



**The International Academy for Production Engineering**

# **NEWSLETTER**

**N° 29 – November 2006**

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The logo CIRP originates from "Collège International pour la Recherche en Productique"

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The next issue of the Newsletter is scheduled for April 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](mailto:j.meijer@utwente.nl) preferable before **March 15<sup>th</sup> 2007**

Johan Meijer (Technical Secretary)

# 1. From the President

Dear Colleagues,

I would like to take this opportunity to share some thoughts with you, about the future development of CIRP. CIRP has had a leading position in the world of international research in manufacturing and production engineering and has pioneered a multi cultural, multi national environment, whilst simultaneously maintained the highest academic standards for its members. CIRP is an international academy, in the full sense of the term. It is a global organization, which was established even before globalization was a common term! However, manufacturing and production engineering change rapidly and CIRP has to sustain and enhance its position as a leading organization in the world arena of manufacturing research and development:



- CIRP has to meet the challenge of constantly renewing its membership, while maintaining and possibly increasing the academic standards for its members.
- CIRP has to enhance its ties to the manufacturing industry worldwide, and make sure that the industry is aware of the CIRP developments, participates in CIRP and communicates their needs to the CIRP community.
- CIRP has to increase its impact on the global scene since it is a global organization.

There is no doubt that CIRP, as an academic organization, needs discussion and consensus building (and inevitably an adequate time frame) before introducing any changes in its operations. In order to ensure a proper time frame for discussions, but also a coordinated action plan over a period of time, which may exceed that of one year of a presidency, the Board, and particularly the past, current and future CIRP Presidents, are undertaking a discussion focusing on issues such as:

- The CIRP publication policy,
- The restructuring of the work of the STC's and
- The creation of a CIRP network of younger research scientists.

Despite the problems we encountered in the beginning, with the new publisher, Elsevier, our relationship with them is improving daily. We just renewed/signed with them a contract that is rather beneficial for CIRP. Elsevier is an internationally known publisher that “fits the bill” for an international top organization as is CIRP. Work is also under way for creating one (and perhaps later one more) journal with high CIRP standards being complimentary to the role of our annals. This journal(s) will provide an additional outlay for the work of the CIRP members, the sponsored conferences etc.

As we all know, the STC work is the “backbone” of the CIRP. One needs to be particularly careful with any restructuring. It has to be built upon consensus and common sense. CIRP draws more and more attention both from academia and industry and thus, it needs a flexible structure that will allow the accommodation of the academic interests of our members, whilst simultaneously it will look into new subjects and developments. Therefore, there is a need for possible STC consolidation that would allow a better structuring of both our General Assembly and Paris meetings.

The junior CIRP network, as it has been provisionally named, aims at creating a pool of young researchers, interested in manufacturing and production engineering. There is work underway for establishing the rules and the framework that would allow us to create such a network, without burdening unnecessarily, the General Assembly and the Paris meetings. Last but not least, our Corporate Membership is particularly valuable to us. We plan to pay special attention to their needs and opinions for the benefit of industry and CIRP.

Dear colleagues, it is a great honor for me to serve as CIRP President for the year 2006-2007. I will be glad to welcome you all in Paris, at the end of January, and in the mean time, I am sending you my warmest regards.

George Chryssolouris

## 2. About CIRP

The International Academy for Production Engineering (CIRP) was founded in 1951 as Collège International pour la Recherche en Productique 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

#### **NAMRI/SME Award for Prof Altan, Lahoti and Oh**

The Society of Manufacturing Engineers (SME) and the North American Manufacturing Research Institute (NAMRI/SME) has announced three winners of the of the prestigious **NAMRI/SME S. M. Wu Research Implementation Award** named in honor of the late Professor S. M. Wu, University of Michigan, Ann Arbor who was highly respected for his problem-solving research in manufacturing.

The three recipients of the NAMRI/SME S. M. Wu Research Implementation Award are recognized for developing concepts and methods related to the finite element modeling of forming problems that was later commercialized into a Finite Element Method (FEM) package known as DEFORM. The three recipients are:



*Taylan Altan*  
*The Ohio State University*



*Goverdhan D. Lahoti*  
*The Timken Company*



*Soo Ik Oh*  
*Scientific Forming*  
*Technologies Corporation*

Scientific Forming Technologies Corporation (SFTC) was incorporated in Ohio in August 1991 by former Battelle employees to provide state-of-the-art process design and analysis technologies to the materials forming industry. SFTC acquired from Battelle the DEFORM business in October 1991, and is currently supporting hundreds of user sites worldwide. DEFORM is one of the most widely used FEM software for metal forming and die analysis by the industry.

The original research of Drs. T. Altan, G. D. Lahoti, and S. I. Oh and their efforts aimed at extending and refining this work and then participating in the transfer of this technology into the world of commercial application is a classic success story that embodies all of the attributes sought by the framers of the S. M. Wu Research Implementation Award.

## Doctor honoris causa for Prof. Dr.-Ing. Fritz Klocke



Great honor for Prof. Dr.-Ing. Fritz Klocke, one of the four chairman of the Laboratory for Machine Tools and Production Engineering at the Aachen University of Technology. The Department of Mechanical Engineering of the University Hannover awarded Prof. Dr.-Ing. Fritz Klocke a Doctor honoris causa, honoring his scientific and academic efforts in basic research, cutting and industrial applications. The certificate was presented to Prof. Klocke by the president of the University Hannover, prof. Dr. Ing. Berend Denkena who appreciated Prof. Klocke's wide research area research area covering cutting electro machining and special topics of metal forming. Additionally Prof. Klocke is committed to a lot of remarkable duties and responsibilities for the society of Production Science.

## SME Frederick W. Taylor Research Medal

**Taylan Altan** was also awarded with the 2006 SME Frederick W. Taylor Research Medal from the Society of Manufacturing Engineers at the Annual Meeting held in Los Angeles. This award was for significant published research leading to better understanding of materials, facilities, principles, operations, and their application to improve manufacturing processes.



## Emeritus Professor Erich Thomsen's 100<sup>th</sup> birthday.



Erich G. Thomsen has celebrated his 100th birthday on 9 September 2006. Many of his former students, colleagues and friends have joined him for this event. Erich was born in Germany, in 1906. He came to the United States in 1926 where he married Harriette, with whom he travelled the world. Erich joined the University of California in 1951 as Professor of Mechanical Engineering. He acted as a Visiting Professor at the Institute of Production of the Technical University, Aachen, Germany (1962) and at the Catholic University of Santiago, Chile (1965-66). He became Emeritus Professor in 1973. In 1980 he was awarded the SME Frederick W. Taylor Research Medal Award.



## Obituaries

Sad news received us at the first day of the General Assembly in Kobe. Eugene Merchant has passed away the day before. Shortly after the GA we got the message that another past president has passed away too.

### Dr. M. Eugene Merchant (1913 – 2006)



With the passing of Dr. M. Eugene Merchant we have lost a colleague who was our most willing volunteer, one of the strongest supporters of manufacturing research and a man who had, himself, contributed significantly to manufacturing research history.

From the time I was an engineering student, Gene Merchant was my boss, then my mentor and finally my colleague and friend. He has helped me in my career many times, just as he helped others at Milacron and throughout the field of manufacturing research. He was a brilliant scientist and a true gentleman, always willing to give his time to a colleague. Dr. Merchant's most referenced research work was based on his Doctoral Dissertation "Theory of Friction and its Part in the Metal Cutting Process" in 1920. He developed a metal cutting theory that researchers still try to build on. He built up a world-class research laboratory at Cincinnati Milling Machine Company, with staff recruited from all over U.S.A. Activities ranged from radioactive tool life testing to analog computer simulations of machine controls, to mechanics of metal forming processes, to improvements in EDM, ECM and drill bit sharpening, and many others. Today there are few manufacturing research labs anywhere in the world of comparable to the lab that Gene Merchant built.

When Gene Merchant first began his study of manufacturing systems he was struck by the amount of complexity and confusion manufacturers had built into their overall systems. He was certain that this could be improved upon and he believed that the new (at that time) digital computers would play a major role in the improvement. He studied these things, wrote about them and eventually convinced others to study them. This was the beginning of CIRP's STC "O."

Gene was a leader in the technical organizations of his profession. He served as Vice President of the American Society of Mechanical Engineers (ASME), President of the American Society of Lubrication Engineers (ASLE), President of the Society of Manufacturing Engineers (SME) and Advisor to the SME Education Foundation. He served CIRP as President from 1968 to 1969 and as Chairman of STC "O" from 1966 to 1971. He was a permanent member of the Liaison Committee from 1970 to 2006.



Throughout his career of more than six decades, Dr. Merchant received many honors and awards. In 1955, the Technical and Scientific Societies Council of Cincinnati named him Cincinnati's Engineer of the Year. In 1968, Dr. Merchant was awarded the ASME Research Medal. In 1986, he was the first to receive an honor named for him, The M. Eugene Merchant Manufacturing Medal, jointly sponsored by the American Society of Mechanical Engineers and the Society of Manufacturing Engineers. He was also recipient of the AM Award of American Machinist Magazine, the National Award of the American Society of Lubrication Engineers, the Research Medal and the Richards Memorial Award of the American Society of Mechanical Engineers.

Dr. Merchant is held in high esteem by colleagues world wide, and he has received many international honors, including The George Schlesinger Prize from the City of Berlin, the Tribology Gold Medal of the Institution of Mechanical Engineers (Great Britain), the Otto Benedikt Prize of the Computer and Automation Institute of Hungary, the Medal of the Polish Institute of Metal Cutting, and an award from King Carl XVI Gustav of Sweden. Gene received Honorary Doctorate Degrees from the University of Vermont, the University of Salford and GMI Institute.

He was dedicated to his family. Every year he led his wife, Helen, their children, and later grandchildren and great-grandchildren, on a wilderness camping and canoeing trip. The highlight of each trip was that Gene, working under primitive conditions, would bake a cake, which thrilled and delighted all the children.

All of his colleagues will greatly miss this cheerful, visionary man and we will try to practice the things he taught us.

Richard L. Kegg

### **Professor MILTON C. SHAW, 1915 - 2006**



Professor Milton C. Shaw, Honorary Member (1980) and Past-President of CIRP (1961) passed away on September 7, 2006 in Tempe, Arizona, USA. He was the first CIRP member from the U.S. He was invited by General Nicolau in 1952 to attend the CIRP meeting in Leuven, Belgium. Since then Milton and his dear wife, Mary Jane Shaw attended most of the CIRP General Assemblies. Professor Shaw was very active in both G and C groups and had contributed numerous technical papers and presented keynote lectures. He was also very active in the cooperative research between various members of the CIRP in these two groups. In our publication on "Forty Years CIRP," Shaw wrote the following: "My wife and I have

greatly enjoyed our association with CIRP through the years not only because of the opportunities it has offered but also because of the opportunity to form many strong social ties. One of the key benefits I derived from my association with CIRP was the fact that it resulted in attracting many very talented co-workers to my laboratory many of whom are now members of CIRP.”

The Shaws enjoyed lasting friendship with many CIRP members. He was a role model and a mentor for many researchers that followed him. The first modern text book in the U.S. on “The Metal Cutting Principles,” was written in 1953 by Shaw during his tenure at MIT (the 2<sup>nd</sup> revised edition came in 2005). We all will miss him dearly at the General Assemblies but will remember his many outstanding contributions to manufacturing science and technology.

Stillwater

Ranga Komanduri

## 4. General Assembly 2006

### Highlights of the presidential opening address

CIRP is the leading international academy for production engineering. We have and will continuously develop our organization to accommodate the development in industry. The unique character as “a circle of friends” was maintained over 50 years. Also the aims of CIRP are still valid:

- promote scientific production engineering research
- establish permanent relationships between researchers
- convene conferences of researchers to consolidate and publish results



CIRP has followed the development of production engineering to the situation today with a dynamic and complex production industry facing many new challenges. We have a large impact on production engineering research and education on an international scale – enhancing the basis for a competitive industry.

Manufacturing plays a major role in creating sustainable industrial growth and wealth in the world. The industry is today developing more rapidly than ever and many new important trends can be identified.

- ICT – Information and Communication Technology
- New materials and new design paradigms needed
- Miniaturization and precision engineering
- Integrative approaches
- Production systems and network

Within ICT trends/challenges are focused around: distributed and collaborative design process modeling and process planning; digital to physical environment integrators; enterprise technology (digital production platform of the future). Full utilization of ICT in a global world is in rapid progress.

To realize new products, advances in materials science form the basis for new products and services. We see many new materials like ceramics, polymers, metal alloys, biomaterials, intelligent materials etc. A strong trend/development is seen within miniaturization and precision engineering: new machining procedures for micro- and nanomanufacturing, challenges in scaling down macro to micro; micro

handling and measuring devices; high speed nanometer positioning, new design principles.

Within the trend of integrative approach we see: different disciplines, new ways of integrating emerging and new technologies, changes in manufacturing systems; combination of new materials, electronics and mechanical components. Also the changes in production systems and network are coming rapidly (flexible and reconfigurable distributed design and production.

Other trends are growing international cooperation, focus on international education and industrial innovation. The globalization raises the difficult issue how to handle intellectual property rights.

Looking at all these trends we foresee a future, which forces us to look at production from a holistic viewpoint. It is not sufficient to look at individual disciplines to set the new agenda for production. This brings us to the question is: Is CIRP ready to address the new challenges? The aim is the same, but to address the challenges we must:

- broaden the scope of production engineering
- include new and bordering fields
- broaden some of our existing fields
- adapt a multi-disciplinary view on many subjects

We have so far been developing CIRP by continuous improvements but we should speed up our development processes. We have to discuss:

- A new/revised strategy for CIRP (Mission, Vision, Goals)
- A stronger leadership, presidential periods should be increased.
- A flexible topic structure of STC's and working groups.
- A new recruitment policy for instance by establishing a Junior Academy of young researchers, attending CIRP seminars from which fellows and associate members can be recruited.

We will start the process *making CIRP ready to address the challenges of the future.*

## **The 2005 - 2006 presidency in retrospect** *CIRP – An International Academy with an exiting future.*

After the 60<sup>th</sup> General Assembly in Kobe I became Past President and in this short note I would like to share with you some of the good experiences and results in my time as your President. First I would like to express my appreciation to the Board, the Council and the Liaison Committee for their support and positive cooperation during my presidency. And also bring my warmest thanks to what I call the

presidential group i.e. President, Vice President and Vice President Elect when we discussed the initiatives that could be taken to enhance the development of CIRP. The Presidential Group ensures continuity in the initiatives.

It was good to experience the positive working atmosphere where all wanted to do their best for our organization. CIRP is a unique organization which has an important role to play in promoting scientific research in production engineering to stimulate a world wide growth in the wealth creating production industry. To enhance the possibilities for CIRP to play its important role many good decisions have been made the last year. Among these decisions I would like to mention:

- Change of name and title, an important decision to reflect our mission and goal
- The establishment of a new CIRP international journal (Editor in chief Prof. Monostori) to publish seminar papers
- The establishment of an international network of young researchers affiliated with CIRP (in charge: Vice President F. Klocke). This network will be important in the recruitment of associate members and fellows.
- Improvement of the work in the STC's to get more time for the business issues

Further important work has been initiated to create a more flexible STC structure to enable CIRP to broaden its scope in accordance with the development in the manufacturing industry, i.e. new topics, cross-multidisciplinary approaches. In the Liaison Committee a positive discussion ended up in a consolidation process headed by the President. Possibly the present 10 STC's can be consolidated into 3-4 larger STC's allowing for more flexibility in the future. A very important step for CIRP is to adapt to the future requirements for production/manufacturing engineering. In my view, we further have to discuss and resolve our strategy/mission and leadership to strengthen our position as an international academy to promote research and education in production engineering and attract young students and researchers to the field. I have been so glad to experience the energy and dedication within the CIRP members all. This points toward a bright future for CIRP.

Our corporate members are important in focusing our research on industrial issues and in sharing their knowledge with us – also here I see a strong dedication to play a role.

My year as President has been rewarding and I would like to thank my colleagues in the Presidential Group, the Board, the Council and the Liaison Committee and all the members for the support which made many decisions possible. I would like to thank the secretariat for the support, guidance and help.

Thank you - good luck to CIRP

- *CIRP that makes a difference*

Leo Alting, Past President

# Elections at the General Assembly

## Board and Council Members

President	Professor G. Chryssolouris
Vice President	Professor F. Klocke
Vice President Elect	Professor R. Hocken
Past President	Professor L. Alting
Secretary General Treasurer	Professor D. Dumur
Technical Secretary	Professor J. Meijer
Council Members	Professor J. McGeough
	Professor L. De Chiffre
	Professor D. Dornfeld
	Professor F. Kimura
	Professor A. Nee
	Professor F. Van Houten

## New Fellows

Prof. D. Allen (UK)	Prof. H. Bley (Germany)
Prof. D. Ceglarek (Poland)	Prof. L. Galantucci (Italy)
Dr. F. Hashimoto (USA)	Prof. S. Smith (USA)
Prof. A. Weckenmann (Germany)	

**Honorary Fellow** Professor M. Véron (France)

## New Associate Members

Prof. J-H. Ahn (Korea)	Dr. J. Allwood (UK)
Prof. C. Brecher (Germany)	Prof. P. Cunha (Portugal)
Prof. J. Fleischer (Germany)	Dr. S. Kara (Australia)
Dr. P. Koshy (Canada)	Dr. R. M'Saoubi (France)
Prof. W. Sihn (Austria)	Dr. S. Bruschi (Italy)
Prof. L. Settineri (Italy)	Prof. M. Zaeh (Germany)

## New Emeritus Fellows

Prof. J. Corbett (UK)	Prof. M. Kiuchi (Japan)
Prof. H. Kunzmann (Germany)	Prof. W.S. Lau (Hong Kong)
Prof. B. Lindström (Sweden)	Prof. V. Portman (Israel)
Prof. G. Pritschow (Germany)	Mr. J. Vigneau (France)

## New Corporate Members

Asahi Diamond Industrial Europe, France  
CIC marGUNE, Spain  
Coskunoz A.S., Turkey  
EADS CCR, France  
Inspire, Switzerland  
Multimedia University, Malaysia  
Sumitomo Electric Hardmetal Corp., Japan  
Toyota Motor Corporation, Japan  
Tusas Engine Industries, Turkey  
Uddeholm Tooling, Sweden  
VDW, Germany  
Yamazaki Mazak, Japan

Dr. V. Hays  
Dr. X. de Maidagan  
Mr. E. Acay  
Mr. H. Falgarone  
Dr. K. Wegener  
Dr. P. Brevern  
Mr. N. Kitagawa  
Messrs. T. Hayama & H. Yoshimura  
Mr. E. Tayyar  
Mr. S. Gunnarsson  
Dr. T. Würtz  
Dr. A. Nagae



### Taylor Medal



*The Taylor medal was awarded to  
Dr. X. Lu (USA)*

### General Nicolau Award

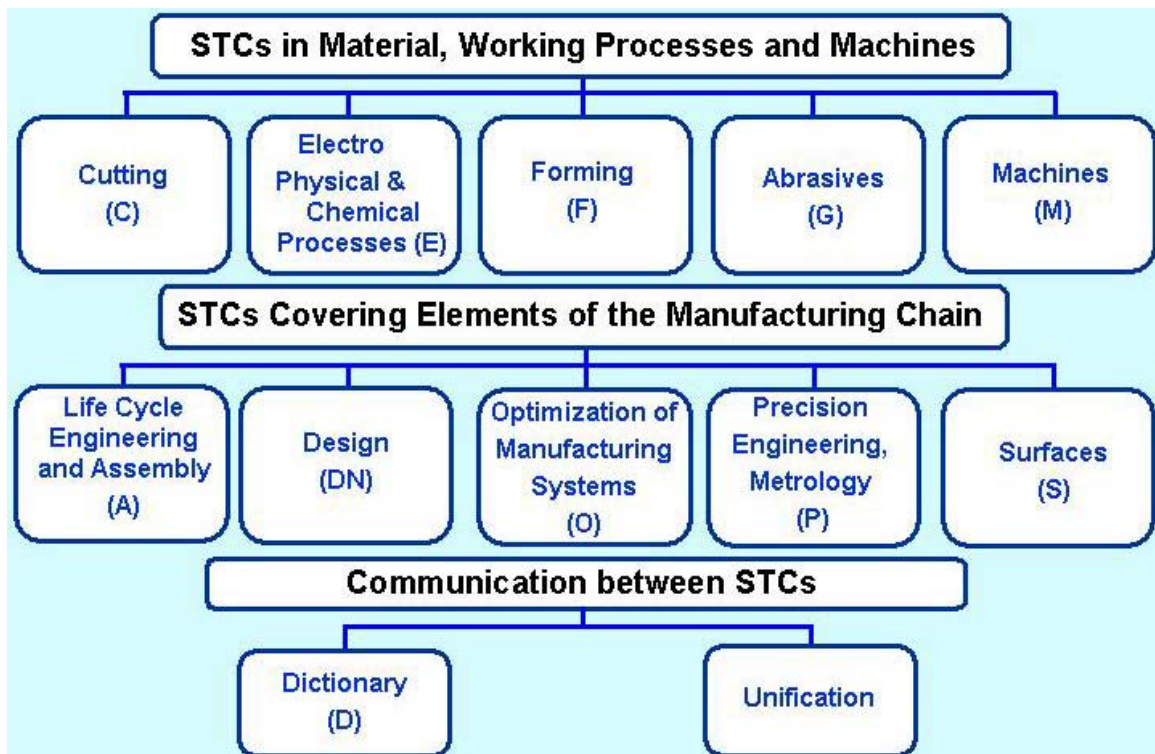


*Prof. Nam P. Suh receives the  
General Nicolau Award*



## 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. Mitsubishi
O	L. Monostori	N. Duffie	R. Teti
P	T. Estler	A. Weckenmann	W. Knapp
S	G. Goch	A. Balsamo	H. Hansen

## **STC Dn (Design)**

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. For Further information see: Meetings Seminars, conferences.

A. Y. C Nee, STC Dn Chairman

## **STC M (Machines)**

The STC M is focussing on the Digital Modelling 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 given by both academic and industrial members of the STC M sessions, working groups and sponsored conferences.

Digital Modelling 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.

A keynote paper was prepared and presented in Virtual Machine tools (CIRP Annals, Vol. II, 2005). The Mechatronics activities include sensors, actuators, and intelligent devices added to the machine tools in order 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.


Y. Altintas, STC M Chairman

## STC P (Precision Engineering, Metrology)

Recent research in coordinate metrology has led to the construction of a number of coordinate measuring machines (CMMs) designed to measure microfeatures, including fuel injector nozzles, inkjet printer components, and the geometry of MEMs devices. One of the most challenging aspects of such micrometrology 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 microprobing in both the commercial (Werth and Mitutoyo) and research laboratory (TU Eindhoven, PTB, and NIST) arenas. A number of probes have now been demonstrated with spherical tips less than 100 micrometers diameter 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. Comparisons of several microprobes of different designs, measuring 1mm ring gages, have demonstrated agreement at the level of  $\pm 100$  nm. Ongoing research is focused on reducing errors due to frictional forces that can dominate the performance of contact probes in the limit of very small sizes. A useful overview of CMM probe technology, including a number of microprobes, 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  
 W. T. Estler Chairman, CIRP STC-P

## 6. Science Citation Index

The latest Science Citation index numbers about the Annals show again a decrease in impact factor from 0.974 first year to 0.973 last year and 0.891 now as shown below.

Mark	Journal Title	ISSN	Total Cites	Impact Factor	Immediacy Index	Articles	Cited Half-life	Citing Half-life
	<a href="#">CIRP ANN-MANUF TECHN</a>	0007-8506	2348	<a href="#">0.891</a>	<a href="#">0.037</a>	136	<a href="#">&gt;10.0</a>	<a href="#">6.6</a>

Although 0.891 is a good number it is important to change the trend by referring to CIRP papers For detailed information see . <http://portal.isiknowledge.com>

# 7. Corporate Members News

## CMAG Meeting held on August 22nd, 2006 in Kobe, Japan

In his welcome, Prof. Inasaki stressed that the cooperation between academia and industry is the purpose of the CMAG group promoting information exchange between universities and industry. Dr. Mori mentioned the importance of manufacturing in the industrial world and said that a big effort is necessary to the new tendencies. He also highlighted the need of revitalizing Engineering as being fundamental to attract new generations.

Prof. Byrne gave a holistic view of the main activities in the Scientific and Technical Committees involving *Material Processing* namely: 'C' Cutting, 'E' Electro-Physical and Chemical Processes, 'F' Forming, 'G' Grinding and 'M' Machine tools.

Prof. Monostory gave a comprehensive overview of the Scientific and Technical Committees covering *elements of the manufacturing chain*: 'A' Life Cycle Engineering and Assembly, 'DN' Design, 'O' Optimization of Manufacturing Systems, 'P' precision Engineering, Metrology, and 'S' Surfaces.

Prof. Alting underlined in his address the importance of the CMAG lunch to foster personal relations between the industrial CMAG members and the academic members to articulate the needs of manufacturing industry on the scientific research agenda.

### Company Presentations CMAG Co-Chair. Juan M Minguez.

**Mori Seiki (Japan)** by dr. Makoto Fujishima ([fujisima@moriseiki.co.jp](mailto:fujisima@moriseiki.co.jp)). Mori Seiki was established in 1948 as "The Machine Tool Company" and is one of the most relevant machine tool builders in Japan now and employs 3502 people in three sites; Iga, Nara and Chiba Campus. The company applies innovative methods in



production; reducing the production time for machine tools from 18 days to 6 days. The main activities in R&D are focused on the reduction of vibrations, improved accuracy, application of direct drive systems and remote monitoring systems.

**Toyota (Japan)** by mr. Yoshimura ([hiromi\\_yoshimura@mail.toyota.co.jp](mailto:hiromi_yoshimura@mail.toyota.co.jp)). Toyota Motor Company produced 7.541.000 vehicles, has sales in 170 countries and operates 52 manufacturing companies in 27 overseas countries. Toyota is very concerned and committed with environmental technologies and produced the first hybrid car in 1997 resulting in a cumulative world-wide total of 360.000 hybrid vehicles. Topics related to production



technologies are focused in *Global competition*: Maintaining uniform quality across the world and constructing production lines capable of low-cost manufacturing. *Protection of Global Environment*: Reducing energy consumption and minimizing waste (dry or near-dry cutting and chip processing). *Diversified Customer needs*: Constructing production lines requiring short shutdown periods for retooling and different models.

**Mitsubishi Materials Kobe Tools Corporation (Japan)** by dr.Yamada ([yayamada@mmc.co.jp](mailto:yayamada@mmc.co.jp)). Mitsubishi Materials Kobe Tools started its activities as Cutting Tool division of KOBE STEEL, LTD in 1911 producing the first HSS drills in Japan. In 2000, the company became a member in Mitsubishi Materials Kobe Tools Corporation. The main products are drills, endmills, gear cutters and broaches. The main research activities are in the development and application of new coatings, new carbide substrates and



new cutting edge geometries. Excellent cutting performance and longer life in machining has been achieved with the newly developed coated carbide endmills.

**Korea Institute of Machinery and Materials KIMM (Korea)** by dr.K.H Whang ([hwk@kimm.re.kr](mailto:hwk@kimm.re.kr)). The Korea Institute KIMM was founded in 1991. Presently, 470 persons are involved. The main Institute is located in Daejeon with the Materials Research Centre located in Changwon. The R&D activities are: intelligent and precision machinery (micro- and nano- scale manufacturing), environment and energy machinery, system engineering research, advanced structure materials and new functional materials.





## 8. From the secretariat



*Chantal Timar-Schubert*



*Agnès Chelet*

### **Elsevier our new Publisher**

After many years with Colibri we have changed to Elsevier as publisher for the Annals. This was in effect already with Part One, the Annals of the August meeting. Maybe it did not catch your eye because the quality is as good as it was. A side effect was that the delivery was too late. It was compensated by the publisher by delivering a series of Annals and by Prof. Moriwaki who very quickly provided a CD for all attendees at the conference site. This was a good opportunity to check if a paper version is really needed. Although some members never carry the heavy book with them, the general feeling was still that only an electronic version will not be an improvement.



*The renewed contract is signed by Christopher Greenwell, Publisher (left) and Didier Dumur, CIRP (right) on 23 October 2006 in Paris.*

## Submission of papers streamlined

From now on, authors will send their paper directly to a specified email address, which will automatically download their paper file on the CIRP ftp site, where the secretariat, the EC Members and STC Chairmen can open it. Automatically-generated emails will be sent in return to authors and to the CIRP secretariat as a receipt.

## Electronic votes

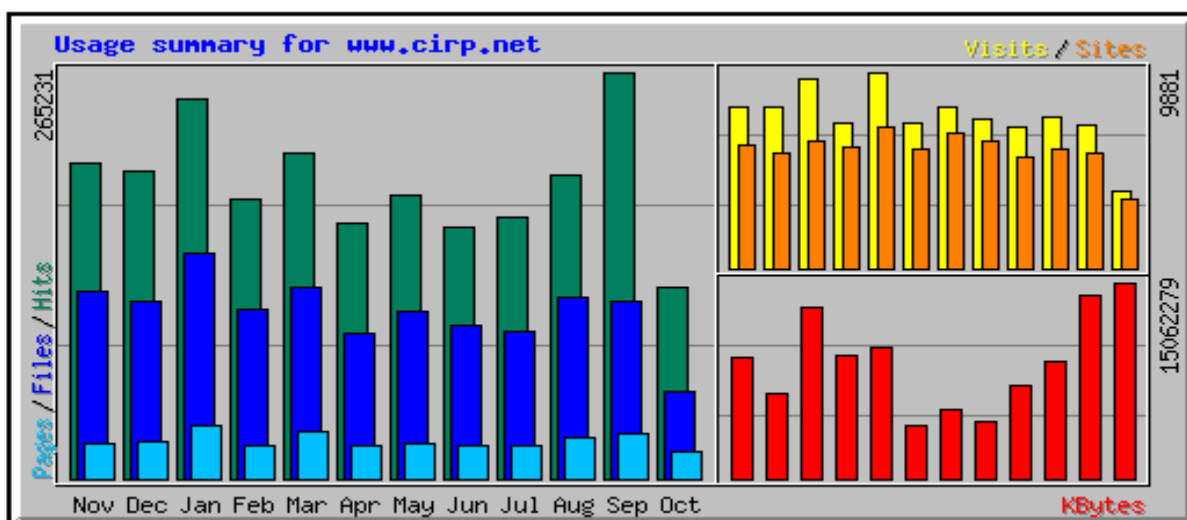
This year new Fellows and the Taylor medal award were voted by electronic ballots which worked out to be very successful.

## 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". The Annals will be online on 15 on June 15 for Vol.1 and December 1<sup>st</sup> for Vol.2.

## The CIRP website

Looking at the website you will see some changes already now and more in future. The Council has decided to update the website in accordance with our position as a leading academy. This will be done in two steps: 1. The secretariat will continuously improve the current site. 2. A new design will be made and thoroughly tested and discussed before implementation. Next steps will be discussed during the January meeting in Paris. Members who want to update the new membership titles e.g. in German, are reminded to respond on the mail sent by the secretariat earlier.



The use of the web is still going up. The most hits were in September, after the General Assembly in Kobe but the most Kbytes however has been transferred in October.



## Flyers for Corporate membership

The Flyers to recruit new Corporate members are updated in line with the new names and titles. Those who want to receive new flyers just ask the Secretariat.

## New Meeting place in Paris

With the new meeting place "la Maison de la Mutualité", better known under the name "la Mutualité" the problems where to have your coat will be definitely solved. There is enough meeting space for all the STC's now.



The address is: 24 rue Saint Victor, 75005 Paris. Nearest metro station: Maubert-Mutualité (line 10). Nearest RER station: St Michel (RER B). See map.

More information on <http://www.cirp.net/meetings/januarymeetingvenue.html>



## 9. Meetings Seminars, conferences

### **CIRP International Seminar on Assembly Systems -ISAS 2006**

**15-17 November 2006, Stuttgart, Germany.**

**Topics:** Holistic Assembly Systems. Assembly Modeling and Simulation. Assembly Process Technologies. Design for Assembly. Planning of Assembly operations. Methodologies for Planning. Design of Assembly tools and Fixtures. Flexible Assembly. Modular Assembly Systems. Robots in Assembly. Hybrid Assembly Systems. Human Working Groups. Digital Assembly. Intelligent Assembly. Quality Management in Assembly. Assembly Execution Systems. System integration. Integration of electronics. Micro Assembly. Disassembly. Assembly Logistics.



**Contact:** E. Westkämper, [www.cirp2006.iff.uni-stuttgart.de](http://www.cirp2006.iff.uni-stuttgart.de)

### **COMA 07**

**31 January-2 February 2007, Stellenbosch, South Africa,**

The International Conference on Competitive Manufacturing (COMA '07) is taking place for the third time. The main objective of the conference is to present recent developments, research results and industrial experience related to the improvement of competitiveness in the field of manufacturing. A further objective of the conference is to be a generator of innovative ideas and fruitful collaboration both locally and abroad.

**Contact:** D. Dimitrov, [coma@sun.ac.za](mailto:coma@sun.ac.za) <http://www.ie.sun.ac.za/coma>

### **International Conference on Smart Machining Systems / M**

**13-15 March 2007, NIST, Gaithersburg USA**

**Topics:** The program consist of presentations on all aspects of SMS technologies: Smart machine tool components such as spindles, drive systems, tooling, controls; Machine tool and process condition monitoring; Machine tool performance characterization and tracking; Predictive tolerance analysis and control; Process quality control and improvement; Robust optimization and other mathematical modeling tools for machining environments with high levels of uncertainty; Process modeling including Modeling of the tool-material-work-material interaction including Finite Element Modeling, measurement of material properties at high

















