

## Editorial

The global financial and economic crisis has again prompted reflections on how to prevent a crisis, how and with what measures to fight the consequences of the crisis, how to examine and analyze it, what the comparative advantages and weaknesses are in overcoming the crisis, whether it will help structural changes in the economy or just. This is obviously a multidisciplinary problem that must be addressed by a team of macroeconomists, skilled managers, politicians, advanced technology experts, sociologists, psychologists, financial experts, futurists, etc.

Of course, one would have to be naive to regard the crisis as something unexpected, a random phenomenon, 'force majeure', conspiracy, a struggle between the developed and undeveloped, rich and poor, etc. Possible solutions in a particular country will be considered depending on the position and characteristics of the country's economy: gross domestic product (GDP)/per capita, resources (natural, energy, human resources, level of education of the population, age of the population, water resources, energy sources, type of industry), the share of hi-tech technologies, the number of patents, innovations/per 1000 inhabitants, relationship towards the environment locally and globally, financial power of the state structure, the level of democracy, the level of organization of state administration, distribution of power between the political and intellectual elite, the influence of experts in the decision-making process concerning public affairs, the civic sector in public and political life, etc.

This was also one of the ideas for starting the international scientific conference MOTSP (Management of Technology – Steps to Sustainable Production) which is trying to integrate the ideas of *sustainable production*, relationship to the environment, environmental legislation, socially responsible behaviour of companies, the civic sector, and impact of new technologies, materials (composites, metal foams), nano technology, mechatronics and *production and organization improvement methods* (5S, Kaizen, Lean, SMED, Six Sigma, Supply Chain Management, Green Logistics, LCA/LCM), total cost estimation, cutting of costs, risk management, change management, reengineering.

The synergy of different or, at least, complementary approaches to the working out and resolving problems and represents also a mission of this conference. How to adopt procedures for selection of technology transfer that is part of the concept of BAT (Best of Technology) or Clean Technology, its technological and economic sustainability over a longer period represents a problem that requires a joint approach of experimental protection experts, legal experts, technology experts, economists, state and local government experts, experts in EU projects, participation of the civil sector and development of secondary and higher education.

Development should not move along the lines of capital investment, assignment of technology and know-how, ownership of foreign capital, with the required labour force being semi-skilled or lower level. Why? Because in the long run, the production plant, despite state incentive measures, will be relocated to another country, as soon as better conditions regarding business investment, lower taxes and stringent demanding working and environmental legislation are in force.

Where is the chance for smaller countries without significant natural resources, and with a transition and weak economy? In the development of a distinctive educational system, recognizing and motivating the best students, encouraging innovation already at the level of education, continuous production, in copyright and patent right protection, in informatization and intensive use of web technologies, profound deliberation regarding the concept of definition and implementation of clear objectives, comparative advantages, etc.

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These are noble objectives, aren't they? How to do more than stick to mere political slogans and catch-phrases, how to encourage such changes in the thinking of politicians, businessmen, scientists who will be pursuing development of required procedures, developing/adjusting new models, borrowing and adapting other people's experiences.

It seems necessary to go deep into the concepts of social values, in the preschool days' education process, linking with the media, where high on the value scale will be the concepts of efficiency, inventiveness, innovation, creativity, originality, motivation, universally human, national solidarity, team work, personal honesty versus rapid enrichment of individuals and entertainment value system, increase of the impact of aestheticized culture against 'yellowness' in media, soap operas, superficial, thoughtless, uncritical acceptance of external behaviour patterns, technology inside domestic industry.

In the articles selected for this issue the authors have tried to present the application of some of the top technologies in practice (*Rapid Prototyping* – in rapid manufacturing of prototypes), *FME*, *FMEA*, *Risk Analysis* in the simulation of events in an extrusion tool, *Lean* and *Kaizen* as typical Japanese organization technologies, application of *deterministic* and *evolutionary approach* (*Genetic Algorithm*) in the optimization of technological processes, selection of operations and operation sequencing (*web technologies: e-learning*), quantitative assessment of workpiece shape complexity (*entropy – theory of chaos*) and sociological relationship between responsibility, science and theory of sustainable development.

Socially responsible behaviour of companies and society is also reflected in the parts *Sustainable Production: Greener Warehousing and Green Supply Chain Management*, *WEEE Recycling Process* (collection and recycling of the electrical and electronic waste) etc.

The idealized goal of our conference is to encourage team and stratified research work, as a result of joint projects that would connect specific technologies, selection procedures and transfer of best technologies, adhering to the principles of sustainable production (LCA/LCM, Clean Production, Green Logistics, BAT, etc.). However, for the time being these are only fragments of the envisaged complex goal.

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