**The International Academy for Production Engineering**

# NEWSLETTER

## N° 30 – April 2007

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The logo CIRP originates from "**C**ollège **I**nternational pour la **R**echerche en **P**roductique"

# Contents



The next issue of the Newsletter is scheduled for November 2007. Your contributions are most appreciated; you may send it to the CIRP office in Paris or directly to the editor at: j.meijer@utwente.nl preferable before **October 15th 2007**

Johan Meijer (Technical Secretary)

# 1. From the President

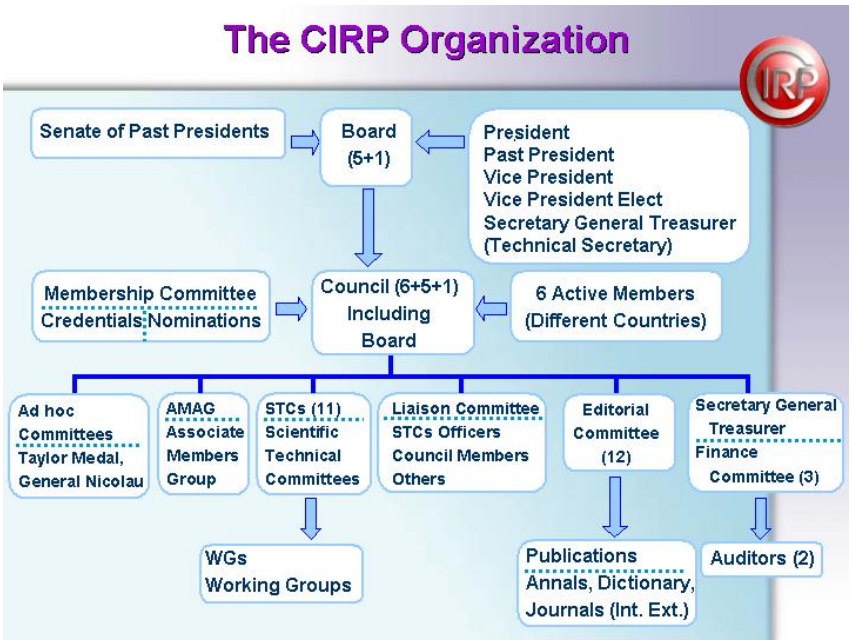
Dear Colleagues,

As we are moving towards spring 2007, the CIRP Community is getting prepared for the next GA in Dresden. It appears that the Organizing Committee there, under the leadership of Professor Neugebauer, is making a lot of effort for a successful CIRP GA. Our January meeting was very well attended and I trust it was useful and scientifically fruitful for all of us. The new facilities, where the meetings were held, seemed to be most adequate for an event of its size and importance. The preparation of the young affiliates CIRP network, is well under way, and we hope that in a few weeks, we will be having our first candidates, who will be able to establish this important network, in order to provide the younger generations of research scientists, in the production community, with the CIRP visibility. We are also about to establish a publication contract for a new CIRP journal, whose success will depend upon everybody's help in the CIRP community. We think that the CIRP is proceeding to future, both briskly and efficiently, and we look forward to seeing you all in Dresden for a successful and memorable General Assembly.

George Chryssolouris

# 2. About CIRP

**The International Academy for Production Engineering (CIRP)** was founded in 1951 as **C**ollège **I**nternational pour la **R**echerche en **P**roductique to stimulate research and education and to create international collaboration within selected fields of production engineering. In the passed 55 years CIRP has developed into a unique international organization covering many fields of production engineering. CIRP is the internationally most recognized organization concerning production engineering.




CIRP has about 500 members (Fellows, Associate Members, Corporate Members) representing over 40 countries. The unique contribution to manufacturing research is acknowledged by leading companies and research institutes, who provide active support through corporate memberships. CIRP is organized in Scientific and Technical Committees (STC's) which are responsible for the collaborative research:

- Studying new techniques and technologies;
- Organizing cooperative research, comparative testing and standardization;
- Collecting and analyzing bibliographies on manufacturing;
- Publishing synthesis reports on important technical problems;
- Organizing seminars and meetings on specialist topics;
- Preparing internationally accepted terminology;
- Contributing to International standardization organizations;
- Surveying the state of the art of research worldwide.

# 3. Personal

## Professor Koren receives 2006 M. Eugene Merchant Manufacturing Medal of ASME/SME

ERC/RMS Director, Yoram Koren, has been selected to receive the 2006 M. Eugene Merchant Manufacturing Medal of ASME/SME for his "outstanding contributions to the science, education, and practice of manufacturing through innovations in reconfigurable manufacturing systems, robotics and manufacturing system control; and for establishing reconfigurable manufacturing as a worldwide scientific discipline." The M. Eugene Merchant Manufacturing Medal of ASME/SME was established in 1986 by ASME and the Society of Manufacturing Engineers to honor an exceptional individual who has had significant influence and responsibility for improving the productivity and efficiency of the manufacturing operation. The presentation of the award has taken place Tuesday, November 7, 2006 at the Honors Assembly of the ASME International Mechanical Engineering Congress & Exposition at the Hilton Chicago Hotel in Chicago, Illinois.

## Professor Matthias Kleiner President of the DFG

On 1 January 2007 Professor Matthias Kleiner assumed his new office as President of the DFG (German Research Foundation). Kleiner is the first engineering scientist to hold the DFG presidency. He was elected for a first three-year term during the annual General Assembly on 31 May 2006. Having been a Vice President of the DFG since 2005, a member of several committees of the foundation as well as spokesperson of the Collaborative Research Centre "Integration of forming, cutting, and joining for the flexible production of lightweight frame structures", Kleiner has manifold DFG experience. The 51-year-old engineer succeeds biochemist Professor Ernst-Ludwig Winnacker. The DFG is the central public funding organisation responsible for

promoting research in Germany with an annual budget of nearly 1.9 billion Euros in 2007. Its activities focus on funding research projects by scientists and academics working at universities or research institutes and on selecting the best projects in a process of fair and transparent competition.

At the end of 2006, Professor Kleiner was also elected as member of two academies: The "German Academy of scientists Leopoldina" and the "Academia Europaea". Founded in 1652, the Leopoldina is one of the oldest scientific academies. The academy`s main mission is the promotion of international scientific research. The 1200 members are elected by the academy´s board and the senate. Membership is an outstanding appreciation of the member`s scientific and personal achievements. The Academia Europaea was founded in 1988 on the initiative of the British Royal Society. The academy promotes international state-of-the-art-research and a wider appreciation of European scholarship and research. It has 2000 members – all of them distinguished scientists.

## Professor McKeown receives Georg-Schlesinger-Preis

Our colleague Professor Pat McKeown OBE FREng who was CIRP President in 1988-89, has been awarded the prestigious Georg-Schesinger-Preis 2006 by the State of Berlin, for "outstanding achievements in the field of production technology" on 7 February 2007. The prize has been awarded every three years since 1979 in memory of Dr-Ing Georg Schlesinger (1874-1949) a word-leading pioneer in applying science to the design and testing of machine tools. In 1904 Schlesinger took the chair in these topics at the TU Berlin, where this latest award was organised by our CIRP colleagues, Professor Dr-Ing Eckart Uhlmann and Professor em Dr-Ing Gunter Spur.

Pat McKeown was a student at Cranfield in 1954-56 in aircraft design and production engineering. After working for Societe Genevoise d'Instruments de Physique (GSIP), a world-leading manufacturer of high precision machine tools and metrology equipment, he returned to Cranfield in 1968 He became a full member of CIRP in 1974 and served our organization as chairman (STC 'P'), Council member and President.

In 1991 he was awarded the OBE by the Queen and elected to Fellowship of the UK's Royal Academy of Engineering. In 1996 he was awarded Hon DSc's by the University of Connecticut USA and at Cranfield, UK. In 1998 he was awarded the Life Achievement Award of the American Society for Precision Engineering, in 2002 the Life Achievement Award of euspen as Founding President, and in 2003 with the International Prize of the Japan Society for Precision Engineering.

Professor McKeown said he was proud and greatly honoured to join his illustrious CIRP colleagues and friends who had been previous recipients of this award. He added that he felt very fortunate and privileged to have been able to be involved in

the rapid growth and development of high precision engineering, micro-engineering and engineering nanotechnology over the last fifty years. His membership of CIRP and warm collaborative relationships with many like-minded colleagues in this "circle of friends" had played a major part in his ability to work internationally in this important and expanding field. The previous CIRP recipients are: Dr. Eugene Merchant 1980; Professor G Pahlitzsch 1883; Professor Jacques Peters 1986; Professor Janez Peklenik 1988; Professor Toshio Sata 1991; Professor Kurt Lange 1994; Professor H Kudo 1997; Professor Gunter Spur 2000; and the Professors Hans-Kurt Tönshoff and Manfred Weck in 2003.

*The photograph shows Pat McKeown (centre) flanked by four previous recipients of the G-S Prize, (left to right) Gunter Spur, Kurt Lange, Hans-Kurt Tonshoff and Manfred Weck.*

## Three CIRP Colleagues among SME Manufacturing's Best and Brightest

Excellence. World Class. Global Leadership. These terms were used by F. Brian Holmes, President of the Society of Manufacturing Engineers to refer to the best and the brightest, awarded by the SME. He said we need these people in all facets of manufacturing today if we are to be world leaders in products and value. The best and the brightest have contributed to all the manufactured goods that we enjoy today, from the ever more efficient and capable aircraft to the electronics that make so many things possible. They keep developing and improving products to make them more affordable for all. They reduce the energy and materials that are consumed in production to improve the sustainability of the planet and those of us who live here.

We also honor them for their contributions to manufacturing education. It is critical that we support and encourage the next generation of manufacturing practitioners, for it is the only way we will continue to attract the best and brightest for our future. Our focus must stay on the supply chain, and how to make not only our customer, but our customer's customer successful. The 2007 SME International Awards Gala has been held in Los Angeles on March 26, 2007.

## Professor Warren R. DeVries wins SME Albert M. Sargent Progress Award

The Society of Manufacturing Engineers (SME) has named Warren R. DeVries, dean of engineering and information technology at the University of Maryland-Baltimore County (UMBC), the 2007 winner of the SME Albert M. Sargent Progress Award on **March 26, 2007** for his significant accomplishments in the field of manufacturing processes, methods and systems.

The SME International Honor Awards recognize exceptional personal accomplishments and contributions to the field of manufacturing engineering in the areas of manufacturing technologies, processes, technical writing, education, research, management or service to the Society. SME members and non-members are encouraged to nominate individuals from industry, academia and government who have made a notable impact in these areas.

"To be recognized by your colleagues is always a great honor. During a time of change in the world and in the manufacturing profession, receiving the Albert M. Sargent Progress Award makes me eager to take up the challenge of education and innovation as the engines that will drive 21st century manufacturing enterprises," said DeVries. DeVries is a leader in the national push for excellence in engineering education and is also well known in his field for his pioneering research in material removal processes and manufacturing systems. Prior to coming to UMBC to lead its College of Engineering and Information Technology, he served as the National Science Foundation's Division Director for the Division of Design and Manufacturing Innovation. DeVries came to the NSF on assignment from Iowa State University, where he was a professor and then chair of the department of mechanical engineering. He has also held faculty positions at Rensselaer Polytechnic Institute, University of Michigan and University of Wisconsin-Madison.

DeVries has served on the Board of Governors and as Senior Vice President for Engineering for the American Society of Mechanical Engineers (ASME) and on the Board of Directors and as President for the North American Manufacturing Research Institution of the Society of Manufacturing Engineers (SME). He is a Fellow of both the ASME and the SME.

## Professor Koren recognized with the SME Gold Medal.

Professor Yoram Koren, PhD, FSME, PE University of Michigan is recognized with the SME Gold Medal for his outstanding service to the manufacturing engineering profession in technical communications through published literature, innovations, technical writing, and lectures. The medal was awarded in Los Angeles on March 26, 2007. Koren is credited with creating the scientific underpinnings of the reconfigurable manufacturing paradigm. He is the founding director of the National Science Foundation Engineering Research Center for Reconfigurable Manufacturing Systems at the University of Michigan (Ann Arbor). Through his research at the center, he has pioneered the creation of a new generation of manufacturing tools and systems that can respond to rapid changes in global markets. He has published over 250 papers and books, was granted 14 US patents, and has given numerous keynote addresses on manufacturing-related topics in many countries. Koren was elected to the National Academy of Engineering. He is also the recipient of the prestigious Eugene Merchant Manufacturing Medal, jointly awarded by ASME and SME.

## Professor Weck receives SME F. W. Taylor Research Medal

Professor Manfred Weck is recognized with the **2007 SME Frederick W. Taylor Research Medal** for his significant published research which has led to a better understanding of materials, facilities, principles, operations and their application to improve manufacturing processes Prof Weck is internationally recognized for his research in machine tools and manufacturing systems. He is credited with pioneering the development of experimental modal analysis. This analysis is used in industrial applications and the creation of structural mechanics modeling and calculation processes, publications, including his series entitled, "Machine Tools and Manufacturing Systems." The

series is internationally recognized as the definitive work on machine tools. Prior to his retirement in 2004, Weck served as the Chair of Machine Tools at the Technical University of Aachen. He currently serves on the boards of several companies in Germany, among them Doerries Scharmann Technology, Chiron Machine Tool and Liebherr-Verzahntechnik Machine Tool. The medal was received at the award ceremony in Los Angeles on March 26, 2007.

## Professor Nam P. Suh Doctor Scientiarum Honoris Causa

The Council of the **Technion** – Israel Institute of Technology, acting on behalf of the International Board of Governors of this Institute and with the approval of the Technion Senate, has decided to confer Professor Nam Pyo Suh the highest honor of the Technion – Doctor Scientiarum Honoris Causa.
This decision was reached:
In recognition of his standing as a world leader in mechanical engineering research and education. For his significant and outstanding contribution to the theory of tribology by introducing the Delamination Theory and Theory of Wear; to Polymer Processing, and particularly to microcellular plastics and laminated plastics; and to Design Theory by developing the Axiomatic Design Theory, a mathematical and algorithmic basis for products and systems design.
The conferral ceremony will be held in Technion City, Haifa on Monday, June 11th, 2007, during the Technion's annual International Board of Governors meeting.

## Professor Nam P. Suh Doctor of Engineering honoris causa

The Senate of The University of Queensland, at its meeting on 8 February 2007, has awarded Professor Nam Pyo Suh, President of Korea Advanced Institute of Science and Technology (KAIST) the degree of Doctor of Engineering honoris causa in recognition of his distinguished career and his contribution to the field of Engineering.

The University of Queensland, from time to time, recognizes distinguished service to the Commonwealth of Australia and/or to the State of Queensland (whether or not directly associated with The University of Queensland), distinguished career achievement or academic distinction in a particular field, through the award of an honorary degree. The award will be conferred a special ceremony on Tuesday 15 May 2007.

## Professor Nam P. Suh receives SPE Lifetime Achievement Award

SOCIETY OF PLASTICS ENGINEERS

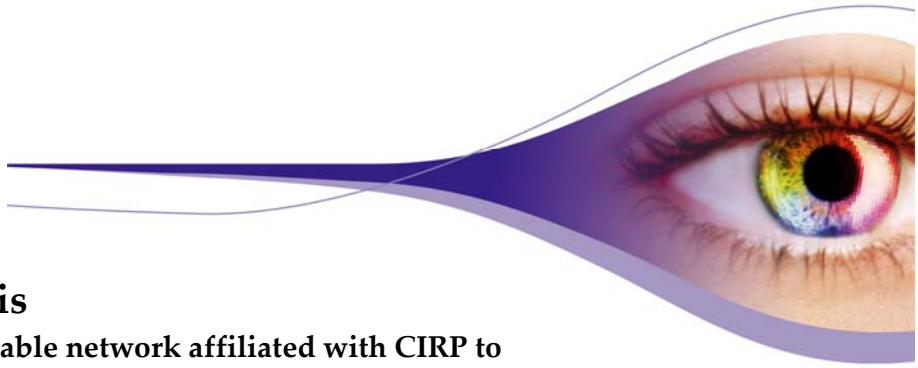
The Society of Plastics Engineers (SPE) will be awarding Professor Nam P. Suh the Lifetime Achievement Award on May 8, 2007. The award is in recognition of the creation of Microcellular Plastics (MuCell), which are being manufactured in the United States, Asia, and Europe to make precision plastic parts that are lighter at a production rate much faster than the conventional processes. The process is also used to make extruded parts such as the recyclable weather strips used in automobiles.

Dr. Nam P. Suh is the Ralph E. & Eloise F. Cross Professor, and Director of the Park Center. He has been the Head of the Department of Mechanical Engineering for ten years from 1991 to 2001. He has been on the MIT faculty since 1970. During this period he was the Founding Director of the MIT Laboratory for Manufacturing and Productivity (1977-1984). He was also the Founder and Director of the MIT-Industry Polymer Processing Program (1973-1984), Head of the Mechanics and Material Division of the Mechanical Engineering Department (1975-1977), and a member of the Engineering Council of MIT (1980-1984 and 1991-to date). He received an S.B.(1959) and S.M.(1961) from MIT, and his Ph.D. from Carnegie-Mellon University (1964). He has received many awards and honors. He received three honorary doctoral degrees: Doctor of Humane Letters from the University of Massachusetts-Lowell in 1988, Doctor of Engineering from Worcester Polytechnic Institute in 1986, and Honorary Doctor (Dr. hc) from Royal Institute of Technology, Stockholm, Sweden, in 2000 and the CIRP General Nicolau Award in 2006.

Nam Pyo Suh (b. Seoul, Korea, 1936) is the thirteenth and current president of the Korea Advanced Institute of Science & Technology. Dr. Suh began his appointment on July 13, 2006, replacing Robert B. Laughlin. Although still keeping the title of Ralph E. Cross Professor of Mechanical Engineering at MIT, Suh is now President of KAIST. During his tenure at MIT, Suh also worked for industry and the government. Suh is on the board of several companies and founded TREXEL, Inc. He also served as the Assistant Director for Engineering at US National Science Foundation from 1984 to 1988 and has consulted for the UN, National Laboratories, World Bank and the Korean government (where developed Korea's Five-Year Economic Plan in the 1980s). Important contributions to science and technology are: Developed microcellular plastic, Significant advances to the field of Tribology and the Developed axiomatic design

# 4. CIRP Research Affiliates

In the January Council meeting it was decided to create a ***CIRP affiliated network*** with young researchers, the ***CIRP Research Affiliates***. The purpose of this network is to get access to young talented production engineers who could potentially become CIRP members.



## The Vision is

**Create a sustainable network affiliated with CIRP to promote and to develop upcoming young researchers in production engineering**

There are some demands:

- Candidates should have been working in research for more than 2 years
- Candidates must be proposed by a CIRP fellow
- Candidates must be mentored by a CIRP fellow during their membership
- Candidates need not be older than 36 years
- Approval of membership will be taken by the council
- Maximum duration of membership 6 years (3 years, one renewal)
- Each CIRP fellow might be allowed to mentor up to 3 young researchers
- No membership fee (but must pay regular fee for GA, Conferences etc.)

The affiliates will receive (after nomination and election)

- a letter of appointment
- a membership list

The benefits to candidates are:

- Create an information exchange network on internet
- Exchange and discuss research results
- Create joint research projects
- Get easy access to CIRP members

And the benefits to CIRP are:

- Promotion of high potentials in production engineering
- Make CIRP more visible
- Input of research findings & innovations
- Incubation for potential future CIRP members

There are also joint Benefits to CIRP and Research Affiliates:

- Set up joint publications and
- Set up joint research projects
- Increase of Improve communication
- Expand community of researchers

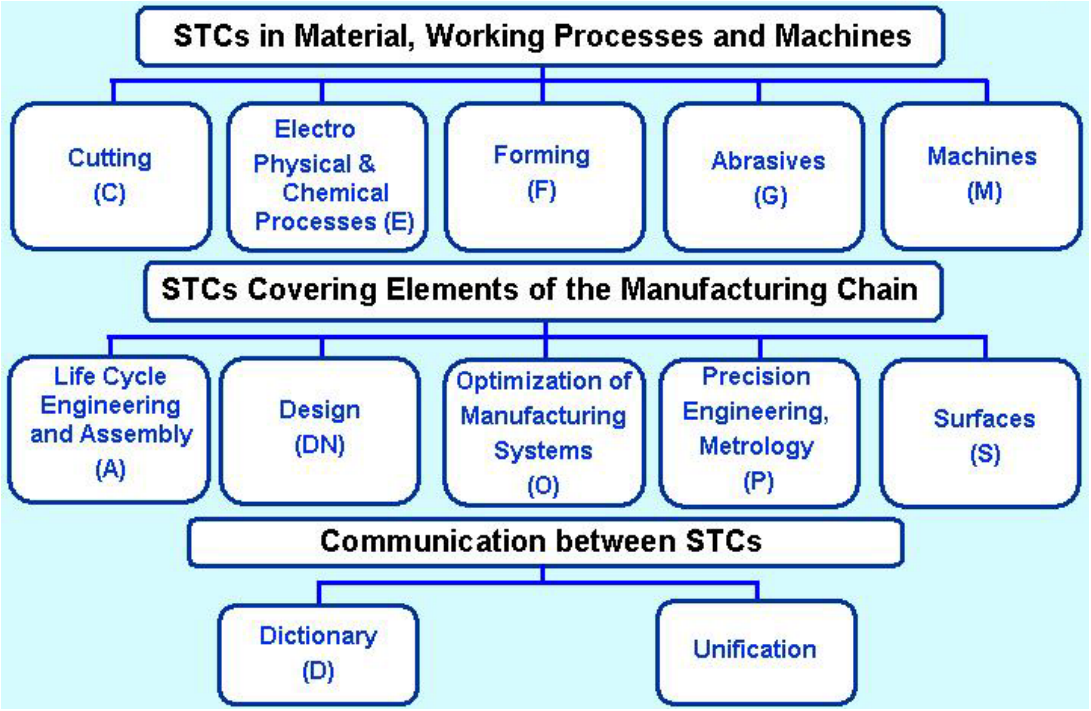
Implementation:
Every fellow can propose candidates by a Research Affiliate Proposal Form as distributed by the secretariat to be returned to the CIRP Secretariat by e-mail only, before May 31st 2007)

The benefit for the CIRP Research Affiliates would be their having access to the CIRP site and publications as well as to have a reduced fee for the CIRP sponsored conferences. Our intent is to create this Internet based network with a link through the CIRP site so that young researchers can exchange opinions, ideas and thoughts.

In order to avoid overcrowding our General Assembly and the Paris Meeting, the rule for participation in these events remains unchanged, so that one CIRP Fellow can invite up to one person.

# 5. From the STC's

There are two kinds of STC's. Five STC's covering the Processes and Machine and five covering the Manufacturing chain as shown below.




| STC | Chairman | Vice Chairman | Secretary |
|---|---|---|---|
| A | H. Bley | J. Jeswiet | M. Hauschild |
| C | K. Bouzakis | B. Denkena | M. Davies |
| D | A. Moisan | E. Westkämper | J. Werner |
| Dn | A.Y.C. Nee | P. Gu | A. Bernard |
| E | K. Rajurkar | A. De Silva | B. Lauwers |
| F | K. Osakada | J. Jeswiet | P. Bariani |
| G | B. Karpuschewski | J.F.G. Oliveira | F. Hashimoto |
| M | Y. Altintas | S. Smith | M. Mitsuishi |
| O | L. Monostori | N. Duffie | R. Teti |
| P | T. Estler | A. Weckenmann | W. Knapp |
| S | G. Goch | A. Balsamo | H. Hansen |

## STC "A"

Collaborative research projects and CIRP papers as well as special themes working groups were encouraged as a way of stimulating more activities within the assembly area. In particular, real assembly systems including a number of joining technologies were identified as topics which are rarely addressed by current activities under CIRP.

## STC "C"

Cooperative Work is going on Cutting Tool Geometries, Macro and Micro (Denkena, deLeon) The goals are:

(1) establish a methodology for characterizing cutting edge geometry;

(2) compare measurement with available methods;

(3) conduct cutting experiments to measure tool life and cutting forces; and

(4) conduct FE modeling.

Therefore, the measurements of different participating institutes and different available measurement methods have been compared. A total of 18 institutions are involved. Measurements of commercial tools donated by Dr. Wertheim from ISCAR using the same method lead to results with a deviation of up to 120%. Finite element simulations of different tool geometries have been conducted by Denkena's group. Other groups are in the process of doing this. A key finding is tool life travel path can be increased by 38% due to the application of the cutting edge geometries with the lowest cutting forces.

Main Decisions: It was decided to start a preliminary WG "Part Quality and Surface Integrity in Machining" (I.S. Jawahir)

## STC "Dn"

The STC Dn is preparing the 17th CIRP STC Design Seminar: The Future of Product Development to be held in Berlin, Germany, on March 26-28, 2007.
Product development is one of the most important drivers of innovation. To a large extent economic growth and welfare of enterprises depend on that. Methods, procedures and systems are challenged to evoke, to enable and to support innovation. The approaches are on a change. Customers are more involved in the scenario of product development, as individualized products are demanded. As the global economy is rising, more distributed product development has to happen and nevertheless it should have close contact to manufacturing. The functionality still is dominating, but sustainability is an upcoming must. Answers can only be composed out of a variety of solutions where psychological, economical and technical research results are taken into account.

## STC "E"

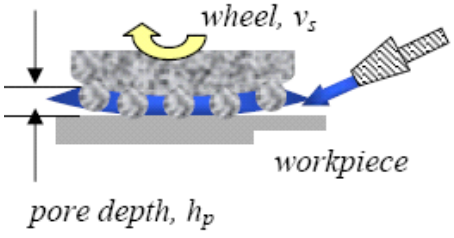
The following items have been presented and discussed:

(1) EDM and ECM Trueing and Dressing of Fine Grained Bronze-Bonded Grinding Wheels (F. Klocke, A. Klink)
(2) Bio-manufacturing – Next Generation Manufacturing Across the Scale Boundaries, Examples of Materials, processes and integration (A. Malshe)
(3) Modeling of surface evolution during chemical mechanical planarization: A multistage approach (A. Chandra)
(4) Computer Based Design of extra cellular matrix for tissue engineering (P. Bartolo)
(5) Non-conventional processes research activities in Tekniker (A. Aranzabe)

## STC "F"

An important discussion is going on about the involvement of the STC "F" in writing a collaborative book on metal forming. The new book should be based on a "synthesis" more than "analysis" approach. That proposal has been circulating among the Members in the first months of 2006 and, based on the answers of the colleagues, it seems that writing a completely new book collectively is a difficult task but to agree to the invitation of writing a book on metal forming should be an obligation for the STC. The book has not necessarily to cover every aspect of the technology. If the book is designed to cover only the most recent developments of the technology most of the work concerning advanced aspects related to material behavior, processes, tooling and machines have already done in the Keynote papers that the STC prepared in the last years. It has been agreed that volunteers among the Members will contact the Chairman before the summer meeting in Dresden and that in that meeting a final decision on the initiative will be taken.

## STC "G"




One of the topics is "Fluid Delivery in Grinding" Progress on a current cooperative UK project was reported. Four integrated programs of work: nozzle design, Laser Doppler Anemometry (LDA) methods, useful flow and user guidance manual were summarized. Typical multiphase CFX simulations of fluid passage through and beyond a nozzle were presented together with results of LDA measurements showing reverse flow in the region prior to contact engagement. Focus was given to results obtained in the useful flow program that outlined an approach to the selection of fluid delivery conditions based on jet velocity, convenient flow, useful flow ratio and wheel speed. The convenient flow, i.e. the flow volume that fills the surface pores in the contact region, is illustrated in the figure with the wheel grits shown to be acting as a pump.

## STC "M"

The STC M is focusing on the Digital Modeling of Machine Tools, Process – Machine Tool Structure and CNC system, Mechatronics and 5 axis Multi-Functional Machines. A series of presentations and papers have been presented. Digital Modeling of Machines covers mathematical simulation of machine tool structure, control and machining process in virtual environment with the objective to design the machine and process most optimally in order to eliminate or reduce costly prototypes and machining trials.

The Mechatronics activities include sensors, actuators, and intelligent devices to make the process more smart and self calibrating. The focus of Multi-functional machines activities are the design of machine tools which can mill, drill, turn, grind and measure. In particular, 5 axis trajectory generation, control and synchronizing simultaneously moving drives to minimize the machining errors. In addition to regular papers, we invite members from academia and industry to give presentations related to the listed areas which lead to keynote articles.

## STC "O"

Technical presentations were given on:

(1) Production monitoring connected to object identification/localization
(2) Real-time distributed cooperative design using VR
(3) Planning procedures for the automation of NC-code optimization
(4) Remote Monitoring System for CNC Machine
(5) Process optimization with respect to clean part surfaces

## STC "P"

Recent research in coordinate metrology has lead to the construction of a number of coordinate measuring machines (CMMs) designed to measure micro features. One of the most challenging aspects of such micro metrology has been the realization of probing systems capable of accessing such small features while maintaining a high resolution and low measurement uncertainty commensurate with the CMM's high-accuracy positioning capability. The past several meetings of STC-P have featured new developments in CMM micro probing in both the commercial and research laboratories. A number of probes have now been demonstrated with spherical tips with resolutions of less than 10 nanometers. A number of technical approaches have proven successful, including optical sensing of probe stylus displacement and workpiece contact detection via a change of signal from a stylus mechanically excited at its resonant frequency. Ongoing research is focused on reducing errors due to frictional forces. An overview of CMM probe technology can be found in the STP-P Keynote Paper "*Probing Systems in Dimensional Metrology*" by A. Weckenmann, et al, CIRP Annals Vol 53/2, 2004

# 6. Corporate Members News

## CMAG Meeting held on January 25th in Paris

Appreciation was expressed for the attendance of the Chairs of two STC's in who provided an overview of STC activities; Prof Byrne for his overview of the activities of STC's C, E, F, G & M and Prof Monostori for and overview of the activities of STC's O, A, P, Dn & S. The importance of the participation of companies in the General Assembly in Dresden 2007 was underlined. Mr Minguez reminded the meeting of the desire to invite companies from neighboring countries for presentation in the Corporate Members meeting at General Assemblies.

**Strategic Issues**

Mr Minguez noted that the number of Corporate Members has increased by 12 in 2006. Prof. Alting added that it is important for Corporate Members to intensify their involvement to increase the opportunities for knowledge transfer. With regard to the publication of papers from Corporate Members, it was noted that this year, 17 papers were submitted, 8% of the overall submission.

The organizers from Dresden agreed that the R&D needs would be addressed. The Dresden General Assembly organizers presented an overview of the potential company presentations, including from Switzerland. Nine presentations, at 15 – 20 minutes each would give scheduling problems and it was questioned whether some of the presentations might be better given in relevant STCs.

A planned plenary session has a contribution from the Automotive industry on the future of production technology. A very good sponsorship has been organized, including organizations representing the German machine tool, automotive and automotive supplier industries. Mr Resnick suggested soliciting testimonials from existing Corporate Members as a means of encouraging further members to join CIRP.

**Presidential address during the Corporate Members Lunch**

The President noted four points on future developments in CIRP:

1. To have an interactive website for CIRP through which issues can be put to the Fellows of CIRP possibly using a keyword search.
2. The intention to publish a CIRP journal which would be peer-reviewed by CIRP but which would not limit publication to CIRP members.
3. A proposal to form a number of 'tracks' within CIRP which could accommodate new technologies and trends. This would involve a reorganization of the existing STC structure.
4. A proposal to promote a network of CIRP-affiliated young researchers who might ultimately assume membership of CIRP

*The full text written by J. Barry (CMAG Secretary) is available on CIRPnet.*

# 7. The next GA in Dresden

Preparations for the 57th CIRP General Assembly are in full swing and an exciting and memorable conference is in store for all CIMP members and their accompanying persons. Dresden's historical and cultural appeal has put the city on the map as one of the most sought out travel destinations in all Europe. Its renowned scientific reputation and as home to a multitude of research institutions and excellent universities make this location all the more appropriate for the CIRP General Assembly; Dresden was even selected as Germany's "City of Science" in the year 2006, casting great attention to its scientific and technological contributions.

This year's General Assembly has been years in the making and the selection of the events included in the technical, social and accompanying persons programs will hopefully be true highlights to your visit to Dresden. CIRP members will have the opportunity to travel to the Fraunhofer Institute for Machine Tools and Forming Technology IWU in Chemnitz to see firsthand some of Germany's most innovative production technology and research in action, with contributions from many German CIRP members. Demonstrations and presentations relevant for all the STC's are planned, promising to make this afternoon an interactive exchange of information and experience.

In addition to a social program with fine dining and entertainment in relaxed yet elegant venues, we have planned two optional events that we are very excited about. On Tuesday, August 21st, we will present an exclusive organ concert in the world-famous Frauenkirche, performed by the church's house organist. The second event on Friday, August 24th, is a tour of Volkswagen's Glaeserne Manufaktur- or "Transparent Factory"- to experience a totally unique concept in automotive manufacturing for one of the world's most exclusive cars on the market. Both of these events are free of charge but participation is limited so be sure to indicate your interest on your online registration form.

And just a friendly reminder, early registration prices are only available until May 1st and hotel rooms in Dresden are in great demand, so don't put off your planning for this August and your General Assembly registration too long! On behalf of all the German CIRP members, I warmly welcome you to Dresden for the 57th CIRP General Assembly.

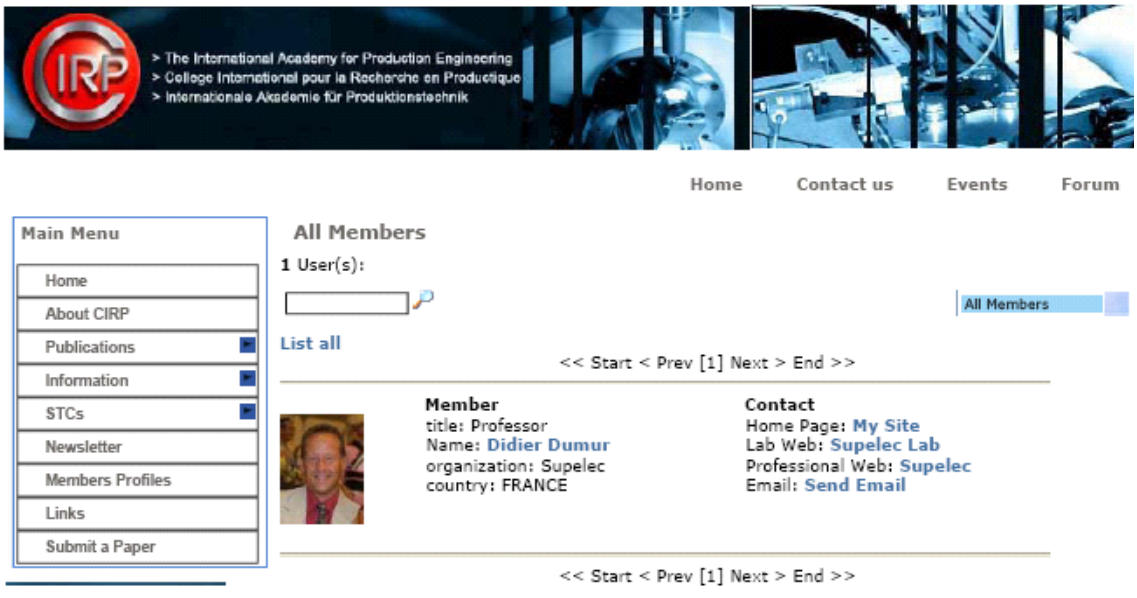
Reimund Neugebauer, Chairman of the Organizing Committee

# 8. The new CIRP website

The renewed website is almost ready. It is being tested now by a test panel and will be released soon. This release is a modern systematic and interactive engine using content sensitive pull down menus. A lot of work has been done to dispatch the current content under a new "logical" presentation. Members will receive an invitation by email to register.

After your registration, you will receive an email asking you to confirm your registration Once the Secretariat has validated your registration, you can use (and modify) your username and password chosen by yourself, and complete your profile (your picture insertion will also have to be validated by the Secretariat, for security). You will select yourself which information can be given to the "public" site, and which information should be only for the logged members (for emails addresses and links).

After you log in, more menus restricted to Members appear: the CIRP Directory, the Forum access, the STCs minutes and Agendas, the Internal Documents and Reports, the Minutes of the General Assemblies, the members profiles with their confidential information reserved to the other members, files available to be downloaded, etc.



# 9. From the secretariat

*Chantal Timar-Schubert*

*Agnès Chelet*

## Annals online

The full papers of the CIRP Annals Vol.1 & 2 are available on the web back to year 1980. You can have access with your CIRP codes through the page “Publications”.

## Flyers for Corporate membership

Flyers to recruit new Corporate Members are still available at the Secretariat.

## Meeting place in Paris

Delegates were very happy with our January meeting place "la Mutualité" so it has already been booked for the next January meetings.


# 10. Meetings Seminars, conferences

## International Symposium on Electro-Machining (ISEM15)

23-27 April 2007 Irwin, USA

This symposium offers an opportunity for researchers worldwide to present their very latest research in nontraditional manufacturing technology processes. The symposium also offers a unique opportunity for open exchange of ideas about future research in a friendly and professional environment. Papers will be submitted and presented by the world's foremost experts in research and industry. Several industrial plant visits are planned and a tour highlighting the historic attractions in the city and surrounding areas will be offered.

**Topics** EDM, ECM, USM, LBM. PAM, Water jet,Abrasive flow and rapid prototyping

**Special attention for** Process Modeling, Process/Material Interaction, Surface and Subsurface Characterization, Bio Manufacturing and Electromachining in Electronics

**Contact:** isemxv@isemxv.com www.isemxv.com

## 3rd Workshop on Optical Measurement Techniques for Structures and Systems

28 – 29 May 2007, Leuven, Belgium

This workshop is a forum for users and researchers developing and working with optical measurement techniques. Different techniques are covered like: Digital Image Correlation, Laser Doppler flow visualization: Particle Image, Velocimetry, laser Doppler Anemometry, Electronic Speckle Pattern Interferometry, Holography, Shearography, Optical fibre sensors, Laser scanners, CCD-LED measurements, Infrared thermography, Signal and image processing, Modeling from optical measurement data.

**Contact**: Prof. J-P Kruth, jean-pierre.kruth@mech.kuleuven.be http://www.optimess.org/

## 4th International Working Conference TQM Advances & Intelligent Approaches

27-30 May 2007, Belgrade, Serbia and Montenegro

The objective of the Third Conference is to provide an international forum for the exchange of knowledge, experience, research results and information about various aspects of the state-of-the-art and the future development of total quality management. The Conference covers philosophical, scientific and practical concepts

concerning research, development and application of TQM-based advanced approaches. The topics are: Business excellence models; TQM & manufacturing management; World class performance; 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;

**Contact:** Prof. Vidosav D. MAJSTOROVIĆ, majnem@EUnet.yu , www.mas.bg.ac.yu

## 40th CIRP International Seminar on Manufacturing Systems

30 May-1st June 2007, Liverpool, UK

This conference is focused on all key important areas of manufacturing systems especially on new paradigms, technology and methodology. This long-standing series of international seminar provides a unique platform for the dissemination and exchanges on the latest advances in manufacturing systems. The objectives are:

- To stimulate technical and scientific discussions on manufacturing systems and their implications to industry
- To provide an international platform for the exchange of the latest ideas and developments on manufacturing systems.
- To act as a driver for new research themes and international networking.

**Contact:** K.K.B.Hon, cirpms@liv.ac.uk http://www.liv.ac.uk/cirpms

## 20th International Conference on Computer-Aided Production Engineering (CAPE),

6-8 June 2007, Glasgow, Scotland

The next CAPE conference in this long-standing series is to be held at Glasgow Caledonian University, Glasgow, Scotland 6-8 June 2007. A full programme of keynote addresses by leading researchers and industrialists, specific topic presentations, industrial visits and a social programme for accompanying persons are already being organised. The CAPE is sponsored by CIRP as well as the UK Institution of Mechanical Engineers. Papers will be included in the Journal of Engineering Manufacture. **Contact**: prof. Anjali De Silva, A.DeSilva@gcal.ac.uk

## IV International Conference on Advances in Production Engineering APE'07

14-16 June 2007, Warsaw, Poland

**Topics:** Material Removal Processes (Cutting, Abrasive and Non-conventional Machining: EDM, ECM, LBM etc.). Metal Forming, Casting and Joining Processes

Machine Tools and Manufacturing Systems. Rapid Prototyping, Time Conserving Technologies. Micro Machining. CAD/CAM and Concurrent Engineering. Computer Integrated Manufacturing. Artificial Intelligence in Production Engineering. Production Management. Human Factor in Manufacturing. Clean Manufacturing. Transfer of Innovations

**Contact:** ape2007@meil.pw.edu.pl www.meil.pw.edu.pl/ape2007

## 14th International CIRP Life Cycle Engineering Seminar

11 – 13 June 2007, Tokyo, Japan

LCE 2007 is intended to foster the exchange of visions, recent developments and research findings in the field of life cycle engineering at an international level. Papers are invited from prospective authors from industry, universities and research institutions. Contributions in the form of case studies and practices, as well as theoretical and experimental research, are encouraged. The topics are: Life cycle engineering, design, management, assessment and costing, Integrated product policy, Sustainable consumption. Product-service systems, Service engineering, Sustainable business models, Design for environment/sustainability, Sustainable production, Sustainable supply chain management, Recycling, reuse and remanufacturing technologies, Reverse logistics, Maintenance engineering, Plant asset management, Energy saving technologies, Life cycle engineering education.

**Contact:** Shozo Takata takata@waseda.jp http://cirp-lce2007.jspe.or.jp/

## 4th International Conference & Exhibition on Design & Production of Machines &Dies/Molds / F

21-23 June 2007, Turkey

This Conference will be held at Altin Yunus Hotel with five star facilities in Cesme, a small town near Izmir on the westernmost tip of Turkey on the Aegean coast with fine beaches. It is close to historical sights like Ephesus and Bergamon. Izmir also hosts one of the largest industrial zones of Turkey with several Universities. The region is well served by the International Adnan Menderes airport.

**Contact**: Prof. Dr. Bilgin Kaftanoglu, bilgink@metu.edu.tr , www.diemold.org

## 2nd International Conference on Changeable, Agile, Reconfigurable and Virtual Production (CARV 2007)

**22-24 July 2007, Toronto, Canada**

The conference mission is to provide the international scientific community with a dedicated stage for debate and exchange of ideas and experiences. Contributions are welcome from both research projects and industrial case studies in the aforementioned field. Breakthrough advances, creative ideas and perspectives on future challenges are expected to create new focus points and to boost further international research.
Topics: Manufacturing Systems Paradigms, Factory Planning and Controlling, Product Development and Production Planning, Cost Management and Risk Management, Enterprise Design and Knowledge Management
**Contact**: Prof H A. ElMaraghy, carv2007@carv-production.com www.carv-production.com.

## CIRP ICME 2006
## Intelligent Computation in Manufacturing Engineering
### 25-28 July, Ischia, Italy

This 5th edition of the Seminar will examine the applications of intelligent computation and related methodologies including expert systems, fuzzy logic, neural networks, multi agents, etc., as well as hybrid systems combining one or more of these techniques as applied to manufacturing engineering problems. The main scope of the Seminar is to provide an international forum for the exchange of the knowledge, information, experience and results as well as the review of progress and discussion on the state-of-the-art and future trends in intelligent computation methods and tools applied to manufacturing processes. Special sessions will be dedicated to two EC's FP6 Networks of Excellence whose activities are focused on the areas of Innovative Production Systems and Micro Manufacture.
**Contact:** Roberto Teti: tetiro@unina.it

## 10th CIRP Intl Workshop on Modelling of Machining Operations / C
### 27-28 Aug 2007, Reggio Calabria, Italy

The aim is to bring professionals both from industry and from academy to present and discuss recent advances in Modelling of the Cutting Process and Machining Operations and to give the participants an opportunity to develop networking interactions. The program will deal with: Modelling of 2D and 3D machining processes, High-speed cutting and hard machining, Tribological aspects during cutting, Precision and micromachining, Dynamics and stability of machining operations, Monitoring and diagnostics of machining operations, Non-conventional modelling and optimisation of machining by artificial intelligence methods, neural networks, genetic algorithms, etc, Evolutionary Computations. Selected and fully

reviewed articles will be taken into account for publication in the Journal of Machining Science and Technology.
**Contact:** Prof. F. Micari, micari@dtpm.unipa.it http://cirp10ws.unical.it

## ICIT&MPT 2007

11-14 september 2007, Bled, Slovenia

Industrial tools can be described as one of the most important driving forces of modern manufacturing technologies. As nowadays the production and economy can be described as turbulent, full of changes, competition, opportunities and risks, the same is valid also for tool development and production. Since all material processing and tool manufacturing activities are under severe time pressure, contemporary toolmakers use a computer supported digital world to evaluate their ideas and their processing technologies before making a real tool. For these reasons a modern computer can be viewed as one of the most efficient tools for making real tools!. New material processing and tool manufacturing technologies, virtual manufacturing, intelligence systems, rapid tooling, tools for flexible and small quantity production, management of tool making, new materials and their treatments, concurrent processes and part (re)design methods, all these topics will be discussed during the gathering of respected specialists, engineers, researchers and scientists coming from the industry, research institutions or academia. Info: http://www.tecos.si/icit

## ICFG 2007 International Cold Forging Group meeting

16-19 September 2007, Padova, Italy

## 4th International CIRP-sponsored Conference on Digital Enterprise Technology (DET 2007)

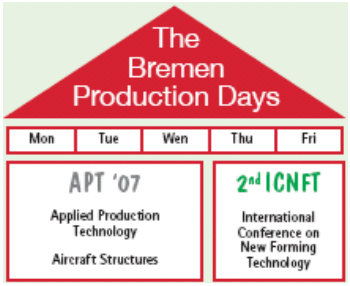
19 – 21 September 2007, Bath, UK

The aim of DET 2007 is to provide an international forum for the exchange of leading edge scientific knowledge and industrial experience regarding the development and integration of the various aspects of DET. The 2007 conference will address the key areas of DET, from the digital definition of products to the modelling and optimisation of processes, factories and production networks. New research in PDM/PLM and Enterprise Integration will also be reported.
Four special sessions will be organised seeking to cluster the contributions and discussions in new and emerging areas including, "Emergent Syntheses in Complex Networks", "Verification of Products, Processes and Systems", "Production Systems

Evolution" and "Interoperability". DET2007 will also facilitate the exploration of future and evolving standards for the application of DET technologies by the international research community.
**Contact**: prof. Paul G. Maropoulos, University of Bath admin@det-conf.org.uk
http://www.det-conf.org.uk

## 2nd ICNFT International Conference on New Forming Technology

20-21 September 2007, Bremen, Germany




This conference is the second part of the Bremen Production Days dealing with recent advances in technologies linked to plastic deformation, i.e. metal forming and cutting (2nd ICNFT) and one focused on production aspects for aircraft structures (APT '07).
Current production engineering research focuses on improving both production technologies as well as production systems. The idea behind The Bremen Production Days is to combine a conference which is focused on basic research with a conference focused on an application field.

Production of metallic parts is dominated by metal forming and metal cutting. Processes of both groups are based on plastic deformation of the work piece material. The aim of the ICNFT is to exchange results from recent research and development in this area. piece size is scaled down), questions of process stability, material behavior, development of new processes and application studies for new products should be discussed.
**Contact:** Prof. Frank Vollertsen icnft@bias.de www.bias.de/icnft

## 3rd ICTMP, International Conference on Tribology in Manufacturing Processes

24 - 26 September 2007, Yokohama, Japan

This conference is a follow-up to the 2nd ICTMP held in Nyborg, Denmark in 2004. The objective is to bring together professionals from industry and academia to present and discuss recent advances in Tribology in Manufacturing Processes including forming, cutting and casting of metals, polymers, ceramics and composites. Specific topics of interest are: Friction, lubrication and wear phenomena. Modeling of friction, lubrication and wear. Testing of friction, lubrication and wear. Development and characterization of lubricants. Tool materials and coatings. Friction assisted processes. Surface engineering, generation and properties of tribologically suitable surfaces **Contact:** Prof. A. Azushima azu@ynu.ac.jp www.ictmp2007.jp

## LANE'07 – Laser Assisted Net shape Engineering

25-28 September 2007, Erlangen, Germany

The 5th LANE 2007 is the only international Conference dealing with Laser Assisted Net Shape Engineering in Germany. The previous events in the conference series – in the years of 1994, 1997, 2001 and 2004 – met with a very favorable response from national and international participants from the fields of scientific and industrial research.

"Laser Assisted Net Shape Engineering" implies laser technologies, laser based approaches and laser integrated processes which aim at extending the application limitations of the production process, shortening process chains and producing a near net shape product. Nowadays, special attention is turned to the processing of "new materials", the application of "new beam sources", rapid prototyping and tooling as well as micro- and nanotechnologies.

Contact: info@lane2007.com www.lane2007.de

## CPI' 2007 - 5th International Conference on Integrated Design and Production Engineering

22-24 October 2007, Rabat, Morocco

The aim of this conference, launched 12 years ago, is to support integrating approaches of production at the conceptual, methodological and technical levels and to promote a dialogue between members of the international innovative industrial community. This conference will emphasize on current research aiming at the best control and integration of the activities related to the product life cycle. This edition follows six other conferences organized within the framework of "France-Morocco integrated actions".

**Chairman :** M. AGOUZOUL cpi2007@emi-ac.ma www.supmeca.fr/cpi2007

## 6th "THE" Coatings Conference

25-26 October 2007, Hannover, Germany

In most cases the success of products depends strongly on the properties of the outermost layer, which can be significantly enhanced by suitable coatings. The 6th International Conference THE coatings focuses on thin hard coatings and their applications. This conference brings together professionals from industry and universities to present and discuss latest developments around hard coatings in manufacturing processes and innovative products.

**Topics**: Manufacturing, Machine Components, Coating Deposition Processes, Properties Characterization, Surface and Tribology.

**Contact:** breidenstein@ifw.uni-hannover.de www.the-coatings.com/

**VRAP'07 - International Conference on Advanced Research in Virtual & Rapid Prototyping**
October 2007, Portugal

**2nd International Seminar on Assembly Systems – ISAS 2008**
21-23 March 2008, Toronto, Canada
Contact: H. ElMaraghy

**18th CIRP International Design Seminar**
7-9 April 2008, Enschede, Netherlands

**15th International CIRP Life Cycle Engineering Conference,**
April 2008 Sydney, Australia

**8th International Conference on High Speed Milling**
April 2008, Darmstadt, Germany

**41st CIRP International Seminar on Manufacturing Systems**
26- 28 May 2008, Japan
Contact K. Ueda

**3rd International Conference on High Performance Cutting**
12-13 June 2008, Dublin, Ireland

**1st International Conference on Process Machine Interactions**
June 2008, Hannover, Germany

**11th CIRP Conference on Modelling of Machining Operations**
16-17 September 2008 Gaithersburg MD, USA,

**19th CIRP International Design Seminar**
**30-31 March 2009, Cranfield, UK**