The International Academy for Production Engineering

NEWSLETTER

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1. From the President

Continuation

Dear Colleagues,

What has changed? Might we identify indicators of change? Why should determining our position be especially suitable right now?

Let me question these issues in this newsletter. Essential indications of this change are:

- World-wide growth in population.
- Falling market boundaries, global markets.
- Increasingly evident resource limits and measures being taken to increase resource efficiency.
- The environment and resource utilisation should be held in equilibrium.
- The Third World is entitled to education, economic growth and wealth.
- Training and knowledge are becoming the prerequisites for innovative growth and market leadership.
- The brain-power of the players is a determining factor in successful competition.
- An excellent education and efficient infrastructures are prerequisites for top performance in research and development.
- The choice of location for research and development will in future also be determined by the availability of knowledge and professional competence.
- The structure of both information and communication technologies has a lasting influence on the quality of knowledge and innovation.
- Knowledge-intensive production services lead to unique selling points and market differentiation.
- The scopes of performance on the way: Product idea – Product realisation – Product supply – Service provision is getting larger.

This is all significantly influenced by research and development in production engineering and is of great importance for the future expansion of societies and for the quality of life. It is therefore obvious, it is so-to-speak the foremost duty of an International Academy for Production Engineering that it engage self-critically with these indicators of change in order to define its own position. From this position can then be derived strategies and options for future action.

The economy of the world is growing, while commerce is growing with disproportionate strength. This is a great chance for all that participate in it.

For this means:

- more trade
- more growth
- more wealth

Wealth and growth are mutually dependent. And this is valid for all national economies, irrespective of their particular stage of development. However, a closer inspection soon reveals that this cycle will only be accepted for the long term and will only be sustainable if the following is realised:

- more growth with less resources or
- with new resources or
- with long-lasting resources or
- with renewable resources that generate themselves or
- with a higher resource efficiency – and in every case simultaneously
- conserving the environment.

Such issues can only be solved with technology. They can never be brought to an ethically defensible solution by means of strategies involving the abandonment of any part of the human race. Within the scope of action just described, I do see three basic options, which do also apply to CIRP, that are obvious

1. Preservation of the right to play.
2. Adaptation to future needs.
3. Active creation of the future.

Whether we want to or not: the International Academy for Production Engineering must hold a clear position in this field and define its own standpoint. I believe we have to seek our own strategies for action in options 2 and 3. Proceeding from the above-mentioned parameters, first we have revised and sharpened the vision as well as the mission of the Academy. You will find the vision and the mission statements prominently stated on the website. They read as follows:

Vision of CIRP

To promote research and development among its members from academia and industry, to contribute to the global growth and well being of society.

Mission of CIRP

To develop the highest level international network of eminent researchers and industrialists for the purpose of marshalling their knowledge and insights.

The vision derives from the strengths that our academy has already realised today. Obviously, this vision puts considerable emphasis on our present focal points such as they were envisaged by our founding fathers:

- basic research in production engineering and
- the development of an international scientific culture for production engineering.

Yet the vision in its present form implies more as well; it encompasses a larger whole. The fundamental extension of this is the strategic aspiration to discuss one's own work responsibly, in the larger context of the growth and wealth of society as well. But growth and affluence can only flourish when humanity has reached a state of well-being. And so, in the second part of the vision, questions concerning the environment and resource conservation are also addressed.

The mission builds on the personalities of our membership from industry and science and emphasises explicitly the network-character of our academy. Together, both are very appropriate organisation elements for implementing our vision.

Vision and Mission statements give as a wide framework to generate a long term and medium term strategy as well as to derive short term actions. The right strategy for the further development of the Academy, however, must be borne by all of its members. For this reason, we created an additional working structure for the general assembly in Manchester. We call this

RESEARCH TRACKS

with which we can discuss questions of strategy. So I will be happy if you can help, with active contributions and by means of an active engagement in this process of discussion, to develop a strategy for the future that is acceptable to all members. We have a workshop planned to be held in Dublin middle of June to prepare the workshop. I let you know more details after the workshop took place.

One thing is certain: the strength of CIRP has always laid in the fact that adaptations and changes have been borne by all of us mutually, and that from this spirit active collaboration has been developed. This must remain so in the future, especially in the case of a working academy organised as a network and built quite essentially upon the voluntary cooperation of its members. Perhaps however, is it feasible to preserve the old principles and nevertheless to realise that which seems necessary today in addition, step-by-step and carefully.

Professor Fritz Klocke

2. Spotlight

‘Dinosaur’ Professor Gideon Levy receives first SME's Additive Manufacturing Achievement Award

The Rapid Technologies and Additive Manufacturing Community (RTAM) of the Society of Manufacturing Engineers (SME) presented Prof. Dr. Gideon Levy the RTAM Industry Achievement Award at the RAPID 2008 Conference and Exposition on May 20.

The award recognizes achievements that have been implemented or deployed in a commercial/industrial environment. Winners are selected with consideration for the scope and scale of benefits realized and the potential future impact their work will have on the industry.

“The goal of the award is to acknowledge the development of new technologies, materials and processes, or the creative application of existing technologies to solve problems and create new opportunities,” said Todd A. Grimm, vice chair of SME’s RTAM Community. “It is meant to honor the unsung heroes who work tirelessly behind the scenes and whose names and faces might not be as well known as others within the industry.”

Prof. Levy is head of Inspire AG’s Institute for Rapid Product Development (iRPD). When it was affiliated with FHS St. Gallen-University for Applied Sciences he led a team in the development of new, groundbreaking selective laser sintering materials. In doing so, he addressed key barriers, which resulted in the greater utilization of the technology. Users within the industry are constantly demanding more and more quality materials. Levy’s team answered that call by making advances that delivered a combination of processing characteristics and quality.

As a member of SME and a CIRP Fellow dr. Levy has a Masters of Science degree in control engineering and a Doctor of Science degree in Manufacturing Technology. He holds 20 patents and has published 150 scientific and technical articles. He was the 2007 recipient of the prestigious VR@P award in the field of virtual rapid prototyping and was named one of Time-Compression Technologies’ 25 Most Influential People in Rapid Manufacturing.

This surprise came just 6 weeks after he had received at the 3D USG Costa Brava CA, “SL Dinosaurs Award”. This award of the 3D Systems North American Stereolithography Users Group honors champions who had envisioned an industrial revolution. Dinosaurs stay up nights and weekends to unresolved problems with a passion for the long haul.

4. CIRP Journal of Manufacturing Science and Technology (CIRP-JMST)

Aims and Scope

The *CIRP Journal of Manufacturing Science and Technology* (http://ees.elsevier.com/cirpj/) publishes fundamental papers on manufacturing processes, production equipment and automation, product design, manufacturing systems and production organisations up to the level of the production networks, including all the related technical, human and economic factors. Preference is given to contributions describing research results whose feasibility has been demonstrated either in a laboratory or in the industrial praxis. Case studies and review papers on specific issues in manufacturing science and technology are equally encouraged. The Journal has been established by CIRP, the International Academy of Production Engineering to meet the needs above. In addition the CIRP has appointed an Editorial Board of Fellows of the Academy which forms a team of highly recognised international experts in the field. The intention is to establish a forum for publishing the best, most innovative research in the field and to this end the journal will publish both in-depth versions of the best papers from CIRP conferences, whilst at the same time, welcoming original contributions from authors worldwide. The main goal is to contribute to the further development of the Science and Technology of Manufacturing which is of fundamental importance of the future.

Structure of the Editorial Board

Honorary Editorial Board: CIRP Presidents (including the acting President and all the former ones).

Editor-in-Chief: appointed by the CIRP Council, responsible for the scientific level of the Journal, for sending the manuscripts to the Publisher in due time, and for keeping contact with the Publisher.

Associate Editors: The Chairmen and Vice-Chairmen of the STCs in the specific year. They are expected to select the appropriate members of the Editorial Board for reviewing within one week upon receipt of the assignment from the Editor-in-Chief, to be in contact with the reviewers, to harmonise the comments received and to propose a final decision for the Editor-in-Chief.

Editorial Board: CIRP fellows who engage themselves to review the papers assigned to them within four weeks from the date they have accepted the invitation to review.

Guest Editors: e.g., the organizers of a CIRP Conference to which a special issue is dedicated.

The work of the Editorial Board is supported by the Elsevier Electronic Submission (EES) system of Elsevier.

Some important details from the contract with Elsevier

Four issues of the Journal will be published yearly, with a page limit of 500 for the four issues together. Free first year subscription is offered for the members (printed and on-line), after that 50 euros/year / individual subscription. CIRP receives royalty. The contractors cooperate for putting CIPR-JMST to the list of journals with impact factors, within the shortest period of time.

Content of the first issue

1. Klocke, F.: Preface
2. Chryssolouris, G.: A Perspective on Manufacturing Strategy: Produce more with less
3. Bouzakis, K.: FEM-Supported Simulation of Chip Formation and Flow in Gear Hobbing of Spur and Helical Gears
4. Natsu, W.; Ooshiro, S.; Kunieda, M.: Research on Generation of Three-Dimensional Surface with Micro Electrolyte Jet Machining
5. Jeswiet, J.; Geiger, M; Engel, U.; Kopp, R.; Kleiner, M.; Bariani, P.; Bruschi, S.; Duflou, J.; Neugebauer, R; Groche, P.: Metal Forming Progress since 2000
6. Altintas, Y.; Stepán, G.; Merdol, D.; Dombovari, Z.: Chatter Stability of Milling in Frequency and Discrete Time Domain
7. Ueda, K.; Takenaka, T.; Fujita, K.: Toward Value Co-creation in Manufacturing and Servicing
8. Hoffmann, J.; Weckenmann, A.: Electrical Probing for Dimensional Micro Metrology

If the authors submit their final versions by the deadline required by Elsevier, the first issue will be available before the CIRP General Assembly in Manchester, this year.

Special Issues in preparation

Main sources of papers for publishing in the new journal are the CIRP, or CIRP-related conferences. The authors of the best papers will be asked to submit the in-depth versions of their papers to the Journal. These papers are, however, not exempted from the rigorous review procedure. Depending on the number and quality of papers, one issue can perhaps relate to even two conferences.

The preparations of the following special issues have been started (indicating the names of the conferences and the Guest Editor(s):

- *15th CIRP International Conference on Life Cycle Engineering* (Prof. Kara)
- *CIRP Design Conference 2008* (Prof. Van Houten)
- *CIRP Conference on High Performance Cutting* (Prof. Byrne)

Other conferences are also considered, like the *6th CIRP ICME International Conference* July 2008, the *CIRP Design* and *IPS2 Conferences* in 2009, the *Manufacturing Systems Conferences*, etc.

Leaflet

Thanks to Professor Klocke who sent us very expressive and high-level photos, a leaflet advertising the CIPR Annals and the CIRP-JMST is being prepared and will be ready for the GA in Manchester.

Prof. László Monostori
Editor-in-Chief, CIRP-JMST

5. From the secretariat

Chantal Timar-Schubert *Agnès Chelet*

New pins

There will be new (yellow) pins for the Research Affiliates this summer. Moreover a special new pin has been designed for the President. All the former Presidents will also be decorated by a Former President pin. New Corporate Members pins are still available at the Secretariat.

Voting online

For those fellows who have not voted for new fellows yet, please take a minute of your time to complete the voting. The procedure is very easy: Log in on the CIRP website and enter your access code on the page "Elections / Vote for new Fellows". Then you arrive on a single page with all information on the candidates and the Ballot for voting. All you have to do is just pushing the boxes of your choice.

Corporate Members

Corporate Members may have a second representative of their company in CIRP. To record a colleague within our ranks you just need to forward the secretariat by email the name, title, position and phone of the second representative.

CIRP directory and website

Not all members entered the three keywords reflecting their activities in the CIRP directory. Please have a look and complete it. And for those who have not registered on the website this might be the right time to do so. You can upload you picture (Go to "my Profile : Update"). Don’t wait to long!

The last numbers of online registrations are:

Fellows:	133 out of 144
Associate members:	117 out of 138
Honorary Fellows:	20 out of 28
Fellows Emeritus:	44 out of 110
Corporate members:	79 out of 144
Invited member:	1 out of 1
Research Affiliates:	59 out of 59

5. Meetings, Conferences, Seminars

The CIRP and CIRP sponsored conferences are listed in the table in chronological order. There is a hyperlink from the conference name to the website providing all details about that particular conference.

2008	Conference	Place
28-29 May	7th conf on High speed machining	Darmstadt, Germany
26-28 May	41st CIRP Conference on Manufacturing Systems	Tokyo, Japan
12-13 June	3rd International Conference on High Performance Cutting	Dublin, Ireland
7-9 July	9th ASME Engineering Systems Design and Analysis Conference	Haifa, Israel
23-25 July	6th CIRP Intl Conference on Intelligent Computation in Manufacturing Engineering,	Naples, Italy
3-4 September	1 st International Conference on Process Machine Interactions	Hannover, Germany
16-17 September	11th CIRP Conference on Modeling of Machining Operations	Gaithersburg, USA
21-23 September	2nd CIRP Conference on Assembly Technologies and Systems	Toronto, Canada
1 October	CIMEC	Nantes, France
1-4 October	6th International Conference "THE" Coatings and 3rd International Conference on Manufacturing Engineering - ICMEN	Kallithea-Halkidiki, Greece
8-10 October	The 7th International Meeting IDMME	Beijing – China
20-22 October	5th International Conference on Digital Enterprise Technology - DET	Nantes, France
20-23 October	2nd Int Conf. On Innovative Cutting Processes And Smart Machining	Cluny, France
5-7 November	TRIZ Future' 08	Enschede, Netherlands

2009	Conference	Place
1 January	42nd CIRP Conference on Manufacturing Systems	Grenoble, France
26-27 March	CIRP Tolerancing Conference	Annecy, France
30-31 March	19th CIRP Design Conference	Cranfield, UK
1-2 April	CIRP IPS2 Conference	Cranfield, UK)
2-3 April	Intl Conference on Burrs-Analysis, Control and Removal	Kaiserslautern,Germany
7-8 May	12th CIRP Conference On Modeling Of Machining Operations	San Sebastian, Spain
1-4 June	5th IWC TQM Conference	Belgrade, Serbia
18-21 June	5th Intl Conf. on Design And Production of Dies/Moulds	Kusadasi Aydin, Turkey
16-18 September	3rd CARV Conference	Munich, Germany

2010	Conference	Place
1 January	43rd CIRP Conference On Manufacturing Systems	Vienna , Austria