering EU regional competence and competitiveness through **innovation and smart specialisation**
4. **Producing better with less** – resource efficient factories
5. **Biotechnology** as a driver for **sustainability** and **new industries**
6. From a research **idea to a finished product** – experiences from large companies and SMEs in the value chain
7. **Advanced processes** for efficient, high quality and agile **manufacturing**
8. **Sustainable healthcare** made possible with advanced materials and nanotechnologies
9. Ensuring availability and security of **water and food** supplies
10. **Nanotechnology advances** and how nano-enabled products change our world and daily life

11. Integration of **industrial and materials research** communities along the **value chains**: The innovation way to future **sustainable products**

12. **Competence**-building, education and skills for industrial competitiveness

13. Innovative material technologies for **energy efficient buildings**

14. Advanced materials for **cleaner transport** - lightweight and low emission

15. Innovation and **up-scaling**: From clusters to demonstrators and pilot lines

16. **Safety** of advanced materials and processes

17. The **smart manufacturing systems** of the future: flexible, adaptive and safe

EXAMPLES OF HOT TOPICS

BIOTECHNOLOGY DRIVES SUSTAINABILITY IN THE NEW INDUSTRIES

No week passes without sustainable development hitting the news. The whole concept became a priority for the world's policy makers.
While biotechnology stands out among the broad range of technologies, promising a significant impact on sustainable development, especially in the fields of food production, materials and energy, most EU citizens do not realise that products made with industrial biotechnology are already in everyday use in their homes.

For instance, eukaryotic microorganisms (yeast) or enzymes are used to produce beer and wine as well as dairy goods such as cheese. However, more and more biotechnology is being applied to improve manufacturing processes and to solve environmental challenges:

- In bread-making genetically enhanced microorganisms produce baking enzymes to enhance rising, strengthen dough and prolong freshness of the bread, while reducing CO2 emissions in grain production, milling, baking and transportation.
- Chlorine is replaced with innovative biotech cellulose enzymes in the textiles production, allowing low-temperature, neutral pH processing while reducing both green gasses, as well as the non-renewable energy uses by 25%. As a result new fabrics have lower impact on the environment and the better performance.
- In synthetic rubber production isoprene from petroleum is now being substituted by BioIsoprene fermented by genetically enhanced microorganisms from sugars from renewable sources, resulting in the reduced use of petroleum and cutting of raw material cost. Likewise the novel enzymes convert starches and cellulose in biomass into sugars to produce biofuels while reducing the environmental impact.

Industrial biotechnology has achieved spectacular progress as a key enabling technology in the field of Bioeconomy, a sustainable economy that utilises bio-resources as an input to industrial processes to help industries become more environmentally sustainable. The Bioeconomy offers Europe a unique opportunity to address complex inter-connected challenges, while achieving economic growth by encouraging a transition to a low-carbon economy by 2050.

Attend the **'Biotechnology as driver for sustainability and new industries' session on 9th of April 2014** to join the discussion with **Per Falholt** of **Novozymes**, **Joanna Dupont** of **EuropaBio** and **Michael Metzlaff** of **Bayer** on achieving smarter and more sustainable bioeconomy.

NANOTECHNOLOGY AND NEW MATERIALS BRING HEALTHCARE TO THE NEXT LEVEL

According to the Transparency Market Research Nanomedicine Market alone is expected to reach over EUR 120 billion globally in 2019. However, already today nanomedicine enables monitoring, repair, construction and control of human biological systems at the molecular level, using basic nanostructured materials, engineered enzymes, and the many products of biotechnology.

With the societal grand challenge of ageing populations, the healthcare sector will continue to grow within Europe. R&D efforts in the sector staying in the continent should be ensured, while the potential of nanotechnologies and advanced materials supports more effective therapies in health care for major diseases:

- For instance, the treatment of diabetes could be transformed by using nanotechnology to create a 'smart delivery' system that regulates glucose levels from within the body. Which by itself means that nano-enhances medicine could one day replace the need for more than 350 million people around the world with diabetes to carry out finger-prick tests to monitor their blood sugar levels.
- On-demand vaccines are made possible with engineered nanoparticles – they are cheaper and easy to manufacture and could save entire populations in the affected areas in case of epidemic.
- Cancer diagnostics are to become more efficient with the help of a new generation of biosensors and medical imaging techniques with higher sensitivity and precision of recognition, thanks to nanotechnology.
- Similarly, drug detoxification is also another field where application for nanotechnology and novel materials has shown promising results in trails.

All things considered, the healthcare industry is in a state of rapid change as it is working to meet grand challenges of 21st century. Exploit the new opportunities in a fascinating and efficient way by attending the **'Sustainable healthcare made possible with advanced materials and nanotechnologies' session**, which deals with R&D, technology transfer and commercialisation of healthcare inventions, with particular focus on the impact on European regions and SMEs.

IS YOUR FOOD FUNCTIONAL?

From planting seeds to feeding people, industry is striving to achieve a better and healthier food supply to meet the demands of a growing world with help of new technologies and materials.
It's not a secret to anyone that in order to make sure that our daily groceries stay appetising and arrive at our table safely, industry creates innovative packaging solutions, enhanced with new materials that reduce cost and minimise the environmental impact.

Leading food and beverage manufacturers utilise innovations in diagnostics to help guarantee that food is not contaminated, and even at the very beginning of the process, at the farms, biotechnology solutions help protect crops and thus increase the food production. Did you know that food biotechnology, for instance, saved Hawaii's papaya crops from devastation by developing virus-resistant crops? Also that was told by International Food Information Council Foundation.
Hence, all in all, from planting seeds to feeding people, industry is striving to achieve a better and healthier food supply to meet the demands of a growing world with help of new technologies and materials.

Current expectation is that new technologies and materials will impact the entire food industry, revolutionising the way food is produced, processed, packaged, transported, and consumed. And this impact has become more apparent over the last few years, as several food and beverage companies are announcing plans to improve existing products and develop new ones to maintain market dominance. Space-age concepts like smart packaging, on demand preservatives, and interactive foods (which for instance allow consumers to modify food depending on their own nutritional needs or tastes) are now becoming an every-day reality.

Get a glimpse of the future at IndustryTech 2014 exhibition, organised by Spinverse in parallel with the conference, which will also showcase food-related innovations, before the hit the market shelf in your local grocery shop. Also the session 9, "Ensuring availability and security of water and food supplies – New business opportunities for European industry" relates to the topic of secure food – welcome to the conference to hear more!

FROM A RESEARCH IDEA TO A FINISHED PRODUCT

Session 6: From a research idea to a finished product – experiences from large companies and SMEs in the value chain

The development and marketing of a finished product in the value chain often varies dramatically between industrial sectors and also between large companies and SMEs In this session we will hear examples as to how a research idea is fostered within a large corporation and is then developed into a marketable product. Furthermore, SMEs will convey their own experience as to how a research idea conceived by an individual or by academic researchers

can eventually make it to the market creating wealth for its owners but also growth and jobs to the society as a whole.

Come to the Session 6 to hear Andrea Reinhardt, Management team member of Microtec and Sheila Hamilton, Technical Director of Teknek, among others, discuss ideas becoming products!

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The event schedule

Day 1: April 9th

Time	Alexandra Trianti Hall	Nikos Skalkotas Hall	Hall MC 2	Hall MC 3	Muses Foyer
9:00 AM	PLENARY 1: Re-industrialisation and smart growth through research and innovation in Europe				IndustryTech Exhibition
10:30 AM	Coffee Break, Exhibition Opening at Muses Foyer				
11:15 AM	Session 1: Innovating products for regional growth in Europe: Co-evolution of products, processes and systems	Session 5: Biotechnology as driver for sustainability and new industries	Session 3: Fostering EU competence and competitiveness through innovation and smart specialisation	WS1: NANOfutures	IndustryTech Exhibition
12:45 PM	Lunch Break				
14:15 pm	Session 4: Producing better with less – resource-efficient factories	Session 10: Nanotechnology advances and how nano-enabled products change our world and daily life	Session 6: From a research idea to a finished product – experiences from large companies and SMEs in the value chain	WS2: Manufuture	IndustryTech Exhibition
15:45 pm	Coffee Break				

16:30 pm	Session 7: Advanced processes for efficient, high quality and agile manufacturing	Session 8: Sustainable healthcare made possible with advanced materials and nanotechnologies	Session 9: Ensuring availability and security of water and food supplies – New business opportunities for European industry	WS3: EuMaT	IndustryTech Exhibition
18:00 pm	Welcome Reception at Megaron, IndustryTech Exhibition open Speakers' Dinner at Acropolis				

In addition, the posters will be displayed in Megaron for the whole conference day duration.
The Greek Showcase and the FutureFlash! innovation showcase will take place at the exhibition area.

Day 2: April 10th

Time	Alexandra Trianti Hall	Nikos Skalkotas Hall	Hall MC 2	Hall MC 3	Muses Foyer
9:00 AM	PLENARY 2: New technologies impacting everyday life				IndustryTech Exhibition
10:30 AM	Coffee Break				
11:15 AM	Session 12: Competence-building, education and skills for industrial competitiveness	Session 2: Low-carbon energy enabling sustainable production and technology leadership across Europe	Session 11: Integration of industrial and materials research communities along the value chains: the innovation way to future sustainable products	Session 17: The smart manufacturing systems of the future: flexible, adaptive and safe	IndustryTech Exhibition
12:45 PM	Lunch Break				

14:15 pm	Session 15: Innovation and up-scaling: From clusters to demonstrators and pilot lines	Session 16: Safety of advanced materials and processes	Session 13: Innovative technologies for energy efficient buildings	Session 14: Advanced technologies for cleaner transport – lightweight and low emission	IndustryTech Exhibition
15:45 pm	Coffee Break				
16:30 pm	PLENARY 3: Improving Europe's competitiveness through regional development				IndustryTech Exhibition
18:00 pm	Greek Night dinner at Zappeion				

In addition, the posters will be displayed in Megaron for the whole conference day duration.
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Day 3: April 11th

Time	Alexandra Trianti Hall	Nikos Skalkotas Hall	Hall MC 2	Hall MC 3	Hall MC 3.2	Hall MC 3.3	Hall MC 3.4	Hall MC 3.5	Crowne Plaza 2	Crowne Plaza 3	Muses Foyer
9:00 AM	PLENARY 4: Horizon 2020, NMP and Regional Funds Research Strategies										IndustryTech Exhibition
10:30 AM	Coffee Break										
11:15 AM	Industrial Technologies for Schools	WS5: Smart Specialisation	WS6: Factories of the Future: Capitalising on Results	WS7: Innovation Business	WS12: Self assembly & Nanocomposites	WS13: Raw Materials	WS14: Nano-science in the Southeastern Europe	WS15: Simulation / Forecasting	WS20: NANOREG	WS21: Materials – Nano	IndustryTech Exhibition
12:45 PM	Lunch Break										

14:15 pm	WS8: Buildings	WS5: Smart Specialisation (continues)	WS10: Nanomedicine	WS11: From Mass Production to Customisation and Personalisation: The New Era of Manufacturing	WS16: Graphene	WS17: Multiscale Modelling	WS18: Safety	WS19: Energy Consuming Industries	WS22: Energy	WS23: Additive Manufacturing	IndustryTech Exhibition
14:30 pm	IndustryTech exhibition closes										
16:00 pm	Industrial Technologies 2014 ends										

In addition, the posters will be displayed in Megaron for the whole conference day duration.
The Greek Showcase and the FutureFlash! innovation showcase will take place at the exhibition area during its opening.