



International Institution for Production Engineering Research

NEWSLETTER

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From the Editor

Thank you all! After the 53rd General Assembly in Montréal which is history now you have supplied me a lot of news. It is the first time in my short history that I had to skip or shorten the available material. You will find summaries of most speeches of the president during the General Assembly but also the ideas of our current President, for some already know as the face of CIRP even before his term has started.

Further you will see how membership has developed, which colleagues have been awarded and of course announcements of coming events.

The next issue of the Newsletter is scheduled for April 2004. Your contributions are very appreciated, you may send it to the CIRP office in Paris or directly to the editor at: j.meijer@utwente.nl preferable before **March 15th 2004**

Johan Meijer (Technical Secretary)

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1. From the President

Professor Michel Veron

Thoughts over the future of CIRP

CIRP is a well established Institution now, with about 500 members (Honorary, Emeritus, Active, Associate, Corresponding, Invited) from 42 countries. Our scientific production is very much appreciated among the Manufacturing Engineering world. This state has been achieved by a strict evaluation of the Papers by our Editorial Committee and the programme committees of all the seminars and conferences that CIRP is sponsoring. Thanks a lot to the members of these committees, because it is a hard work, sometimes misunderstood by some of our colleagues.

CIRP relations with Industries have been improved during the last years by a better preparation of the AMAG meeting (Associate Members Advisory Group) during the General Assembly: the Associate Members Lunch, on Tuesday, followed by the AMAG Meeting with presentations and discussions. This success and worldwide recognition are now well established, but we have to think over the future of CIRP. Along the years to come, many of our colleagues will retire and ask for Emeritus membership, which is a good way of keeping experienced people in our community. We have to think of recruiting good Corresponding and Active members. The procedure is rather long to reach Active membership, and that is why we have to think already now to young brilliant researchers.

Since some years, the Council is suggesting to increase, step by step, the number of Corresponding members from 125 to 150. Please think over this possibility, and invite young colleagues to participate in the CIRP activities. Looking forward to seeing you in Paris for the January Meetings,

2. About CIRP



The International Institution for Production Research (CIRP) was founded in 1951 to bring together research workers studying the application of scientific methods to production technology.

At present, CIRP has about 500 members representing some 40 different countries. The unique contribution of CIRP to manufacturing research is acknowledged by many of the world's leading companies and research institutes, who provide active

support through the associate membership. Today, CIRP is turning its attention to the use of computerized methods for manufacturing control, automation, robotics, interfacing and the computer-integrated factory of the future. The CIRP is organised in Scientific and Technical Committees (STC's) that are the groups responsible for coordinating the collaborative research. The main activities are:

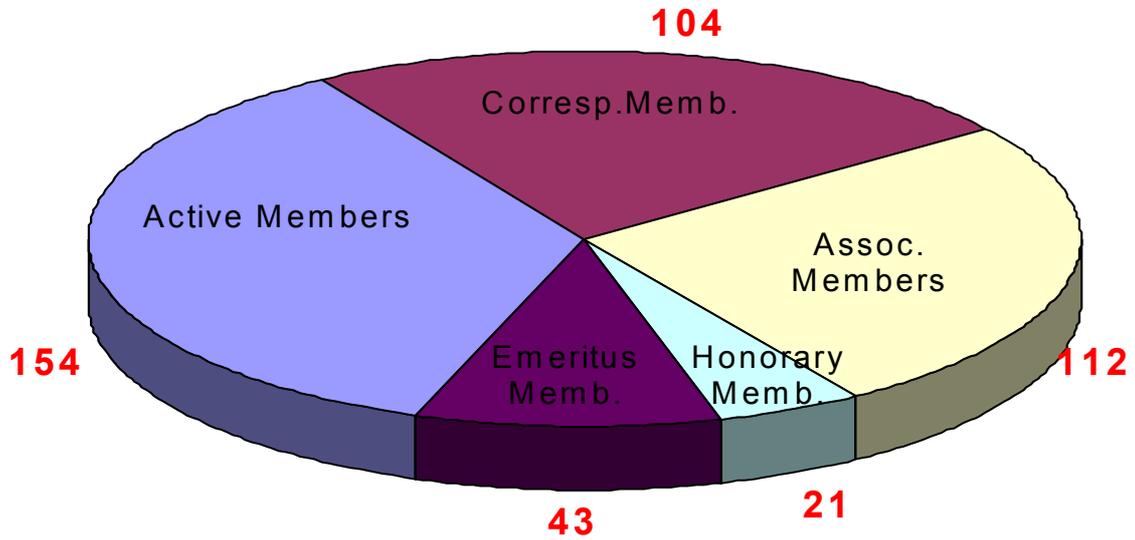
- Studying new techniques and technologies;
- Organising cooperative research projects, comparative testing and standardisation;
- Collecting and analysing bibliographies on manufacturing;
- Publishing synthesis reports on important technical problems;
- Organising seminars and meetings on specialist topics;
- Preparing internationally accepted terminology;
- Contributing to the work of the International Standardisation Organisation;
- Surveying the state of the art of research in different laboratories over the world;

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

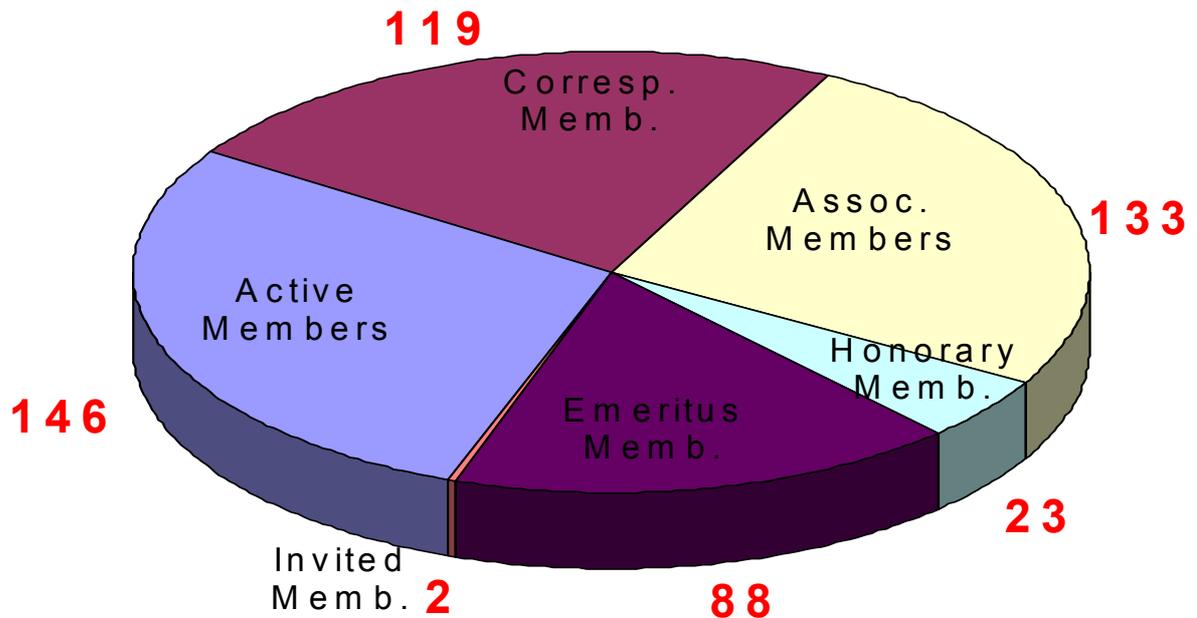
- A: Assembly
- C: Cutting
- Dn: Design
- D: Dictionary
- E: Electro-Physical and Chemical processes
- F: Forming
- G: Abrasive Processes
- M: Machines
- O: Optimisation of manufacturing systems
- P: Precision engineering and metrology
- S: Surfaces

Development of membership.

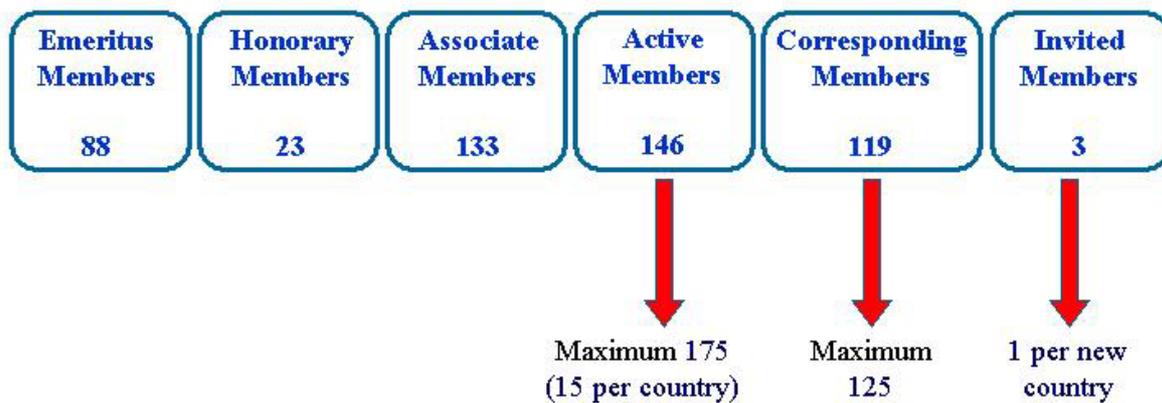
434 CIRP Members in 1993



512 CIRP Members in 2003



The graphs on this page show the development of the membership over the last 10 years.



Attendance of the CIRP members



Attendance of Active and corresponding members at the January and August meetings.

CIRP Promotion Presentation

During the January meeting a promotion presentation, compiled in PowerPoint format, has been made available for members who want to add some CIRP promotion material in CIRP sponsored conferences. It contains: The history. Aims and field of work. The organization. Membership. Represented countries. STC's and their scope. Publications. Collaboration network. Members who are interested to use this information can download it from the web or ask the technical secretary for the CIRP promotion.ppt.

3. Awards

Ms. Lanza receives Best Paper Award



The CIRP paper “Quality simulation for fast ramp up” received the Best Paper Award at the 36th CIRP International Seminar on Manufacturing Systems at Saarland University in Saarbrücken/Germany, that was held from June 3-5, 2003.

Prof. Peklenik, Prof. Ueda and Prof. Bley handed the price which was connected with an amount of \$ 1000 to Ms. Dipl.-Wi.-Ing. Gisela Lanza who is working for the Institute of Machine Tools and Production Science at the University of Karlsruhe, Germany.

As a scientist at the Institute and as assistant lecture Gisela Lanza deals with modeling, simulation and optimization of business processes. She works out a concept which applies quality simulation for Fast Ramp up to enable a controlled transition of the production system into a new state of serial production.

Professor Mayor Rafi Wertheim

At 11 November our past president professor Rafi Wertheim was elected as the Mayor of Kiryat Bialik, his home city (near to Haifa) for the next 5 years. He will enter the office on December 1st. We wish him full success.



Professor Günter Spur honoured on 28 October in Berlin



Prof. Dr. h.c.mult. Dr.-Ing. E.h. Dr.-Ing. Günter Spur, born 28. October 1928 in Braunschweig, is emeritus professor of the Technical University Berlin. For over two decades he was the director of both the Institute for Machine Tools and Factory Management of the Technical University Berlin and the Fraunhofer Institute for Production Systems and Design Technology. From 1991 to 1996 he was founding director of the Brandenburg University of Technology in Cottbus.

Professor Spur has contributed significantly to the science of production technology, especially in the fields of machine tools, manufacturing, factory management and computer integrated production. Besides writing several monographs and initiating various editions, he published over 800 articles and lectured extensively both nationally and internationally. Professor Spur is a member in a number of scientific institutions and academies. His achievements as scientist and university professor have been honoured widely. Speakers at colloquium were: Prof. Dr.-Ing. Eckart

Uhlmann, Geschäftsführender Direktor des IWF, Prof. Dr. Kurt Kutzler, Präsident der Technischen Universität Berlin, Prof. Dr. rer. nat. habil. Dr. h.c. Ernst Sigmund, Präsident der Brandenburgischen Technischen Universität Cottbus, Prof. Dr.-Ing. Dr. h.c. mult. Joachim Milberg, Präsident des Konvents für Technikwissenschaften der Union der deutschen Akademien der Wissenschaften, Prof. Dr.-Ing. Günther Clauss, Dekan der Fakultät V der TU Berlin, Prof. Dr.-Ing. Dr.-Ing. E.h. mult. Dr. h.c. Manfred Geiger, Vorsitzender der Wissenschaftlichen Gesellschaft für Produktionstechnik (WGP), Wolfgang Beisler, Geschäftsführer des Carl Hanser Verlages, Prof. Dr.-Ing. Eckart Uhlmann, Geschäftsführender Direktor des IWF

Professor Jay Gunasekera Distinguished

Professor Jay Gunasekera has been honoured with the title Distinguished Professor of the Ohio University. *(Photo: with daughter & wife before the convocation on Saturday, Sept.27).*



The Distinguished Professor Award, Ohio University's highest honor for a faculty member, recognizes scholarly accomplishment, professional reputation and contributions to the university. A lifetime designation, it provides one quarter of professional leave and the privilege of naming

one student annually to receive a Distinguished Professor Scholarship. Professor Gunasekera, chair of the Department of Mechanical Engineering in the Russ College of Engineering and Technology, has been working closely with the United States Air Force Materials Lab and a large number of aerospace engine companies such as General Electric (GE), Pratt & Whitney and General Motors Allison Gas Turbine. He has analyzed and developed novel processes for difficult-to-form materials such as titanium aluminide. He pioneered the computer modeling of the "Pack Rolling" process, which involved the rolling of titanium aluminide, sandwiched between two cover materials.

Professor Pat McKeown awarded by the JSPE



Professor Pat McKeown has been awarded the JSPE International Prize 2003. During his time as a member of CIRP he has concentrated his interests and energies on Precision Engineering, Metrology, Machines, Surfaces and high precision machining processes. He was President of our Academy in 1989. He was involved in the formation of the American Society for Precision Engineering in 1986 and received ASPE's Life Achievement Award in 2002. He was a founder member along with other CIRP colleagues of the European Society for Precision Engineering and Nanotechnology (Euspen) in 1998, was its first President in 2000 and was awarded Euspen's Life Achievement Award in 2002. In receiving the prestigious International Prize of the Japan Society for Precision

Engineering (2003), he is delighted to follow in the footsteps of his illustrious CIRP colleagues and friends, Dr Eugene Merchant, Dr Milton Shaw and Professor Toshio Sata. The award ceremony and lecture will be in Tokyo on the 3rd December 2003.

"JSPE was founded in 1933 and is now an institution authorized by the Ministry of Education with more than 7000 regular members, 300 corporate members and 100 honorary members from industry, universities and research laboratories.

4. Associate Members News

Associated Members Meeting on Tuesday 26th of August 2003.

Submitted by: Juan M Minguéz, AMAG Secretary (shortened)

The president, F. Jovane welcomed the attendees, made a brief summary of the CIRP history, explained the different kind of participation and membership, he mentioned that the CIRP community involves today near 500 people and addressed the importance of the Associated Members and the ways of participation as the possibility to submit scientific papers in the General Assembly and to take active part in the STC's. He concluded that we should try to increase the participation of Associated Members and to ascertain new ways of getting together.

R. Wertheim opened the second part of the meeting, informing about the evolution of the Associated Members meetings. Nowadays the meetings are held on Tuesdays and fully integrated in the General Assembly programme and structured in 3 parts.

- Associate Member lunch and discussion, chaired by the president and followed by a Poster Session.
- Associate Member short technical presentations, chaired by the past president.
- Associate Member Advisory Group meeting, chaired by J. Webster

The aim of the technical presentation is to better know each other, to have a knowledge of the R&D activities carried out at the different sites, to show the technological needs from the industry, and to foster a future collaborative research work.

The floor was then opened to the speakers for the technical presentations.

- S. Engin and I. Sassu, both **Pratt and Whitney**, jointly reported about the Machining R&D activities. They gave general vision about the Intelligent Machining activities taking into account (process control, machine tool analysis, process monitoring, process optimisation, cutting tools development and process modelling). They explained projects examples: *Turbine Discs* (milling, broaching and modelling processes) and *Light Alloy cases* (high speed machining, chatter suppression using stability lobes) by Mr Engin and *Diffuser System* (new technologies, new concepts and manufacturing challenges) Complex Shafts new concepts, taking into account how 80% of the material is removed. Finally they presented their Manufacturing Technology needs and welcomed a future collaborative research.
- A. Srivastava, of TechSolve, reported on the Primary Services focused in Machining Services at **TechSolve** regarding evaluation, analysis, problem solving and optimisation of part production taking into account the machine tool the machining accessories, machining parameters, cutting tools, workpiece material and the cutting fluid. He showed customer examples of Cincinnati machine tool, CNC Data Flute, UES Inc, RMI Titanium, Haakusi USA, OM Group, 3M Unitek and General Motors Powertrain.
- Y. T. Lin, **General Motors** Technology Center, reported about the "Smart Fixture, a CNC Automated Reconfigurable Machining Fixture". The assembly of the requested configuration is made automatically using the tool change mechanism of the machine tool and following the movements sequence programmed in the CNC of the machine tool, the basic components of the fixture System are stored in the tool magazine. The components are fixed on the fixture base magnetically.
- J. Lee, **University of Michigan**, informed about the *Intelligent Maintenance Systems*. The goal is to reduce to 'Near-Zero' downtime for manufacturing systems. They use networked devices to

schedule predictive maintenance before the failure occurs. Ultimately, creating machines that learn, self-optimize, and even repair themselves. The system utilizes the so-called "Watchdog Agent"™ for degradation assessment and Web-enabled device D2B platform.

- S. Badraway, **Moore Tool Nanotechnologies Systems**, USA explained the "Advances in Free-form Machining of Optical Surfaces" based in several examples for Automotive Displays (B-con Engineering) and F-theta lenses. He showed the characteristics, capabilities and set up of the tool slide servo (3-axis diamond turning lathe), with form and surface finishing results. He concluded by stating that 'Slow-Slide Servo' is a viable method for producing free-form surfaces. Surface finish and form accuracy are comparable to axisymmetric diamond turning, the system is inexpensive and has an easy set-up.
- H. Dodd, **Caterpillar USA**, reported on "Low Cost Hard Finishing of Large Module Gear Teeth". He presented the emerging needs for large module gear tooth flank hard finishing. He addressed "What is changing in the product performance needs and gave his vision for hard finishing. He finished his presentation defining the areas of focus for further research: Gear tooth flank hard finishing process. Define the relationship between gear performance characteristics and functional specifications for surface durability. Develop means of reducing heat treat distortion variation.
- S. Lang **National Research Council of Canada** –IMTI (Integrated Manufacturing Systems Institute) reported on Reconfigurable Manufacturing Systems research, explaining that the main goals and objectives are: To develop technologies for Reconfigurable manufacturing systems that will improve productivity and agility of Canadian manufacturers. Virtual Reconfigurable Manufacturing Environment, a system that can model, simulate and control reconfigurable manufacturing systems. Reconfigurable control systems and reconfigurable control processes. Parallel kinematics machines. Design methodologies for reconfigurable manufacturing systems. He also explained the UROCA research project "A Unified Reconfigurable Open Control Architecture.
- M. Zatarain **Tekniker Fundacion**, informed that the R&D Center is located in the Basque Country, Spain, and has a total workforce of 200 people, Turnover of 1100 K Euro with R. Bueno (CIRP Active member) as the Managing Director. Main activities are focused in Manufacturing and Microtechnologies. The organization the R&D Center is framed in the departments Mechatronics and precision Engineering, Production Engineering, Manufacturing Processes and Micro and Nanotechnologies. They are equipped with Advance Machine Tools, Measurement Equipment, PVD Technologies for coatings. They deal also with RAM techniques and Ambient Intelligence and they are very active in Ultraprecision Machining Processes and Micromachining.

R. Wertheim encouraged the speakers to send 2 slides summarising their activities, to be published in the CIRP Web page together with the minutes.

Associate Member Advisory Group meeting.

J. Webster opened this session, reminding the main objectives: To inform the Associated members about the more relevant conferences and seminars sponsored by CIRP and to discuss on the future of the AMAG Group.

Y. Koren reported on the **CIRP 2nd International Conference on Reconfigurable Manufacturing** held on the 20-21st August in Ann Arbor, USA.. The conference was opened by the Keynote presentation: Toyota Approach toward Globalisation of Production Lines by A. Nimi, President of Toyota Motor Manufacturing, North America. Conference Highlights: Two Keynotes, 57 papers from 14 countries, RMS demonstrator. Visionary Challenges for the year 2020. It is worth to mention that the conference topics are moving away from manufacturing to other related fields.

L. Alting, summarised the **CIRP seminar on Life Cycle Engineering** held in Copenhagen, Denmark 22 - 23 May 2003 in the Association of Danish Engineers' conference centre at Copenhagen harbour with 80 participants and representative form the European commission.

R. G. Wilhelm informed on The **8th CIRP International Seminar on Computer Aided Tolerancing Managing Geometric Uncertainty in the Product Lifecycle** April 28 - April 29, 2003, Charlotte, North Carolina, USA Organized by the Center for Precision Metrology and the Department of Mechanical Engineering and Engineering Science, University of North Carolina at Charlotte. Two Keynotes were 'Specifications, Operators and Uncertainty's, Henrik S. Nielsen, HN Metrology Consulting, Inc. 'Trends in Tolerancing Research', Robert Wilhelm, UNC Charlotte and 31 papers.

H. Bley reported on the **36th CIRP International Seminar on Manufacturing Systems**, held on June 03 – 05, 2003, at Saarland University, in Saarbrücken, Germany. Main reference: *Progress in Virtual Manufacturing Systems*. Ther were 120 participants, 94 papers and 3 keynote speakers. The Best Paper Award winner was Mr. Lanza.

Prof Tichkiewitch gave detailed information on the 2003 International CIRP Design Seminar held at the Laboratoire 3S, in Grenoble, France, on May 12-14, 2003 , 60 papers were presented. 132 participants attended the Conference and a tour to visit CATERPILAR was organized as well.

Discussion Points About The Future of AMAG.

It was reminded that *scientific papers* could be submitted by Associated Members through the STC chairman and sponsoring Active Member.

New Associated Countries: R. Wertheim said that has been an attempt to include Zimbabwe but unfortunately has not been possible owing to technical reasons.

H. Kals initiated a discussion about the importance and the role of the Associated Members within the CIRP organisation, he mentioned that up to now the participation has been rather weak and it would be of great interest to strength their participation and therefore to clarify and to define *the Strategy, the Vision and the Road Map*. It is proposed to organise a Round Table at the 2004 CIRP January Meetings in Paris. It is suggested to meet a reduced group of 6 - 10 people; 3 - 5 from Associated Members and the 3 - 5 people from Active Members.

The full version of these minutes is available on the web

5. General assembly 2003

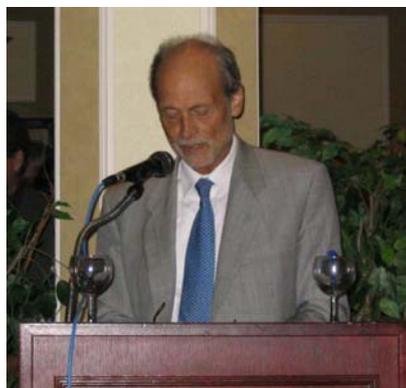
Welcome Reception, 24 August 2003

Professor Francesco Jovane: Ladies and Gentleman, dear CIRP Friends welcome to Canada, to Montreal, the venue of the 53rd CIRP General Assembly. It is a great pleasure to see tonight so many CIRP Colleagues and guests. We have the pleasure of meeting in one of the most beautiful places in Canada, where history, tradition, art, culture, industry and people meet to generate the wonderful Montreal. Canada is the



place of internationally well-known Universities, Research Centres and world class Manufacturing Industries attracting talented people from

throughout the world. Montreal is an outstanding example of this: the organized visits along with the special lectures tomorrow will give us the Scientific and Industrial flavour of this Country. Our hosts have worked at their outmost to offer us a General Assembly to enjoy and remember. Thank you all. Let's wish each and every one of us a successful and pleasant week.



Opening Address by the president, 25 August 2003

Following our tradition the General Assembly will be opened by a performance of Canadian Indians, wishing success to our work. The General Assembly is the highest moment of CIRP life, as members and their families get together for exchanging scientific and technological experience and friendship. More than 400 participants will be attending the first part where more than 130 papers will be presented. A high share of participants will stay for the second part, when Round Table and the STC's will discuss about ongoing and future activities.

This is the second time that CIRP comes to Canada. The first time was in 1981 when the General Assembly was held in Toronto. Canada is the largest Countries in the world. 10 Millions square Km! It spans across 5.500 km from the Atlantic to the Pacific Ocean, and 4.600Km, North-South. Canada is very active in R&D, High-Education, world-class Manufacturing. It invests in R&D nearly, 2% of its GDP. Canada has the highest percentage in the world of population with tertiary-level education for the age group (25-34). It is 4th, at world level, in investments in Knowledge, i.e. R&D, high Education, Software. Canadian University, Research Institutes and Centres, World-Class Companies are very well known and rated at International level: they attract talented people from throughout the world. The rate is one of the highest in the world.

For CIRP Members -involved in Research, Education and advising Research Institutions and Governments- learning about the ongoing activities, vision, strategies of this great Country is a relevant experience! The structure of a General Assembly is a classical example of Knowledge



diffusion, while our STC's may be seen as "confrontation" places for knowledge generation. The Round Table on the Economical, Social, Technological Changes and their impact on CIRP may be an important step forward. This Country it is contributing to Science, Technology, Education, advanced Industry, but more than any other one, to preserving nature for present and future generations. (FJ)



Civic Reception, 25 August 2003

The General Assembly organized by Prof. Hoda Elmaraghy and the Organizing Committee is the highest moment of our annual activity. More than 400 members and guests are participating. More than 130 strictly selected papers are being presented. Today, during the open session, the Keynote Addresses of Professor Brzustowski, President of the NSERC and Mr. Benoit Brossait, from Pratt and Whitney Canada, gave us a view of the achievements of Canada in Innovation, both from the public and industrial point of view.

During the Opening Session we have presented the Taylor Medal 2002, for his scientific achievements, to a young scientist Dr. Erhan Budak who worked with Professor Altintas, University of British Columbia, within a Research Projects in cooperation with Pratt and Whitney Canada. Now, as many from throughout the world who have studied in Canada, dr. Budak is a Professor at the Sabarei University in Istanbul, Turkey.

Closing up, I would express the sincere appreciations for the work done by the organizing Committee, the accompanying persons Committee and the support received by Pratt and Witney. (FJ)



Assembly Dinner, 22 August 2003

We are in the Windsor Station, a fine example of 19th Century Romanesque Revival, at one time hub of Canada's railway system. Tonight, this station evocates two kinds of journey: we can travel physically from one place to another, we can travel intellectually from one State of Knowledge to another. Our General Assembly, hub of our knowledge system, has been the intersection of the scientific itinerates of the participants.



Montreal has proved to be what was promised during the presentation last year in Spain according two categories of reporters: The colleagues who

went to visit the world-class manufacturing Companies and Universities and the ladies who visited from the underground city, to Montreal Landmarks, to the Biodome in the Olympic park and St. Helene's and Notre Dame Islands, along with museums and the historical quarter and the special atmosphere of this wonderful city and people. All were, happy for what they had seen and the attentions received. Summarising the first part: Manufacturing Research, Education, and relevant policies are fundamental for Advanced and New Emerging Countries. (FJ)

Farewell Dinner, 30 August 2003

Some impressions:



Most ugly tie?



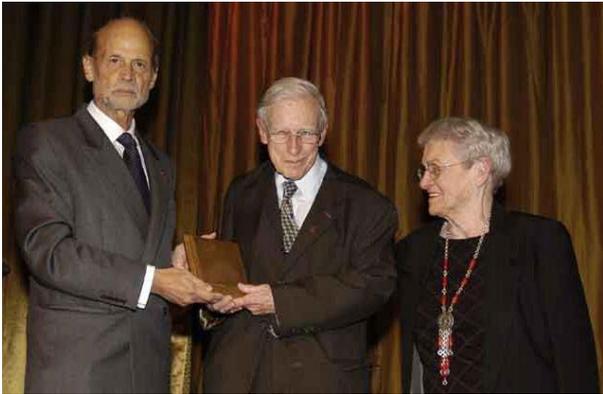
The strongest?



Pleasure and friendship.



Eugene Merchant celebration, 30 August 2003



Eugene merchant, who turned manufacturing into science.

He has covered from developing his theory on cutting to developing visions, paradigms concerning the Factory of the Future and related technologies: a unique long lasting continuity involving Science, Education, Industry. He has developed, in various ways, a great deal of the DNA of the artificial world we are developing in the domain of Manufacturing. This DNA has been transmitted to generations

of people, in the scientific as well Industrial world. It is a part of what we are, scientifically and technologically. Member of CIRP since 1956, President of CIRP 1968-1969, Dr. Merchant has been the long lasting thread connecting years after years CIRP life. With Helen, they have been a royal couple around which science and friendship would assemble. From young people to people young minded, but with white hair, we are grateful and full of admiration!



Eugene in the middle of the "presidents".

Round Table, Organized by Professor Claudio Boër

"Economic, social and technological changes" was the subject of the CIRP 2003 Round Table. Three representatives from industrial developed regions were among those invited to address the session. Their analysis of present global circumstances, and their vision for the way forward for manufacturing were fascinating and stimulated much discussion among the audience.

- *Social Perspectives.* Professor Hiroyuki Yoshikawa, President of the National Institute of Advanced Industrial Science and Technology (AIST), Japan, past Chair of IMS, whose vision led to the formation of IMS.
- *Economic Perspectives.* Robert Cattoi, Chairman of IMS International, ex-President of Rockwell Corporation
- *Knowledge Perspectives.* Ezio Andreta, Director of Nanotechnology, Material and Production, DG Research at the European Commission.

The Round Table's premise was the need for manufacturing to adapt new-sophisticated products using competitive and sustainable processes within new organizational models. The implications for manufacturing of new emerging technologies such as biotechnology and nanotechnology need to be



assessed. Emerging economies and the accompanying shift of the center of gravity in manufacturing towards developing regions also has profound implications. The required adaptation of existing manufacturing industry to this new world will rely heavily on new knowledge obtained through innovation and research in enabling technologies and transformational processes. (CB)

Conclusions by professor F. Jovane

At the end of the rich and stimulating Round Table, I would thank the organiser, the speakers and the participants. The contributions from the presentations and the discussions, addressing new strategic views and actions, respond to the CIRP long standing aims and structure. They point to a CIRP role which may be defined as world forum for Manufacturing, for industrially Advanced and New Emerging Countries, covering from R & D to Education and Technology Transfer. Institution contributing to Technological Foresight, within the K-economy framework Reference Institution, representing at world level, R & D and Education in Manufacturing. CIRP is moving towards this role. The fast pace of NEST Context changes may require, on our side, more and “quicker” efforts.

The full text of the round table, including the discussions can be found in part 3 of the annals.

Final words by Professor Jovane at the General Assembly, 30 August 2003

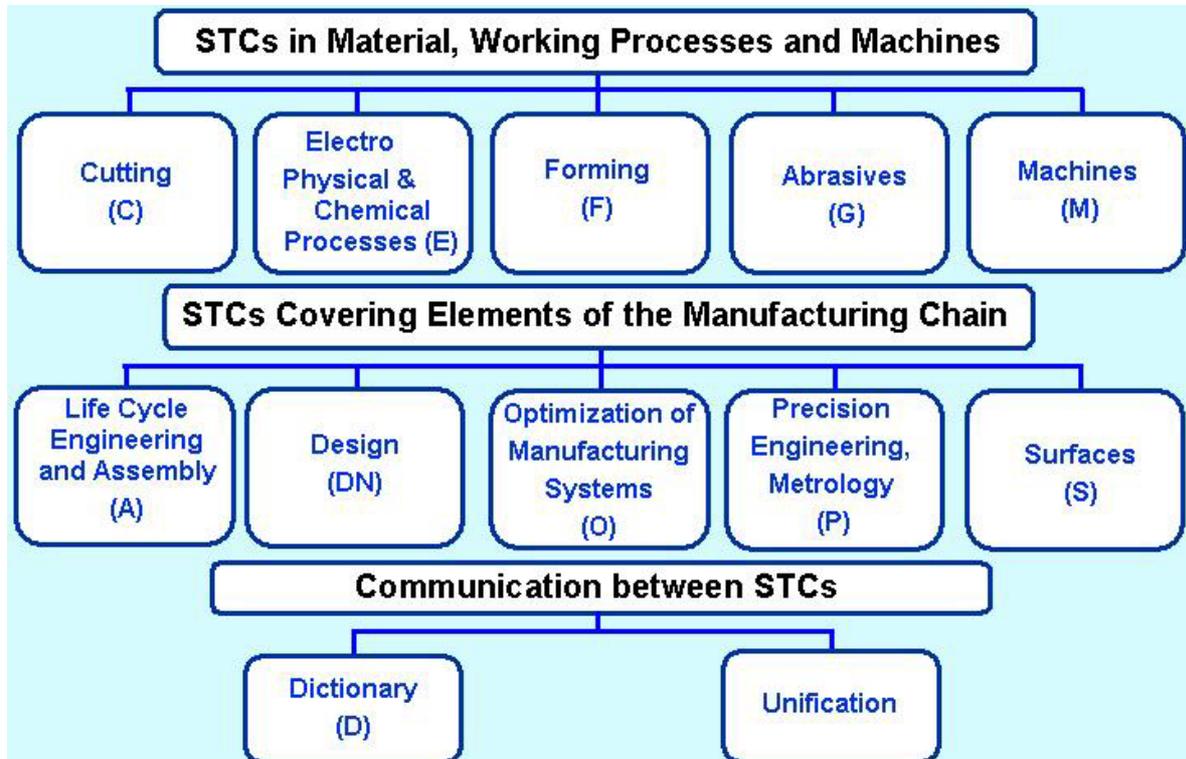
A year ago in San Sebastian I started serving as your President. At the end of my mandate I have a better knowledge of what a President should do. A President represents the single member in relation to the outside, the institution rules, the colleagues. He represents the community of members in relation to the external world, the college, the single member and all this within current and strategic affairs a long year, a long journey and in particular in two events during which “intellectual journeys” take place.

A President must operate within such domains of complexity, playing roles requested by the single, by the group, by the Institutional bodies or by an “incoming future”. It is a challenge for those who have been called to play such a role. They have to play it as individuals, whose hearts and brains must serve colleagues, the College. All this is possible if one realizes that he, as a president, is a part of a chain of continuity to which, through requested actions, he may contribute at operational and strategic level. That means together with past and incoming Presidents and colleagues: Structure! Within this frame of reference I have acted, serving CIRP and Colleagues. Serving as a President and hence, representing you, has been a great honour for me. I thank you for it.

I have worked to contribute to membership and Annuals evolution, strategic moves of CIRP towards Manufacturing of the Future and related activities. At European level: CIRP Colleagues are working on the Manufuture 2003 European Conference to be held in Milano, at global level, developing a common vision concerning Advanced and New Emerging Countries. Now it is time to hand over the Presidency to Michel Veron. We all have identified Michel with CIRP; the Presidency is in very good hands.

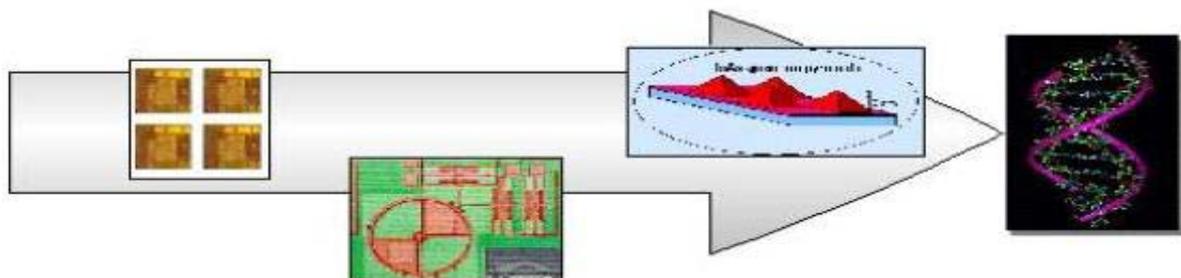
6. From the STC's

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 "E"

Prof. Malshe presented in the August STC "E" session a roadmap on Micro and Nano Systems. This will influence design, tools, materials, manufacturing processes, packaging & integration as well integrated nano and micro systems. Examples of courses for nanomaterials and manufacturing research are: Nanochemistry, Nanophysics, Nanomanufacturing, MEMS Fabrication and Packaging, Surface engineering, Packaging and Integration and Technology and Entrepreneurship. The involved disciplines are: Physics, Chemistry, Biology, Mechanical, Electrical, Chemical and Industrial Engineering.



Trend of Progress in the Field of Micro and Nano Systems. After the Integrated Circuits (IC's) we get the Micro Electro Mechanical Systems (MEMS), then Quantum structure, Laser Dots and finally DNA Computing

7. Meetings Seminars, conferences

ICME '03

9th International Conference on manufacturing Excellence 13-15 October 2003, Melbourne

ICME '03 is very strongly focused on achieving useful outcomes of original and important research and practice in manufacturing. There will be a separate, but related, stream covering important practical aspects of industry excellence.

Contact: icme@eelab.cmit.csiro.au web: <http://www.preston.cmst.csiro.au/icme/>

CPI'2003

3rd International Conference Integrated Design and Production 22-24 October 2003, Meknes, Morocco

This conference follows four other conferences also organized between France and Morocco within the framework of "Integrated Actions". This conference is to propose integrative approaches to production at the conceptual, methodological and technical levels and to promote a dialogue between members of the international scientific community and also with industry

contact: michel.carrard@iut-cachan.u-psud.fr <http://gmp.iut-cachan.u-psud.fr/cpi2003>

MDP-8

Conference on Mechanical Design and Production 4-6 January 2004, Cairo

The conference brings together engineers and scientists from all over the world with a view of exchanging experience and highlighting the state of art in the fields of Mechanical Design and Production. Emphasis is also given to problems related to technology transfer to developing countries especially in Africa and Middle East.

Design and Tribology: Methodology, Optimization, Reliability, Maintenance, Fail-Safe Design, Design for Environment, Rapid Prototyping, Geometric Modeling, MEMS Design, Computer Aided Design, Nanotribology, Biotribology. **Materials and Manufacturing:** Composites, Smart Materials, Crystal Plasticity, Materials Testing and Evaluation, Casting, Welding, Machining, Metal Forming, Nano Technology, Production Automation, Computer Aided Manufacturing. **Solid Mechanics:** Mechanics of Materials, Constitutive Modeling, Inelastic Behavior, Structural Analysis, Fracture Mechanics, Fatigue and Crack Propagation, Failure Analysis, Finite Element Analysis. **System Dynamics:** Robotics, Mechatronics, Mechanisms, Control Theory, Fuzzy and Adaptive Control, Smart Structures, Vibration, Acoustics, Machinery Diagnostics. **Industrial Engineering:** Productivity Measurement and Improvement, Production Management Strategies and Techniques, Facilities and Maintenance Management Quality Management, Human Factors Engineering, Industrial Applications and Case Studies.

Contact: prof. Ehab El-Danaf, e-mail anaf@mdp web site: www.mdp-conf.org.

**7th CIRP Workshop on Modelling in Machining & Forming Operations
January 2004, Nantes, France**

COMA '04

**International Conference on Competitive Manufacturing
4-6 February 2004, Stellenbosch, South Africa**

Topics: Rapid Product Development: Design for Manufacturing and Assembly, Knowledge Management, Reverse Engineering, CAD/CAE, Concurrent Engineering, Rapid Prototyping & Tooling, Virtual Prototyping, HSC & EDM, Process Chains, Non-conventional Processes, Networks in Product Development Agile Manufacturing: Expert Systems in Manufacturing, CAPP/CAM, Machining, Forming, Metrology, Mechatronics, Precision Manufacturing, Robotics, Communication Networks, Reliability, Sensing, Assembly, Automation, Quality Assurance, Intelligent Manufacturing, Software for Manufacturing, Digital Factory Operations management: Factory Planning, Production Planning and Control, Inventory Control, Modelling and Simulation, Scheduling, ERP-applications, Supply Chain Management Enterprise Design and Integration: Product Life Cycle, Human Interface, Web-based Design and Manufacturing, Technology and Innovation Management, Total Quality Management, Distributed Control Systems, Socio-economic and Environmental Issues, Co-operative Value Adding and Enterprise Engineering.

Contact: D Dimitrov e-mail: coma@eng.sun.ac.za website: <http://www.ie.sun.ac.za/coma>

**XV Workshop on Supervising and Diagnostics of Machining Systems
Machine tools and factories of the knowledge
15 - 17 March 2004, Karpacz, POLAND**

Topics: Data and knowledge representation for intelligent and efficient machining. Knowledge based machine tools flexibility design and management. Virtual machine tools and online errors compensation. Hybrid high precision machine tools based on knowledge system. Internet and extranet application form manufacturing knowledge actualization and management. Factory innovation and development management. Machine and factory human oriented. Knowledge, business and human problems integration at the factory and production system. Virtual manufacturing and real time processes monitoring and optimization. Virtual factory innovativeness perfection. Machine tools and hybrid processes integration. Knowledge based assembly systems virtualization and optimization. Agent based machine tools and machining systems design. Agent based manufacturing planning and management. Intelligent manufacturing systems. Manufacturing precision intelligent design and control. Virtual machine tools prototyping. Digital factories, basis for factory planning **Conference Chairman:** Prof. Jerzy Jedrzejewski

ISEM 14

30 March-4 April 2004, Edinburgh, UK,

Topics: Electro Discharge Machining (EDM), Micro Machining, Laser Beam Machining (LBM), Electro Chemical Machining (ECM), Electron Beam Machining (EBM), Ultra Sonic Machining (USM), Water Jet Machining (WJM), Other Electrical Machining (AJM, AFM, IBM, CHM.), Rapid Prototyping, Environmental, Safety and Legal Aspects.

Contact: J.A. McGeough e-mail: lisa.ellis@ed.ac.uk web site: www.lifelong.ed.ac.uk

7th CIRP International Workshop on Modelling of Machining Operations

4 - 5 May 2004, Cluny, France.

The objective of this Workshop is to provide an opportunity for the engineers, academicians, scientists and researchers to present their works and findings as well as to share information on the latest developments that are taking place in the field of advanced Modelling of Machining Operations. Sessions on: Modeling of 2D/3D cutting process, High speed cutting and hard machining, Tribological aspects during cutting, Green manufacturing operations, Precision machining. Chairman Prof. A. Moisan e-mail: alphonse.moisan@cluny.ensam.fr website: <http://www.cluny.ensam.fr/cirp>

CIRP 2004 Design Seminar

“Design in the Global Village”

16 – 18 May 2004, Cairo, Egypt

Scope: Advances in computer technology and the exponential growth of the Internet have created opportunities for local and global communication, which were never before possible. This Seminar aims to highlight contributions in the areas of design theories, principles and methodologies, their practical application, the development of computational tools to support distributed design and manufacturing and the whole product life cycle in a changing world. The discussion of leading edge research work will stimulate exchange of ideas among participants and potentially establish collaborative work in the global village: West to East and North to South.

Topics: Design Knowledge In A Changing World. Appropriate Technologies And Standards. Creative And Innovative Solutions. Holistic Design. Methods For Product & Process Design. Product Design, Modelling And Simulation. Integration Of Design Methodologies With Advanced Technologies and Business Models. Human Factors And Cognitive Models. Industrial Collaboration & Team Work. Quality By Design, Optimization And Control. Manufacturing Databases - Design Education. Collaborative And Participatory Techniques. Digital Design And Virtual Manufacturing. Virtual And Rapid Prototyping & Mock-Ups. Smart Design For Sustainability. Design For Local And Global Consumers. E-Design & Manufacturing For New Economies. Linking R&D Institutions With Industry : Examples and Case Studies. Innovation in Design Education - Models and Implementation. **Contact:** CIRP 2004Dn Secretariat, e-mail: cirp2004dn@uwindsor.ca website: www.uwindsor.ca/CIRP2004Dn

37th CIRP International Seminar on Manufacturing Systems (ISMS)

Digital Enterprises, production networks

19 - 21 May 2004, Budapest, Hungary

Contact: László Monostori isms2004@conferences.hu.) (<http://www.sztaki.hu/CIRP-ISMS2004/>)

5th International Workshop on Emergent Synthesis (IWES'04),

24 - 25 May 2004, Budapest, Hungary

Contact: László Monostori: iwes04@conferences.hu (<http://www.sztaki.hu/IWES04/>)

APE 2004
ADVANCES IN PRODUCTION ENGINEERING
17 - 19 June 2004
Warsaw, Poland

Scope: Material Removal Processes Cutting, Abrasive and Non-conventional Machining: EDM, ECM, LBM, Metal Forming, Casting and Joining Processes, Machine Tools and Manufacturing Systems, CAD/CAM and Concurrent Engineering, Computer Integrated Manufacturing, Artificial Intelligence in Production Engineering, Production Management, Rapid Prototyping, Time Conserving Technologies, Human Factor in Manufacturing, Clean Manufacturing, Transfer of Innovations.

Contact: Lucjan Dabrowski, e-mail: ape2004@meil.pw.edu.pl
website: <http://www.meil.pw.edu.pl/ape2004>

**3rd International Conference and Exhibition on Design and Production
of DIES AND MOLDS**
and
7th International Symposium on Advances in Abrasive Technology ISAAT 2004
17-19 June 2004, Bursa Turkey

Information Prof. Bilgin KAFTANOGLU, Chairman info@diemold-isaat.org www.diemold-isaat.org

11th International CIRP Life Cycle Seminar
Life cycle product – Quality management issues
20-22 June 2004, Belgrade, Serbia

The management of sustainable development considered from the aspect of product's life cycle and its quality management represents a real challenge for researchers, economy and educational system. The aim of this Seminar is to acquaint the home public and experts with the achievements and trends in the world in this field. This will later serve as a basis for building of national strategy in this respect. The main objective of the Seminar is to provide a international forum for the exchange of knowledge, experience, research results and information about various aspects of LCP in QM.

Topics: Quality Management Issues on different stages of Life Cycle Product (Engineering, Design (Eco-Design), Assessment, Management, Disassembly), in the contest of sustainable development and manufacture: Research, Applications Education

Contact Prof. V. D. Majstorovic. e-mail: majnem@EUnet.yu website: www.lcs04.mas.bg.ac.yu

CIRP Design seminar New Innovation in engineering design
Shanghai, China, June 2005

Contact: S. Lu

4th CIRP International Seminar on Intelligent Computation in Manufacturing Engineering ICME '04

30 June – 2 July 2004, Sorrento, Italy

The Seminar will examine the applications of intelligent computation and related methodologies including expert systems, fuzzy logic, neural networks, genetic algorithms, multi agent systems, evolutionary and emergent computation.

Topics: Manufacturing applications of expert systems, artificial neural networks, fuzzy and neuro-fuzzy models. Manufacturing processes (machining, forming, casting, welding, etc.) Process modeling and monitoring Design, simulation and modeling Concurrent/Simultaneous engineering Reverse engineering Rapid and virtual prototyping. Assembly and disassembly. Diagnostics and maintenance. Automated inspection and quality control Sensors and sensing techniques for manufacturing. Planning and control. Dynamic scheduling in complex manufacturing. Distributed and co-operative production. Customer driven production. Intelligent machines and robots. Intelligent manufacturing systems. Factory design, reconfigurability and integration. Virtual reality for manufacturing. Product life cycle management. Human factors in intelligent manufacturing systems.

Contact: Prof. Roberto Teti, e-mail: tetiro@unina.it website: <http://www.icme.unina.it>

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

19–21 August 2004, Zakopane Poland

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

Contact: M. Szafarczyk, mzybura@ios.krakow.pl

8. From the secretariat

Following the last Council meeting, it has been decided that the Provisional Registration Form for the General Assembly, to be sent to the Secretariat in Paris, would be cancelled. There will be only a Request Form for Guest to be sent to the Secretariat (on the Website). It has been reminded that only one guest per member is authorized, for the August General Assembly as for the January Meetings. Those asking for more than one guest for the General Assembly in August will need the Council 's special approval. There will be no approval for several guests for the January meetings.

- Emeritus requests will have to arrive at the Secretariat before the January Meetings of the year concerned.
- The dates and locations of the next CIRP January and August meetings are now given on the Website, in 'Meetings and Seminars'.
- 'Related links' have been created in the 'Members Links', for those who wish to propose some links with websites in connection with CIRP members researches.
- A PowerPoint presentation of CIRP has been added on the Website, in 'Presentation'. This may be useful for future Associate members to understand better what is CIRP.
- In the CIRP Member Area of the Website, statistic curves are presented and will be regularly updated, on CIRP Membership evolution and attendance to the meetings.
- The scanning of the Annals from 1991 to 2000 has been done and is now under process to be put on the Website. You will find progressively all the files of the papers inserted in the storage year by year of the CIRP Member Area. Then it will be linked progressively to the Annals Year by Year search under the red button 'Publication' direct access, and later directly through the Research Engine.
- The 2001 and 2002 Papers have been linked to the Research Engine and to the Annals year by year. Direct consultation of the papers is be made through the Annals Year by Year (with password) or through the CIRP Member Area. The 2003 Papers will be added before the end of the year.



Chantal Timar-Schubert and Agnès Chelet in front of the Paris office

9. Miscellaneous

New book received:

Rapid Prototyping, Laser-based and Other Technologies,

by Patri K. Venuvinod and Weiyin Ma, City University of Hong kong

RP technologies are different from other modern manufacturing technologies in many ways. In RP, material is usually added incrementally in a layered manner and, occasionally, subtracted. Some technologies depend upon layers of resin cured under the influence of one or more CNC controlled laser beams. Others use lasers to selectively sinter layers of powdered metal. There are also RP technologies that do not use lasers at all. Indeed, RP is turning out to be a potent arena for technological creativity.

The book provides an updated overview of RP technologies at a level of detail that university engineering students taking courses on RP as well R&D and operating professionals from industry interested in RP are likely to find attractive. While the emphasis is on laser-based technologies, other processes are also discussed. With respect each important RP process, the part/assembly modeling techniques, the materials used, process itself, advantages and disadvantages, accuracy and finish issues as well as application potential are discussed.