



**INTERNATIONAL INSTITUTION FOR PRODUCTION  
ENGINEERING RESEARCH**

# **CIRP NEWSLETTER**

**edited by the Technical Secretary  
Johan Meijer**

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## from the Editor

Dear colleagues,

To be prepared for the General Assembly in San Sebastian you have received a lot of information and you have found this newsletter among all the paperwork.

In the last Newsletter I have asked for input from the membership, and here you see the result. It was mentioned by some colleagues that the Newsletter often was given away to colleagues to show what CIRP is, but it was not always clear what the aims are. For that reason this issue opens with "What is CIRP".

In the Liaison Committee it was decided to restrict the announcement of conferences to conferences sponsored by CIRP.

Apart from this paper version you can find this issue and all preceding ones at:

[www.cirp.net](http://www.cirp.net)

Please note that the next issue is scheduled for **October 2002**.

All your contributions are very welcome, you may send it to the CIRP office in Paris or directly to the editor at: [j.meijer@ctw.utwente.nl](mailto:j.meijer@ctw.utwente.nl)

Please consider that the deadline for contributions is **September 15<sup>th</sup> 2002**.

Johan Meijer, Technical Secretary

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# 1. What is CIRP ?

The International Institution for Production Research (CIRP) was founded in 1951 to bring together research workers studying the application of scientific methods to production technology. At present, CIRP has about 500 members representing some 40 different countries. The unique contribution of CIRP to manufacturing research is acknowledged by many of the world's leading companies and research institutes, who provide active support through the associate membership. Today, CIRP is turning its attention to the use computerized methods for manufacturing control, automation, robotics, interfacing and the computer-integrated factory of the future.

CIRP is organised in Scientific and Technical Committees (STC's) that are the groups responsible for coordinating the collaborative research.

The main activities are:

- Studying new techniques and technologies;
- Organising cooperative research projects, comparative testing, standardisation of methods etc.
- Collecting and analysing bibliographies to document the state-of-the-art in particular areas of manufacturing;
- Publishing synthesis reports on important technical problems;
- Organising seminars and meetings on specialist topics;
- Preparing internationally accepted terminology to aid understanding and promote more precise scientific definitions;
- Contributing to the work of the International Standardisation Organisation
- Surveying the state of the art of research being carried out different laboratories in the world;

The present Scientific and Technical Committees (STC's) are:

## **A: Assembly**

Techniques, processes and equipment for the assembly and handling of parts and their disassembly, including design for assembly and disassembly, process planning for economic assembly and application of industrial robots. New joining processes. Terminology and symbols used to describe assembly and handling operations.

## **C: Cutting**

Processes and techniques used to shape components by material removal (turning, milling etc.), including the processes of chip formation, the physical laws governing the wear of cutting tools and the factors influencing surface finish.

## **Dn: Design**

Conceptual and innovative processes in engineering design.

Design for economic and ecological manufacture, coordination with manufacturing.

Computer-automated systems and the integration of technological and economic methods.

## **D: Dictionary**

This STC has the responsibility for publication of CIRP dictionaries on Advanced Manufacturing Engineering. The dictionaries cover definitions and terminology for manufacturing processes, machines, tooling, materials and systems formulated by the other STCs

# 1. What is CIRP ?

## **E: Electro- Physical and Chemical processes**

Research into material removal processes of an electro-physical or chemical nature such as electro-discharge machining (EDM), electrochemical machining (ECM) and the use of high energy laser, electron and ion beams. Development of new non-conventional processes, rapid prototyping, metal powder sintering.

## **F: Forming**

Processes in which components are shaped by plastic deformation, including pressure joining and separation techniques such as stamping or shearing. Application of the theory of plasticity to industrial forming processes with reference to tribology and materials engineering aspects.

## **G: Abrasive Processes**

Research into material removal processes using hard abrasive grains such as grinding and finishing, the mechanics of grinding and the economics of abrasive processes.

## **M: Machines**

Design, manufacture and use of manufacturing equipment, including the study of performance-related factors, such as static and dynamic behaviour, efficiency and resistance to wear. Study of components like structures, guide ways, spindles, servo actuators, displacement transducers, sensors, CNC systems and adaptive control. Automation interfaces and control systems.

## **O: Optimisation of manufacturing systems**

Design for production, factory equipment selection and layout, numerical and adaptive control, application of computers to manufacturing, information technology and human factors in production engineering. Advising the other STC's regarding the optimisation of manufacturing systems. Education, training and Life cycle analysis.

## **P: Precision engineering and metrology**

Development and application of measuring techniques to be used for quality control procedures, involving the measurement of size, shape and positional relationships in manufactured components and assemblies. Research on Nanotechnology processes and equipment.

## **S: Surfaces**

Research into the geometrical, physical and chemical properties of the work piece surface in relation to function, production processes and metrological assessment.

## 2. From the President

### **“CIRP as a Leading Institution for Collaboration and Globalisation in Production Research”**

Dear Colleagues,

It is my pleasure and honour to update our friends both inside and outside the CIRP institution regarding recent developments, mainly on our collaborative and global activity. I am writing the introduction to this Newsletter under the heading “CIRP as a Leading Institution for Collaboration and Globalisation in Production Engineering”, following on from various recent events including two presentations in Chemnitz Germany at the international PKS (Parallel Kinematic Seminar) (April 2002) sponsored by CIRP, and the CIRP workshop in UK and Ireland (May 2002) on future direction for R&D in manufacturing.

The globalisation of CIRP is emphasized by, amongst others, the new locations of General Assemblies and the number of members from new and developing countries. During the upcoming summer, CIRP is going to conduct the General Assembly for the first time in Spain, in San Sebastian on the Atlantic Ocean coast. We also decided to hold one of our next General Assemblies in Turkey. These two new locations reflect CIRP's goal, already defined in 1951, of creating and acting as a worldwide organization in order to accelerate and amplify the successes in collective international research and development in the field of production engineering.

During the last January meetings we elected two new additional Invited Members from Portugal and Mexico as well as a new corresponding member from Brazil. Today, members from 42 countries are represented and active in our institution. This follows the aims of our institution to be more global, better known and active in new and developing countries. Our members have initiated further contacts in research and education from Bosnia, Chile, Columbia, Russia, Saudi Arabia and Slovakia. This may result in spreading CIRP's collaborate work and international activities.

The membership situation was raised during the last council meeting whilst stressing the average age of our members (we have 105 retired honorary and emeritus members out of a total of 523). Questions were raised concerning the possibility of raising the number of corresponding members (125) and if it is worthwhile to recruit new young researchers and to raise the number of active members per country (15). These topics could be discussed during our upcoming meetings.

The activity of CIRP members in national, international and global conferences, seminars and research programs was intensified during the last few years. The enclosed figures give an example from my recent presentation during the PKS (Parallel Kinematics Seminar) in Chemnitz. The first chart demonstrates the well organized and established CIRP organization as described in this Newsletter by our technical secretary.

## 2. From the President

The second chart shows the various CIRP activities emphasizing the collaborative research network. During the PKS, our past President Prof. Van Brussel, the Vice President Prof. F. Jovane, many other CIRP Members and myself were active in the presentations and discussions of the collaborative work and the global research and development directions. This activity is characteristic and corresponds directly to the goals and views of our institution. The meeting of CIRP on Research and Development in Manufacturing on May 3<sup>rd</sup> 2002 is another example of the interrelations in our society between the members and others for the benefit of the manufacturing world. Many other seminars, conferences and meetings initiated by our members show a similar picture.

In the current Newsletter you will find a report from our AMAG (Associate Members Advisory Group). We are all looking to improve the collaboration and collective work with our Associate Members and to intensify their activities. The Council and the Liaison Committee agreed to modify the Associate meeting during the General Assembly by adding a short session on Tuesday morning before the Associate Member Luncheon with a continuation with the AMAG meeting directly after lunch. This should enable more of our Associates to participate and enable other CIRP members to take part in the various activities and accelerate collaborative work. It could also improve the exchange of information within our society.

The council and Liaison Committee's proposal to use English as the official language in our oral paper presentations and our annals have strengthened the CIRP's global image. It was mentioned that this has now been accomplished during our meetings and reflects the worldwide tendency, which is symbolic of our global nature.

The publication of CIRP's keynote papers on the SME Internet website has already been established. During the first quarter of 2002, more than 400 hits per month on the SME / CIRP web page were monitored. This new option to spread our knowledge, together with the acceptance by the ISI citation index, can help us to continue our negotiations with other publishers in the world regarding the publication of our keynote and discussion papers in order to bring the CIRP achievements to all the corners of the world.

In the upcoming GA we are going to carry out for the first time the micro, nano - technology working group meeting, which will include a paper session of 10 selected presentations and a working group meeting in Part II. This follows the request to update our activity by including new emerging topics of common interest by various STC's reflecting also research and innovation in the manufacturing world of the 21<sup>st</sup> century.

Hope to see you all in San Sebastian.

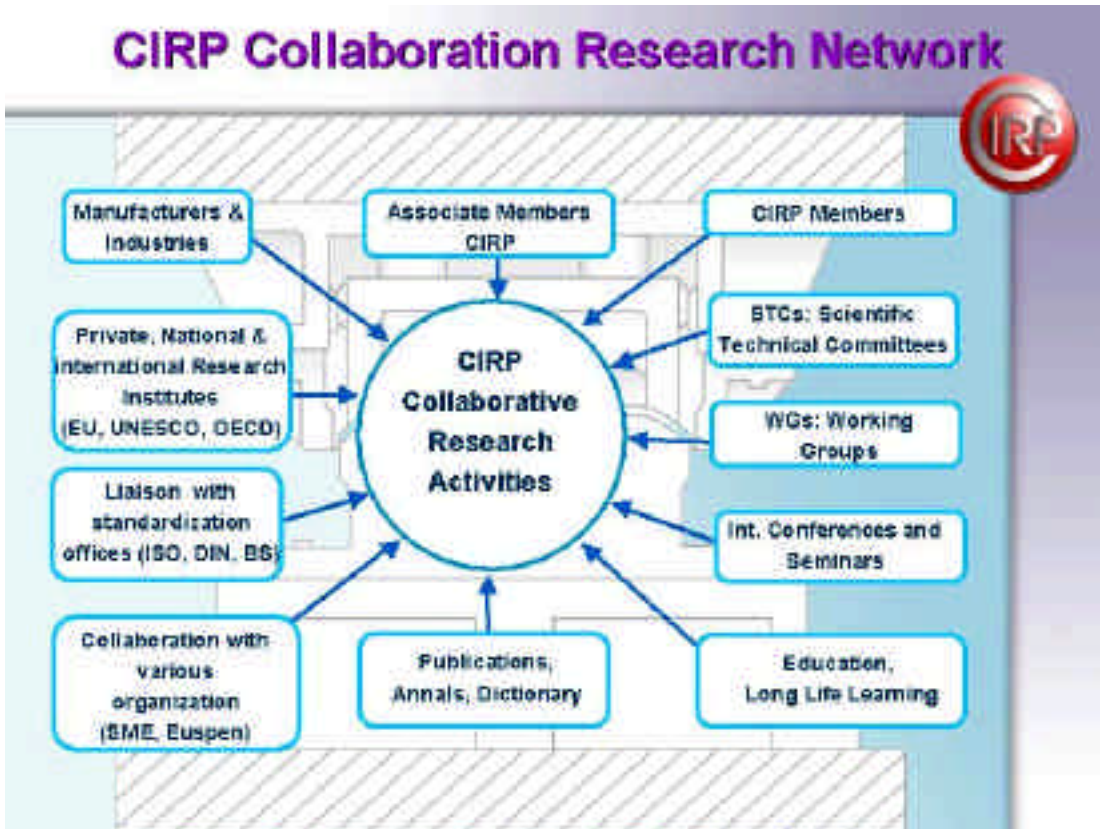
Rafi Wertheim, President 2001/2002

# 2. From the President

## The CIRP Organization



## CIRP Collaboration Research Network



## 3. Awards

### **Professor RANGA KOMANDURI**

has received the Oklahoma State University president's service award. The President Service Award recognizes one faculty, one administrator, and one staff from the entire University who have given outstanding service to the University. This year's faculty recipient is Dr. Ranga Komanduri, Regents Professor and A. H. Nelson, Jr Endowed Chair in Engineering, Mechanical & Aerospace Engineering,

### **Dr. IOAN D. MARINESCU RECEIVED A HONORARY DOCTORATE**

Dr. Ioan D. Marinescu, Professor and Director of the Precision Micro-Machining Center of the College of Engineering, received the "Doctor Honoris Causa", a honorary doctorate for his contribution on fundamental research in the field of technical sciences during a ceremony at the Technical University "Gheorghe Asachi" of Iasi, Romania, on June 25, 2001. Dr. Marinescu received for his high quality cooperation with the University of Toledo, College of Engineering the "Gheorghe Asachi Golden Medal", the highest distinction from this University.



### **PROFESSOR GÜNTER SPUR ELECTED TO CHINESE ACADEMY OF ENGINEERING**

Professor Günter Spur has been elected a Foreign Member of the Chinese Academy of Engineering. The academy is the most prestigious scientific institution in engineering sciences in China. Its objectives are to promote engineering and technological sciences by supporting young scientists and enhancing international cooperation. In electing Professor Günter Spur the academy honors his outstanding achievements in research and education in production technology, particularly in the fields of machine tools and manufacturing technologies, factory management and computer-integrated production. It moreover pays respect to his long-standing cooperation with Chinese institutions and universities.

### **PROFESSOR GEOFFRY BOOTHROYD HONORED BY ASME AND SME.**

Dr. Geoffry Boothroyd has been honored by the American Society of Mechanical Engineers (ASME International) and Society of Manufacturing Engineers (SME) for the development and continuing refinement of Design for Manufacture and Assembly by receiving the M. Eugene Merchant Manufacturing Medal.



## 4. Associate Members News

### Summary of the survey on Associate Members Interests

by Norbert Roth, Siemens AG, Germany

Associate members value CIRP and its activities but they also see that some improvements are possible. This is the result from a report presented by our past President Prof. Hendrik van Brussel to the Council. on Saturday 25 January 2002 in Paris. This result is based on a survey among the Associate Members on their particular interests in working areas of CIRP's STCs and Working Groups or in other technical fields to be looked at. In November 2001 a questionnaire was distributed to Associate Members and in a short version also to all Active/Corresponding Members.

The feedback rate was:

28 out of 140 (~20%) for Associate Members

70 out of 275 (~30%) for Active Members

Preferred topics for intensified discussion within CIRP are:

- Microelectronics/Microtechnology
- Modelling/Simulation
- Integrated Product- and Process-Design

In the question on current and new activities within CIRP we find an encouraging concurrence between the answers of the Associate Members and the Active Members.

**The most rewarding opportunities for contact with CIRP colleagues are:**

- **Newest R&D**
- **Know- Who- Finder**
- **Bridge to Academia**

**Nearly all of the AM who sent back the questionnaire attend GA's or Paris Meetings or other CIRP Conferences and stay for more than one day. They are familiar with CIRP and accept active roles in Paper Sessions or STC's. Most of them (~65%) have a function in R&D.**

The president of CIRP, Prof. Rafi Wertheim, provided strong impact and valuable guidance in implementing a new Active Members and AMAG meeting format on the General Assembly at Tuesday. The traditional Associate Members Lunch will continue to be combined with some technical presentations from Associate and Active Members, which will be presented during the hour before lunch in parallel with other paper sessions. The AMAG will hold its meeting after lunch thus being able to consider all ideas generated during the hours before.

The strategy (results and consequences from the questionnaire) as well as structure (chairpersons, topics, etc) of AMAG will be discussed in future meetings For the time being Prof. Hendrik van Brussel, who made a big progress with this initiative last year, agreed to be further involved in working out all these ideas.

For comments or questions about this report mailto: [norbert.roth@mchp.siemens.de](mailto:norbert.roth@mchp.siemens.de)

## 5. News from the STC's

The technical work is organized in the Scientific Technical Committees. The work is presented during paper presentations at the General Assembly, starting with a keynote paper of general interest followed by parallel presentations in the paper sessions. Further there are the regular STC meetings, twice a year, and topical conferences and working seminars.

An overview of the Keynote Papers to be presented next August is listed below :

### **2002 Keynote papers, 18-24 August 2002, San Sebastian**

- "A" Computer aided disassembly planning: state-of-the-art and perspectives M. Santochi, G. Dini
- "C" Machining of composite materials. R. Teti, G. Byrne and F. Klocke
- "Dn" New trends on rapid product development. A. Bernard and Anath Fischer.
- "E" Machining by short and ultra-short laserpulses, state-of-the art. J. Meijer.
- "F" Mushy/semi-solid metal forming technology - present and future. M. Kiuchi and R. Kopp.
- "G" Process monitoring in grinding. H.K. Tönshoff
- "M" Parallel kinematic machines. M. Weck
- "O" Production in networks. H. Wiendahl
- "P" Large scale metrology: an update. W. T. Estler, K. L. Edmundson, G. N. Peggs and D. H. Parker
- "S" Emerging trends in surface metrology. P. Lonardo, L. De Chiffre, D. Lucca and C. Brown

For more details see [www.cirp.net](http://www.cirp.net)

## 6. From the Labs

### **A new “Bayerisches Laserzentrum” in Germany**

Prof. Dr.-Ing. Dr.-Ing. E. h. mult. Dr. h. c. Manfred Geiger.

The Bavarian Prime Minister Dr. Edmund Stoiber has opened the new Bayerisches Laserzentrum (BLZ) on 7 November. Dr. Stoiber praised the achievements of the Friedrich-Alexander-University Erlangen-Nuremberg and especially the BLZ as “forges of ideas and sources of a courageous founding spirit that our state gains from”. He called the “close cooperation between the world of academics and the world of business” a forward-looking achievement of the Bayerisches Laserzentrum.

The BLZ was founded in 1993 and has become one of the most important partners of the University of Erlangen-Nuremberg. Besides intense cooperation in research and development, the BLZ gGmbH is an important link in the knowledge transfer chain stretching from basic research at the university to industrial applications.

### **The Institute of Production Engineering and Machine Tools (IFW) in Hannover, Germany**

The IFW has announced that Prof. Dr.-Ing. Berend Denkena has joined management of the institute. Prof. Tönshoff and Prof. Denkena will work together until September 2002.

### **Collaborative Research Center 289**

#### **“Forming of Metals in the Semi Solid State and their Properties”**

#### **IBF, Institute of Metal Forming, Aachen University of Technology Germany**

Prof. Dr.-Ing. Dr.h.c. Dr.-Ing.E.h. R. Kopp.

The main goal of the collaborative research center 289 is to investigate the basic behavior of metal alloys in the semi-solid state and the technologies to process these materials.

Contact: [www.rwth-aachen.de/sfb289](http://www.rwth-aachen.de/sfb289)

## 7. Meetings Seminars Conferences

STC	Conference	Date/place	CIRP responsible
C	5 <sup>th</sup> CIRP Int workshop on modelling of machine operations	20-21 May 02 West Lafayette, USA	I.S. Jawahir
Dn	CIRP Design seminar	16-18 May 02 Hong Kong, China	M. Tseng
Dn	Design and manufacture for sustainable development	27-28 June 02 Liverpool, UK	B. Hon
Dn	Innovation Forum Virtual Product Creation	3-4 July 02 Berlin, D	F. Krause
M	3 <sup>rd</sup> PKM International Conference	23-25 April 02 Chemnitz, D	R. Neugebauer
O	XIII Workshop on supervising and diagnostics of manufact. Systems	11-13 March 02 Karpacz, Poland	J. Jedrzejewski
O	CIMEC 2002, CIRP Int.Manuf. Education Conf.	3-5 April 02 Enschede, NL	H. Kals
O	9 <sup>th</sup> Life cycle seminar	10-11 April 02 Germany	K. Feldmann
O	IWES'02, 4 <sup>th</sup> Int.workshop on emergent synthesis	9-10 May 02 Kobe, J	K. Ueda
O	35 <sup>th</sup> CIRP Manuf. Systems seminar	13-15 May 02 Seoul, Korea	K.I. Lee
O	Manufacturing in mechanical engineering	14-16 May 02 Clermont-Ferrand, F	A. Bernard
O	ICME 2002, 3 <sup>rd</sup> CIRP Int. conf. on intelligent computation in manufacturing engineering	June 2002 Gulf of Naples, Italy	R. Teti I. Jawahir
O	International Seminar on Digital Enterprise Technology	17-18 Sep 02 Durham, UK	G. Maropoulos
P	Euspen 2002	27-31 May 02 Eindhoven, NL	P.H.J. Schellekens
<b>2003</b>			
Dn	CIRP Design Seminar	May 2003 Grenoble, F	S. Tichkiewitch
O	36 <sup>th</sup> CIRP Manufacturing systems seminar	3-5 June 03 Saarbrucken, D	H. Bley
<b>2004</b>			
Dn	CIRP Design seminar Design in the global village	1-3 June 04 Cairo, Egypt	W.ElMaraghy A.B. Khairy
E	ISEM 14	30 March-4 Apr 04 Edinburgh, UK	J.A. McGeough
O	4 <sup>th</sup> Congress Intelligent manufacturing processes systems	20-24 June 04 Belgrade YU	V. Milacic V. Majstorovic
<b>2005</b>			
Dn	CIRP Design seminar New Innovation in engineering design	June 2005 Shanghai, China	S. Lu

## 7. Meetings Seminars Conferences

### **XIII Workshop on Supervising and Diagnostics of Machining Systems. Open and global manufacturing design**

11th - 13th March 2002, Karpacz, Poland

Contact: prof. J. Jedrzejewski

E-mail [jedrzej@itma.pwr.wroc.pl](mailto:jedrzej@itma.pwr.wroc.pl) - web <http://www.itma.pwr.wroc.pl/indexen.htm>

### **9th CIRP International Seminar on Life Cycle Engineering**

9-10 April 2002, Erlangen (D)

Contact: LCS2002@faps.uni-erlangen.de

### **3<sup>rd</sup> Chemnitz Parallel Kinematics Seminar 2002 International Conference**

April 23-25, 2002.

Contact Holly Shores, Fraunhofer Institute for Machine Tools and Forming Technology in Chemnitz, Germany.

Tel. 49 371 539 7-328, Fax 49 371 539 7-448

### **35<sup>th</sup> CIRP International seminar on manufacturing systems "Manufacturing technology in the information age"**

13-15 May 2002, Seoul, Korea

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 School of Mechanical and Aerospace Engineering. <http://www.cirp-isms2002.org> - e-mail: [jonkkim@snu.ac.kr](mailto:jonkkim@snu.ac.kr)

## 7. Meetings Seminars Conferences

### 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, Advanced Manufacturing Institute Hong Kong University of Science and Technology.

<http://ami.ust.hk/design2002/CIRP.htm> - e-mail: [design@ust.hk](mailto:design@ust.hk)

### First International Conference on Design and Manufacture for sustainable development

June 27- 28 2002, Liverpool, UK

This International Conference is dedicated to the holistic study and interchange of ideas on the theory, technology, tools, and 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.

#### Topics:

- 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.
- Consumer issues.
- International trends and future development.

Contact: Bernard Hon Liverpool University, [jbquinn@liv.ac.uk](mailto:jbquinn@liv.ac.uk) [www.liv.ac.uk/sustain](http://www.liv.ac.uk/sustain)

## 7. 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

#### Contact:

Prof. Roberto Teti, e-mail [tetiro@unina.it](mailto:tetiro@unina.it); <http://www.icme.unina.it>

## 7. 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](mailto:jusfa02@hiroshima-u.ac.jp)

### Second International Working Conference

Total quality management, advanced and intelligent approaches

June 22 - 25, 2003 Subotica, Yugoslavia

The scope of the Conference covers philosophical, scientific and practical concepts concerning research, development and application of Total Quality Management based advanced approaches.

#### Topics:

- TQM & manufacturing management
- World class performances
- Attractive quality
- Robust engineering
- Six sigma model
- Intelligent quality tools and methods
- Virtual factory and virtual quality
- Intelligent metrology in manufacturing
- Intelligent and virtual CMM
- Business process improvement
- Breakthrough management
- Intelligent design for quality

Contact: Prof. Dr. Vidosav D. MAJSTOROVIC



## 7. Meetings Seminars Conferences

### 7th International Conference on Monitoring and Automatic Supervision in Manufacturing, AC'04

19 - 21 August 2004, in Zakopane Poland

#### Topics:

- Introduction: general situation of automatic control in monitoring with the stress on automatic monitoring and supervision, nomenclature, classification...
- Sensors and basic processing of signals for monitoring in manufacturing.
- Strategy and algorithms of the design systems for the monitoring and supervision of manufacturing processes.
- Strategy and algorithms of the design systems for the monitoring and supervision of accidents and breakdowns.
- Strategy and algorithms of the design systems for the monitoring and supervision of product quality.
- Strategy and algorithms of the design systems for the monitoring and supervision of machines and manufacturing equipment.
- Monitoring and supervision in a multi-stand manufacturing system as a whole.
- Monitoring and supervision through network and/or the Internet.
- Monitoring and supervision in manufacturing processes: Turning, Milling, Drilling, Abrasive machining, EDM, ECM and Assembly

#### Contact:

M. Szafarczyk, [mzybura@ios.krakow.pl](mailto:mzybura@ios.krakow.pl)

## 8. Relation to ISO

### CIRP has received the following ISO documents

ISO 12164-2	Hollow taper interface with flange contact
ISO 15641	Milling cutters for high speed machining
ISO 1986-1	Test conditions for surface grinding machines
ISO/FDIS 230-6.	Test code for machine tools. Determination of position accuracy on body and face diagonals.
ISO 3874:1997 FDAM2.	Freight containers, Handling and securing.
ISO/DIS 3875	Machine tools, test conditions for external cylindrical centreless grinding machines, testing of the accuracy

ISO is adopting a policy of communication with its members (including CIRP) solely by electronic means starting at 30 April 2002. Please be aware that members have the possibility to comment on draft and final draft international standards (DIS and FDIS)

## 9. Miscellaneous

Received:

- Proceedings of the V conference of the Italian Association of Manufacturing Technologies, 18-20 Sep 2001 in Bari, Italy. All the information can be found at <http://www-dimeg.poliba.it/evanti/aitem2001/ital/>
- Handbook of Production Management Methods by Gideon Halevi. ISBN 0750650885. This book covers nearly all methods of production an manufacturing and will prove a comprehensive guide to choosing and using these methods.
- Micromachining of Engineering Materials edited by Joseph McGeough. ISBN 082470447. Contains the latest data on material removal rates, surface accuracy and polishing.
- Managing Virtual Web Organizations in the 21st Century: Issues and Challenges by Ulrich Franke, Cranfield University UK. ISBN 1-930708-24-6. The book provides a guideline of how to manage virtual organizations, by introducing the concept, explaining the management theories behind the concept and presenting practical examples of successfully operating virtual organizations.



**It is now a habit to see our generations of Presidents on the CIRP office stairs !**