



**INTERNATIONAL INSTITUTION FOR PRODUCTION
ENGINEERING RESEARCH**

CIRP NEWSLETTER

**edited by the Technical Secretary
Johan Meijer**

N° 19 - October 2001

9 rue Mayran - 75009 Paris - France

from the Editor

Dear colleagues,

In the last newsletter it was announced by our colleague Santochi that it was his last year as Technical Secretary and consequently that issue was the last newsletter edited by him self. The new Technical secretary, at that time unknown, should continue and improve this publication.

I will take the opportunity to thank professor Santochi for his pioneering work by establishing this publication. After 18 issues from his hand it will not be easy to fulfill his high expectations by further improvement.

But as we all know, CIRP is a wonderful organisation, driven by volunteers. In that view I feel free to ask you for your contribution to make this really a newsletter for CIRP members by CIRP members. The next issue is scheduled for

April 2002

All your contributions are very welcome, preferably by e-mail, to the CIRP office in Paris or to your Technical secretary at address: j.meijer@wb.utwente.nl

Please consider that the deadline for contributions is:

March 15th 2002

Johan Meijer, Technical Secretary

Editorial from the President

CIRP celebrated its 50th Anniversary in a remarkable, unique atmosphere during the 51st General Assembly Meeting held in Nancy, France. With special thanks to our colleague the Secretary General Treasurer, M. Veron and his team, together with Chantal and Agnes from the CIRP secretariat, we enjoyed a marvelous, well organized and successful meeting.

We had the opportunity to recall and remember the first 50 years of our organization with thanks to Milton and Mrs. Shaw. Milton is the only member who joined the CIRP in its inauguration in 1952 and is still participating in our meetings and has recently published a new book on the subject of metal cutting. We were also honored by the participation of E.G. Thomsen in the meeting. Mr. Thomsen is probably the most senior of the CIRP emeritus members who participated actively in our technical discussions, sharing the wealth of knowledge of his 95 years. Many other Emeritus Members, in particular Eugen Merchant and Helen, who still contribute to our Society, are mentors and guides for our younger and older members who are active in research, development, tutoring and manufacturing. The 50th Anniversary was an excellent opportunity to both honor and show our appreciation to these members and to wish them many more happy and healthy years within the CIRP society.

This CIRP Newsletter was founded by the initiative and foresight of our colleague Marco Santochi who performed an excellent job as our technical secretary in the past decade. The 18 issues of these Yellow Pages are used as an Internal and External source of information advising meetings, seminars, conferences, awards and all other CIRP relevant activities. We all have to also thank Marco for leading our paper publication procedure into the electronic communication area. We were happy to hear during the last General Assembly that all of our contributions and papers were transferred to Hallwag (now Colibri) for publication, either by e-mail as PDF files or by CD. This has greatly improved the quality, accelerated the procedure, made communication more efficient and guided us into the technical efficiency of the 21st Century.

This new issue of our CIRP Newsletter is the first edition to be edited by our new Technical Secretary, Johan Meijer. We would like to take this opportunity to wish him every success in his new role where he will be responsible for our technical activities, including the coordination of the work of our STC's and reporting to the Liaison Committee. In the global world of today, the task of our Technical Secretary is of great importance in strengthening the cooperation between the CIRP, Industry and other International bodies together with the recruitment of new Associate Members.

Today, thanks to our past president, Rik Van Brussel, we have now been approved by the Citation Index, (ISI) which demands our adhering to stipulated guidelines in order to maintain our high standards. We would all therefore like to take this opportunity to thank Rik for his intensive professional achievements, not solely for including our Annals in the most authoritative reference in the world of manufacturing science improving our impact on the manufacturing world, but also for his marvelous work as president of the CIRP.

Editorial from the President

Today 1000 copies of our Annals are distributed principally amongst our members, libraries and various institutions. Contacts with other key bodies worldwide are being initiated, which will hopefully widen the impact of CIRP and attract potential new members who will contribute their experience and knowledge to our Organization. We have already been approached by the President of the SME in the U.S.A. who has shown an interest in publishing our Keynote papers which will make them accessible to more than 50,000 members through the SME website.

Today we are actively looking forward to welcoming new Invited Members from countries which are not currently represented in the CIRP and would ask our members to establish contacts with suitable professionals within our field.

Currently we are considering restructuring some of our STC's in order to keep up with the present changes within our research, development and manufacturing society. As an example of these changes, there has been an idea to form a joint group between the STC "A" and the Life Cycle Working Group. Interest has also been shown by STC"S" to include Nano technology and Micromachining in their activities.

The group of Associate Members has shown great interest in establishing clearer guidelines towards their activity within the CIRP. In order to improve collaboration and coordination between the Associate Members and the CIRP, a survey was distributed amongst our Associate, Active and Corresponding members. The first step will be to extend the duration of the Tuesday General Assembly Lunch to include a "Round Table" discussion and short presentation by STC's representatives and Associate Members. It is planned that the AMAG meeting will follow on the same day.

I am looking forward to seeing you all again in the January 2002 meeting which will be held in a new location in Paris. I would also like to take this opportunity to wish you all a Happy and Peaceful New Year.

Sincerely yours,

Rafi Wertheim
President 2001-2002

Awards

We are proud to announce that **Dr. Darek Ceglarek**, who has been recently elected as corresponding member, has been awarded by his paper entitled "Modeling Variation Propagation of Multi-Station Assembly Systems with Compliant Parts" He has received the 2001 Best Paper Award by the ASME Design Engineering Division. This award was granted to a single paper selected among all 64 papers in the area of Design for Manufacturing presented during the 2001 ASME Design Engineering Technical Conferences (DETC'01) in Pittsburgh, Pennsylvania.

This is the 2nd Best Paper Award that Darek has received for his work in the IE Department at the UW-Madison. Last year his paper, "Process-oriented Tolerance Synthesis for Multistage Manufacturing Processes," received the 2000 Best Paper Award by the ASME Manufacturing Engineering Division (MED).

Associate Members News

by Norbert Roth, Siemens AG

In the previous Newsletter, the President, Prof. van Brussel, announced some new ways to involve Associate Members of CIRP more deeply in the activities of CIRP. One first step in this direction was taken during the Associate Members Business Lunch on Tuesday when four CIRP Members who organized a CIRP-related conference during the last year presented a very comprehensive and fascinating personal view on the highlights of this conference.

Associate Members got a survey on new trends, developments and scientific results which most of them would not have had the time to collect otherwise. The effort of Prof. Y. Koren, Prof. J. Corbett, Prof. J.-P. Kruth and Prof. G. Chryssolouris in preparing and presenting a big amount of valuable information in a particularly interesting way was very much appreciated by the Associate Members.

This approach and other opportunities to give some input to CIRP from the Associate Members' side was discussed in the Associate Members Advisory Group AMAG: This group held a meeting chaired by the president, Prof. van Brussel, on Sunday afternoon before the GA 2001.

One item which was discussed more deeply dealt with the question how to improve the knowledge on the particular interests of Associate Members with regard to the working areas of CIRP, represented by the STC's and working groups, and how to get some information on other technical fields to be looked upon. It was decided to distribute a short questionnaire to all Associate Members which should cover these questions and which should help to provide an even more efficient involvement of the Associate Members for the next General Assemblies.

For comments or discussion about this report contact: norbert.roth@mchp.siemens.de

Meetings Seminars Conferences

Open and global manufacturing design
11-13 March 2002, Karpacz, Poland

XIII Workshop on Supervising and Diagnostics of Machining Systems.

Organized by the Wroclaw University of Technology, the Machine Tool Design and Manufacturing Systems Division of IPEA, CRAN Nancy and IPK Stuttgart.

Topics:

- Design methodology from concept to detailing
- Design of one of a kind of products
- Principles of intelligent design (axiomatic, general theory, conceptual design)
- Distributed systems for design and manufacturing
- Product life-cycle modeling, optimization and simulation
- Virtual Reality Applications
- Human activity in intelligent virtual manufacturing
- Virtualization of design processes machine tools, cells and production systems
- Intelligent Machining Systems
- Machine tools and manufacturing systems intelligence design
- Manufacturing system life cycle design
- Knowledge management
- Manufacturing design modularity
- Product and manufacturing design globalization
- Manufacturing planning global systems design
- Complex manufacturing design
- TQM systems

Chairman: prof. J. Jedrzejewski. Contact: jedrzej@itma.pwr.wroc.pl

Meetings Seminars Conferences

35th CIRP International seminar on manufacturing systems 13-15 May 2002, Seoul, Korea

“Manufacturing Technology in the Information Age”

Topics:

- New manufacturing paradigm
- Internet-based manufacturing
- Information integration in manufacturing
- Applications of information technology to manufacturing
- Manufacturing technology for information process equipment
- Integration of design and manufacturing
- Intelligent planning, scheduling and control
- Virtual manufacturing
- Manufacturing processes and machines for information technology
- Inspection and quality issue in information technology
- Agile and/or rapid manufacturing technology, machine and systems

Contact: Professor Jongwon Kim, Seoul National University

e-mail: jonkkim@snu.ac.kr

2002 International CIRP Design Seminar 16 -18 May 2002, Hong Kong

Topics:

- Design theory
- Web based design
- Design collaboration
- Methodology
- Teamwork
- Process and production planning
- Design principles
- Evaluation methods
- Distributed systems
- Life Cycle modeling
- Design for X
- Virtual reality
- Intelligent systems

Contact: prof. Mitchell M. Tseng, e-mail: design@ust.hk

Meetings Seminars Conferences

First International Conference on Design and Manufacture for Sustainable Development June 27- 28 2002 University Of Liverpool, Uk

This International Conference is dedicated to the holistic study and interchange of ideas on the theory, technology, tools, methodology for the entire product life cycle within the framework of sustainable development. This will embrace key topics including strategy, design, materials, manufacture, packaging, distribution, disposal, recycling and auditing.

Areas of interest

- Philosophy of and strategy for sustainable technologies.
- Design principles for sustainable development.
- Sustainable manufacturing technologies.
- Use of recycling/bio-degradable materials.
- Re-use and recycling design and technologies.
- Environmental/economic impact analysis for product and processes.
- Tools for sustainable product design.
- Measurement and auditing.
- Best practices and case studies.
- Impact of emerging legislation.
- Sectoral/consumer issues.
- International trends and future development.

Submission of abstracts: 30 November 2001

Full paper submission: 28 February 2002

Chairman: Bernard Hon Liverpool University

Contact: jbquinn@liv.ac.uk www.liv.ac.uk/sustain

Meetings Seminars Conferences

3rd CIRP International Seminar on Intelligent Computation In Manufacturing Engineering - ICME 2002 3-5 July 2002, Ischia (Naples), Italy

Topics:

- Manufacturing processes, machining, forming, casting and solidification, welding, heat treatments
- Process modeling and monitoring
- Design, simulation and modeling
- Assembly and disassembly
- Sensors and sensing techniques for manufacturing
- Process/Production planning and control
- Diagnostics and maintenance
- Automated inspection and quality control
- Concurrent/Simultaneous engineering
- Rapid and virtual prototyping
- Continuous, discrete and hybrid processes
- Distributed and co-operative production
- Intelligent machines, robots and systems
- Intelligent manufacturing systems
- Knowledge and data-base for IMS
- Holonic manufacturing systems
- Virtual manufacturing
- Dynamic scheduling for complex manufacturing
- Evolutionary and emergent computation for manufacturing
- Customer driven production
- Product life cycle management
- Factory design and integration
- Human factors in IMS
- Manufacturing applications of: expert systems, artificial neural networks, fuzzy and neuro-fuzzy models, multi agents, genetic algorithms, simulated annealing, hybrid approaches

Submission of abstracts: 30 November 2001

Submission of full papers: 31 March 2002

Contact: Prof. Roberto Teti,

e-mail tetiro@unina.it; Web Site: <http://www.icme.unina.it>

Meetings Seminars Conferences

2002 Japan- USA Symposium on flexible Automation
15- 17 July 2002, Hiroshima, Japan

Topics:

- Machine Tools and manufacturing Systems
- Manufacturing Process Control
- Nano or micro factory
- Concurrent Engineering
- Principles of Agility in Manufacturing
- Network-based Manufacturing
- Communication Networks and Software Systems
- CIM, SIS, SCM, E-commerce
- CAD/CAM/CAE
- Scheduling and Production Control
- Life Cycle Engineering
- Eco-Factory
- Reliability Analysis and Fault Diagnosis
- Sensing and Signal Processing
- Application of Neural Networks, Genetic Algorithms, Evolutional Computing, or Fuzzy Theory
- Human Factory in Manufacturing
- Mechatronics and Robots
- Autonomous Guided Vehicles and Transportation Systems
- Welfare and Medical Robots

Contact:

Dr. Takeshi Murayama, e-mail: jusfa02@hiroshima-u.ac.jp

Miscellaneous

ISO

CIRP has received the following ISO documents

- ISO/TC 29 N 2315 rev - Draft agenda ISO/TC 29 meeting
- ISO/TC 29 N 2316 F - Report of ISO/TC 29 Secretariat
- ISO/TC 29 N 2316 E - Report of ISO/TC 29 Secretariat
- ISO/TC 29 N 2317 E - Report of ISO/TC 29/SC2 Secretariat
- ISO/TC 29 N 2317 F - Report of ISO/TC 29/SC2 Secretariat
- ISO/TC 29 N 2318 E - Report of ISO/TC 29/SC4 Secretariat
- ISO/TC 29 N 2318 F - Report of ISO/TC 29/SC4 Secretariat
- ISO/TC 29 N 2324 - Report of ISO/TC 29/WG34 Secretariat
- ISO/TC 29 N 2326 - Report on work under Vienna agreement
- ISO/TC 29 N 2327 - Result of systematic review of ISO 237
- ISO/TC 29 N 2328 - Result of systematic review of ISO 2336-1
- ISO/TC 29 N 2329 - Result of systematic review of ISO 2336-2
- ISO/TC 29 N 2330 - Result of systematic review of ISO 2804
- ISO/TC 29 N 2331 - Result of systematic review of ISO 2935
- ISO/TC 29 N 2332 - Result of systematic review of ISO 3295
- ISO/TC 29 N 2333 - Result of systematic review of ISO 5407
- ISO/TC 29 N 2334 - Result of systematic review of ISO 10897
- ISO/TC 29 N 2335 - Result of systematic review of ISO 15488

Surfaces and their Measurement

Prof. David Whitehouse

This new title in the field of surface technology will be published in November. by Professor David Whitehouse from University of Warwick.

The book discusses new advanced techniques of surface metrology, enabling it to be applied to production engineering, semiconductors, electronics and optics, reaching down to atomic dimensions.

Publisher, Kogan Page Publishers, email: kpinfo@kogan-page.co.uk