**TRIENNIAL REPORT** 



International Ergonomics Association

2006-2009

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# **President's Address**

# David C Caple, President



# **Participation and Collaboration**

It has been a pleasure and enormously rewarding experience to fulfil the role as the 16<sup>th</sup> President of the International Ergonomics Association (IEA). During this three year period (2006-2009) we have witnessed growth within the membership of the IEA through the welcoming of ergonomics societies as Federated members from Ecuador, Indonesia, Latvia and Tunisia. We also welcomed Nigeria as an affiliated member. This now grows the IEA to a family of 47 countries who share the goals to collaborate together, advance the size, and contribute ergonomics to the global society.

Communication and collaboration has been a major activity during this period. I would like to recognise the excellent foundation left to me from my previous IEA Presidents and the guidance provided by the immediate past President, Pierre Falzon. It was evident from consultations with Pierre that many countries were not fully aware of the activities and programs undertaken through the IEA so a range of initiatives were introduced to assist in encouraging greater communication and collaboration. This included the re-design and re-focussing of the IEA website, the introduction of a monthly IEA Newsletter from the President sent directly to each Federated Society, as well as a range of external stakeholders, and opportunities to visit 25 countries to represent the IEA and the ergonomics domain.

These visits provide direct opportunities to meet members of the Federated Societies as well as other stakeholders from their own countries to promote education, research and practice of ergonomics within their areas of influence. I have been particularly humbled by the hospitality shown to me, and my family in some instances, during these visits.

There have been many examples of collaboration between ergonomics societies through sharing expertise and resources towards the overall promotion of ergonomics at the global level. I generally refer to my role as the transient head of the "IEA family" as we share many of the values and goals of a family in the way that we operate and work together.

There were two primary themes that we developed for our Executive. These were:-

- Partnerships
- Inclusiveness

### Partnerships

The recognition of ergonomics and human factors as a relatively small domain within the global society encouraged me to seek out opportunities for strategic partnerships with external organisations

The primary goal was to utilise these partnerships to integrate and promote ergonomics to a broad and diverse community at the global level.

I have been particularly pleased with the development of relationships and joint projects with organisations including the International Labour Organisation (ILO); the World Health Organisation (WHO); the International Standardisation Organisation (ISO) and the International Council of Societies of Industrial Design (ICSID).

I was also pleased with the growing relationship with other professional associations such as the International Commission on Occupational Health (ICOH) and the International Occupational Hygienists Association (IOHA).

These strategic partnerships help us to work together in promoting our respective areas of research to increase our influence within the global community.

#### Inclusiveness

The total number of members of our Federated and Affiliated Ergonomics Societies is estimated to be around 25,000 spread around the world. The membership criteria for our societies vary from individuals who are totally involved in education, research, and practice of ergonomics, to those who are students or interested in aspects of the domain.

The IEA has adopted a theme of inclusiveness to encourage participation of all interested members into the IEA activities.

The Technical Committees (TCs) have reflected the changing diversity of ergonomics over the last three years. Due to the leadership of the STP Chair, Halimahtun Khalid, we now have five new Technical Committees and we have closed off three that were no longer active. The participation in the Technical Committee processes is open to all as a reflection of the inclusiveness approach.

Our support to developing countries in participating in IEA activities is a strong and ongoing desire to ensure their inclusiveness in any way possible as part of the global IEA family.

#### **Ergonomics – Future Challenge**

In my travels over the last three years, I have become aware of the diversity in ergonomics methodologies, areas of application, and methods of assessing sustainable impact. This diversity multidisciplinary science brings the strength of adopting methodologies that reflect excellent research in developing theoretical basis to our scientific understandings. It also adopts methodologies which reflect the needs within the areas of application and practice to provide the desired outputs of improvements to human wellbeing and systems performance.

One of the underlying challenges for the future will relate to managing the overall framework that encapsulates the ergonomics approach to addressing workplace, and community issues. One aspect of confusion about what is ergonomics from those outside of our domain that I met in my international travels appears to be an unclear framework or foundation of what constitutes an ergonomics approach to research and practice.

I have also been concerned about the sustainability of ergonomics education at the post graduate level that is targeted towards the needs of our world during the periods of global financial crisis and changes to the global environment. It will be important that the holistic approach taken in ergonomics is capable to embrace the broader issues facing the community to maintain relevance in contributing to current and future needs.

As an international body that celebrated the 50<sup>th</sup> Council meeting in Reykjavik, Iceland in 2008 we are relatively young compared to many of our fellow scientific societies. However, I leave my term as IEA President with a great sense of confidence and hope that together the IEA family will continue to grow and prosper.

This Triennial Report will provide you with a broad understanding of the activities across the IEA over the 2006-2009 period together with an opportunity to obtain an historical record of the IEA since its first meeting in Leyden, The Netherlands in 1957.



IEA Council – Reykjavik, Iceland 2008

# About the discipline of ergonomics and the IEA

# **IEA definition of ergonomics**

Ergonomics (or human factors) is the scientific discipline concerned with the understanding of the interactions among humans and other elements of a system, and the profession that applies theoretical principles, data and methods to design in order to optimise human well being and overall system performance.

Practitioners of ergonomics, ergonomists, contribute to the planning, design and evaluation of tasks, jobs, products, organisations, environments and systems in order to make them compatible with the needs, abilities and limitations of people.

#### **Domains of specialisation**

Derived from the Greek ergon (work) and nomos (laws) to denote the science of work, ergonomics is a systems-orientated discipline which now applies to all aspects of human activity. Practicing ergonomists must have a broad understanding of the full scope of the discipline, taking into account the physical, cognitive, social, organisational, environmental and other relevant factors. Ergonomists often work in particular economic sectors or application domains. These application domains, which are not mutually exclusive, evolve constantly. New ones are created old ones take on new perspectives.

Within the disciple, domains of specialisation represent deeper competencies in specific human attributes or characteristics of human interaction.

**Physical ergonomics** is concerned with human anatomical, anthropometric, physiological and biomechanical characteristics as they relate to physical activity. The relevant topics include working postures, materials handling, repetitive movements, work related musculoskeletal disorders, workplace layout, safety and health.

**Cognitive ergonomics** is concerned with mental processes, such as perception, memory, reasoning, and motor response, as they affect interactions among humans and other elements of a system. The relevant topics include mental workload, decision making, skilled performance, human-computer interactions, human reliability, work stress and training as these may relate to human-system design.

**Organisational ergonomics** is concern with the optimisation of socio-technical systems, including their organisational structures, policies, and processes. The relevant topics include communication, crew resource management, work design, design of working times, teamwork, participatory design, community ergonomics, cooperative work, new work paradigms, organisational culture, virtual organisations, telework and quality management.

#### Birth and development of IEA

The International Ergonomics Association was founded in 1959. At the time, only three ergonomics societies were operating (in the United Kingdom, the USA and Germany). Members of the IEA were not societies, but individuals. In 1976, due to the growing number of national or regional societies on one hand and to the will of being able to interact with world organisations like the World health Organisation (WHO) or the International Labour Organisation (ILO) on another hand, the IEA decided to become a federation of societies.

Since then, the history of IEA and of ergonomics has been a story of expansion.

Expansion first in terms of the number of Federated Societies (from 11 in 1976 to 47 in 2009) or of number of individuals belonging to member societies (11,689 in 1976 to an estimated 25,000 in 2009).

Expansion also in terms of scope of interests: the range of topics covered by the Triennial Congresses has manufacturing, standards, human reliability, quality management, aging agriculture, rehabilitation, etc. Attendance has grown (120 participants in 1961, 519 in 1976, 1600 in 1997, 3100 in 2000, and 1400 in 2006). Variations in attendance to the IEA Congress are influenced by the location in the world, and global events at the time including SARS, wars, global financial crisis, etc.

Expansion finally in the penetration of ergonomics in the society. Ergonomics is not only today an academic discipline, it is a profession. This has led to the definition of professional certification systems in ergonomics and of training programs in the ergonomics discipline. This has also led to a revision of the definition of ergonomics which now defines what ergonomics is and what ergonomists do.

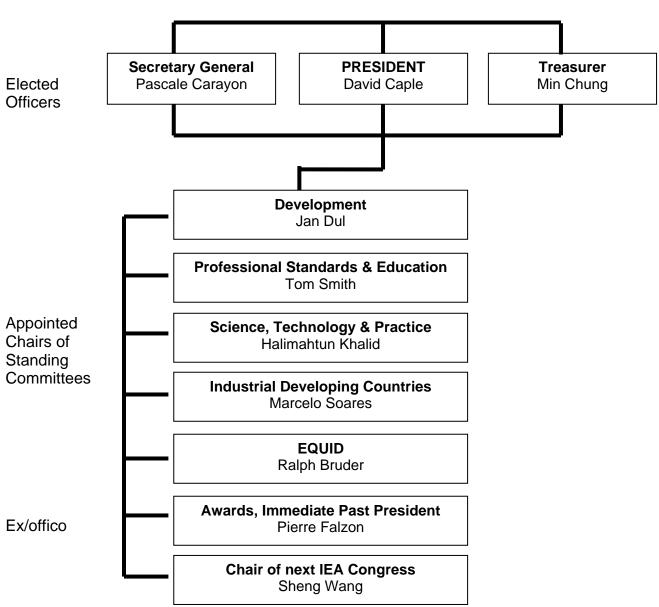
The IEA is now a mature organisation, with responsibilities at an international level. The IEA interacts with WHO and ILO for specific actions, developing and implementing ergonomics programs in small and medium size companies in manufacturing, as well as in agriculture. Special emphasis has been given to developing countries in Africa and Asia.

Recently, the IEA has undertaken to develop a program for assessment and certification of ergonomic design processes in the area of consumer product development, with respect to application of human-centre principles in processes of design.

The IEA Archives are currently hosted by CNAM in Paris, France.

The IEA was re- registered in Zurich, Switzerland in 2009 as a Not for Profit organization.

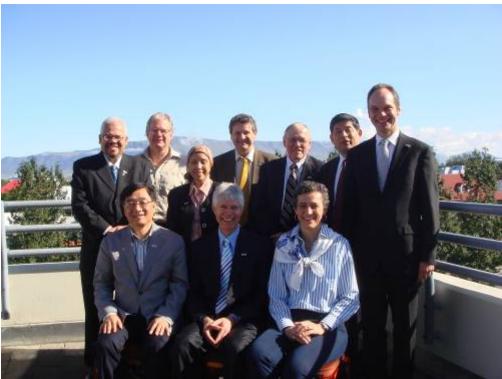
# About IEA



IEA Executive Committee 2006 - 2009

The International Ergonomics Association is the federation of ergonomics and human factors societies around the world. The mission of the IEA is to elaborate and advance ergonomics science and practice, and to improve the quality of life by expanding its scope of application and contribution to society.

The IEA is governed by the Council with representatives from the federated societies. Day to day administration is performed by the Executive Committee which consists of the elected IEA Officers, Chairs of the Standing Committees and Chair of the next IEA Congress.



From Left to right:

Marcelo Soares, Jan Dul, Halimahtun Khalid, Pierre Falzon, Tom Smith, Sheng Wang, Ralph Bruder Min Chung, David Caple, Pascale Carayon.

A President, Secretary General and a Treasurer are elected by Council at the Triennial Congress to serve for a period of three years.

# **Goals and Objectives**

The following are the principal goals of the IEA:

- To develop more effective communication and collaboration with federated societies
- To advance the science and practice of ergonomics at international level
- To enhance the contribution of the ergonomics discipline to global society

#### **IEA Standing Committees**

The Standing committees accomplish much of the work of the IEA. In turn, their sub-committees are responsible for specific functions or activities.

#### Development

This committee explores and coordinates new policy options and proposals, and assists in development and implementation of new programs and initiatives relevant to the function and effectiveness of IEA. The committee develops and coordinates plans and proposals concerning IEA policies, operation, and structure, and assist in development of policy recommendations to better serve Federated societies and the international ergonomics community.

#### **Professional Standards and Education**

This committee promotes and coordinates the exchange of scientific and technical information at the international level. There are presently eighteen subcommittees (known as IEA Technical committees), which address specific areas of technical interest.

Detailed information on IEA Technical Committees activities can be found on Page 18.

#### **International Development**

This Standing committee promotes, coordinates, and implements ergonomics activities in industrially developing countries by supporting local and regional initiatives concerning research, development, training, and conferences. The committee implements ergonomics development programs in industrially developing countries and collaborates with other IEA committees with interests in industrially developing countries.

#### Awards

This Committee recommends to council awards to individuals for their contributions to the field of ergonomics.

#### Awards for which this committee is responsible include:

- IEA Fellow Award
- IEA Distinguished Service Award
- IEA President's Award
- IEA Outstanding Educators Award
- IEA Award for Promotion of Ergonomics in Industrially Developing Countries
- IEA Ergonomics Development Award
- IEA / liberty Mutual Prize and IEA / LM Medal Award
- IEA / JOSE Best Paper Award
- IEA KU Smith Student Award

# **IEA Membership**

As of June 2009, the International Ergonomics Association has 45 Federated Societies, 2 affiliated societies, 6 sustaining member organisations and 2 individual sustaining members.

#### **IEA Federated Societies**

Federated Societies are societies that have the main aim of promoting ergonomics. They are bodies that elect a governing council from within their own membership and encourage the publication of research material and the development of ergonomics practice.

During 2006-2009 period 4 societies have been accepted as federated societies:

- Ecuador Asociacion Ecuatoriana de Ergonomia (AEERGO)
- Latvia Latvijas Ergonomikas Biedriba
- Indonesia Perhimpunan Ergonomi Indonesia (PEI)
- Tunisia La Société Tunisienne d'Ergonomie

During this period we also welcomed one society as an affiliated member:

• Nigeria (Ergonomics Society of Nigeria ESN)

Applications at the 2009 Council meeting were received from;

- Ergonomics Society of Singapore ERGOSS
- Ergonomics Society of Thailand EST

Application was also received from a new Network;

• South East Asian Network of Ergonomics Societies - SEANES

Argentina Australia Austria Belgium Brazil Canada Chile China Colombia Croatia **Czech Republic** Ecuador French Language Ergonomics Society Germany Greece Hong Kong Hungary India Indonesia Iran Ireland Israel Italy Japan

Latvia Mexico Netherlands New Zealand Nordic Countries Philippines Poland Portugal Russia Serbia Slovakia South Africa South East Asia South Korea Spain Switzerland Taiwan Tunisia Turkey Ukraine United Kingdom USA



PPCOE Conference – Kitakyushu, Japan - 2009



Minister for Health Bahrain - 2009



Ergonomics Society of Mexico (SEMAC), Ciudad Juarez, Mexico on 24<sup>th</sup> April 2008.



Ergonomics Society of South Africa – Cape Town 2009



Taiwan Ergonomics Society – 2007



Japan Ergonomics Society – meetings Tokyo, Japan, 2007.



HES Meeting workshop – Kazutaka Kogi, Tokyo , Japan 2007

#### **IEA Affiliated Societies**

Affiliated Societies are other national or international professional societies that are ineligible for federated member status or have an interest in ergonomics but have their main aim in an associated area.

- Human Ergology Society of Japan
- Nigeria (Ergonomics Society of Nigeria ESN)

#### **IEA Networks**

The growing size of the IEA has led to a revision of its membership structure, by creating IEA networks. Societies federated in the IEA may work together in networks, when a need is felt to do so. Examples of such needs can be geographical proximity, sharing of a common language, promotion of common interests. The IEA Council gives its agreement to the creation of the network, on the basis of a proposal from networked societies stating membership and goals. The networked societies are granted the status of IEA Network. IEA Networks have to report their activity to the IEA.

Networks of IEA federated societies are being considered in Europe and in South America.

- Federation of the European Ergonomics Societies FEES
- Union of Latin-American Ergonomics Societies ULAERGO



ULAERGO Conference – Bogota, Columbia – October 2007



IEA Network FEES (Zeist, 2009)

#### **IEA Sustaining Members**

The work of the IEA is accomplished by academicians and practitioners. However, many initiatives vital for the development to ergonomics as a unique science and profession cannot be funded with existing resources. Funds are then needed to support the development of ergonomics worldwide, including in industrially developing countries. To disseminate ergonomic knowledge to the industry and to society at large, to promote ergonomics education and competency standards, and to support the work of our Technical committees

The IEA Sustaining Membership program supports the science and application of ergonomics worldwide. The program provides exposure and enhances the image of institutional members.

IEA is a non-profit organisation. No monetary benefits are given to people involved in the operational of the IEA. This means that 100% of IEA funds support the implementation of the IEA goals.

There are four levels of support on a three year basis, and each level offers specific benefits. The granting of IEA Sustaining Membership does not imply IEA endorsement or approval of company products or services.

# **Organisational Sustaining Members**

#### Diamond Level - US \$ 10,000 per year

Elsevier Christopher Greenwell Publisher, Process and Control Eng The Boulevard, Langford Lane, Kidlington, Oxford, UK Email: <u>C.Greenwell@elsevier.com</u>

# Liberty Mutual Research Institute for Safety

lan Noy VP & Director, 71 Frankland Road Hopkinton, MA 01748 Tel: (508) 497-0215 Fax: (508) 435-0482 ian.noy@libertymutual.com

#### Platinum Level- US \$ 5,000 per year

#### Gold Level - US \$ 1,000 per year

#### 3M

Nancy Larson Building 42-2W-09 PO Box 33331 St. Paul, MN 55133-3331 USA Tel: +1 651-778-5293 Fax: +1 651-778-6745 Email: <u>nllarson2@mmm.com</u>

# Jim Knowles Group

Barbara McPhee PO Box 113 Kurri Kurri NSW 2327 Australia Tel: +61-(0)2-4937 5855 Fax: +61-(0)2-4937 5844 Email: bmcphee@jkgroup.com.au Website: www.jkgroup.com.au **Gulf Petroleum Industries Co** 

Mr Yasser A Rahim PO Box 26739 Manama Kingdom of Bahrain Tel: +973 17 731 777 Fax: + 973 17 731 047 Email: <u>gpic@gpic.com</u>

#### KOSHA

Korean Occupational Safety & Health Agency Mr. Min-ki Noh, President 34-4, Gusan-dong, Bupyung-gu Incheon, 403-711, Korea Tel: +82-32-5100-636 Email: <u>overseas@kosha.net</u>

#### **Central Institute for Labor Protection**

Dr. Danuta Koradecka, Director ul. Czerniakowska 16 00-701 Warszawa POLAND Tel: 48-22-623-4621 Email: <u>dapod@ciop.waw.pl</u>

#### Center for Industrial & Management Research Resources Dr. Min K. Chung, Professor and Head

Department of Industrial Engineering Pohang University of Science and Technology KOREA Phone: + 82-562-279-2192 Fax: + 82-562-279-2870 Email: <u>mkc@postech.ac.kr</u>

#### Individual Sustaining Members

#### Kazutaka Kogi

Institute for Science of Labour 2-8-14, Sugao Miyamae-ku Kawasaki 216-8501 Japan Tel: +81 44 977 2121 Fax: +81 44 977 7504 Email: <u>k.kogi@isl.or.jp</u>

#### Jennifer A. Gutierrez

Industrial Engineering Department De La Salle University - Manila 2401 Taft Avenue Malate Manila Philippines Tel: 524-46-11 Email: jen gutierrez@yahoo.com

# Corporate Sustaining membership benefits

# Gold levelUS \$ 1,000/yearIndividual membersUS \$ 200/year

- Listings in printed IEA directories as well as in the IEA website
- > Complimentary copy of the quarterly updates from the IEA President to the federated Societies.
- Sustaining Member Plaque with company name inscribed

# Platinum level US \$ 5,000/year

- > All benefits at the Gold level
- > Official listings in the programs of IEA conferences and congresses
- > Two complimentary registrations for the forthcoming IEA congress
- Company logo on IEA website home page with active links

# Diamond level US \$ 10,000/year

- All benefits at the Platinum level
- Free space at exhibitions organized at IEA congresses, subject to approval by congress organizer
- Exposure of company logo at IEA conferences and congresses
- > Direct links between new company products with relevant sections of the IEA website
- > Other benefits such as a speech by an IEA officer can be negotiated

#### Star level US \$ 25,000/year

- All benefits at the Diamond level
- > Additional three complimentary registration for the next IEA congress
- > Acknowledgements on the first page (covers) of the Congress proceedings
- Free distribution of promotional materials at IEA Congress
- Additional benefits can be negotiated

# **Technical Committees**

- Activity Theories for Work Analysis and Design
- Aerospace HFE
- Affective Product Design
- Aging
- Agriculture Ergonomics
- Anthropometry
- Auditory Ergonomics
- Building and Construction
- Ergonomics for Children and Educational Environments
- Ergonomics in Design
- Ergonomics in Manufacturing
- Gender and Work
- Healthcare Ergonomics
- Human Aspects of Advanced Manufacturing
- Human Factors and Sustainable Development
- Human Simulation and Virtual Environments
- Mining
- Musculoskeletal Disorders
- Online Communities
- Organizational Design and Management
- Process Control
- Psychophysiology in Ergonomics
- Safety & Health
- Slips, Trips and Falls
- Transport
- Visual Ergonomics
- Work With Computing Systems WWCS



AEDEC Site visit to Rubber plantation – KL 2007



WWCS - committee meeting, Stockholm, 2007



### 16<sup>th</sup> World Congress Ergonomics IEA2006, Maastricht, The Netherlands

The IEA2006 congress was a great success. More than 1,400 people participated in, what turned out to be a most interactive meeting. Due to good communication before the congress and excellent information at site, delegates felt home from the very first meeting after having arrived. The center of interaction was the large exhibition. The opening reception, coffee, tea and lunch breaks were held at this sponsor market. This turned out to be a golden formula; many participants liked it, and the exhibitors were most positive about the high quality of the contacts, in which they received most valuable feed back on their products.

The congress program relied more than at previous IEA congresses on the IEA Technical Committees. With great help of the TC-chairs, the program covered 18 keynotes, a continuous series of 18-20 parallel sessions, tens of interactive workshops, and 300 posters. According to the evaluation forms, the content of the program has met the expectations of the participants. A trend from basic research towards practical oriented research and case studies can be noticed. The social activities were held in an informal atmosphere. The special setting, arrangements and programming of the opening session offered enough content, and entertainment to satisfy most of the participants. Other activities attracted many of the delegates and their guests. The congress party was roaring success. The, for The Netherlands very fine weather attracted many people to the famous Maastricht terraces, many of which stayed there till late in the night.

Proceedings were published on a user friendly Cd-rom, and the keynotes were published in a special issue of Applied Ergonomics. Finally, in 2007 Elsevier published a book with chapters based on congress papers, extended with results of the congress.

The congress resulted in a financial profit, which was divided over a series of goals, including the IEA, CREE, FEES, and the Netherlands Ergonomics Society.

In August 2007, an evaluation report was provided to Council.

Ernst Koningsveld, Ruud Pikaar, Paul Settels



# IEA Strategic Plan 2006-2009

Approved by the IEA Council – Seoul, Korea 2003.

# **IEA Mission Statement**

The International Ergonomics Association is the federation of ergonomics and human factors societies around the world. Working closely with its constituent societies and related international organisations, its mission is to elaborate and advance ergonomics science and practice, and to expand its scope of application and contribution to society to improve the quality of life.

# Goals: The Following Goals Reflect the IEA Mission

- A. Contribute to the development of federated societies.
- B. Advance the science and practice of ergonomics at an international level
- C. Enhance the contribution of the ergonomics discipline to global society

# GOAL A: contribute to the development of federated societies

# SUBGOAL A1: Develop more effective communication and collaboration between and with federated societies.

- 1. Facilitate visibility of each member society through the IEA home page and other means of communication
- 2. Facilitate joint events between member societies when this will not conflict with the operations of these societies
- 3. Facilitate the creation of networks of societies
- 4. Support member societies in taking proactive and reactive positions on major public issues and in their use of the media
- 5. Support member societies to disseminate ergonomics knowledge at various levels
- 6. Support participation of the industrially developing countries in IEA activities (e.g., support for travel to conferences)

#### SUBGOAL A2: Develop ergonomic societies through the world.

- 1. Support the continuing growth of ergonomics in industrially developing countries by training and education
- 2. Provide industrially developing countries with ergonomics knowledge by stimulating the existing IEA mechanisms

#### SUBGOAL A3: Improve IEA operational effectiveness

- 1. Develop mechanisms for effectively involving member societies in IEA activities
- 2. Improve communication with member societies
- 3. Facilitate the exchange of views and experiences among the leaders of member societies
- 4. Initiate campaign to increase the numbers of sustaining IEA
- 5. Increase revenues from donations, endowments and funds when this will not conflict with the operations of member societies (e.g. from international bodies)

# GOAL B: Advance the Science and Practice of Ergonomics at an International Level

### SUBGOAL B1: Stimulate Development of the Ergonomics discipline

- 1. Define and clarify the field of ergonomics
- 2. Identify and elaborate cultural and economic differences affecting ergonomic science and practice
- 3. Identify future needs for development of ergonomics
- 4. Support and promote specialised conferences and workshops in collaboration with member societies
- 5. Promote IEA publications suited to knowledge dissemination by IEA

#### SUBGOAL B2: Enhance the quality of professional practice and education in Ergonomics

- 1. Continue to promote a broad view of ergonomics and its aims
- 2. Consider development of procedures for the IEA endorsements of various activities, in particular journals and books
- 3. Develop international professional standards and guidelines and promote best practices in ergonomics (code of ethics, code of professional practice, etc.)
- 4. Encourage educational institutions to offer ergonomics programs consistent with "IEA Core Competencies for Practitioners in Ergonomics" criteria
- 5. Promote sharing of quality ergonomics education programs available on the Internet through the IEA home page
- 6. Develop IEA guidelines for accreditation of ergonomics educational programs
- 7. Maintain the IEA Criteria for Endorsement of Certifying Bodies and implement a system for such endorsement
- 8. Maintain the IEA Core Competencies for Practitioners in ergonomics
- 9. Maintain and disseminate IEA minimum criteria for the process of certification of an ergonomist
- 10. Show best practices in order to stimulate the growth of ergonomics

# GOAL C: To Enhance the Contribution of the Ergonomics Discipline to Global Society

# SUBGOAL C1: Promote Recognition Of Ergonomics Discipline

- 1. Identify specific areas where greater international exchange of information is needed, and develop appropriate means for dialogue
- 2. Increase public awareness of the benefits of ergonomics through mass media communications
- 3. Provide information about ergonomics/IEA for listing in international directories and reference publications
- 4. Expand and strengthen links with other international bodies
- 5. Expand and strengthen links with societies working in related fields
- 6. Expand IEA prizes to reward and publicize ergonomics innovations
- Develop more effective use of IEA conferences to promote added value of ergonomics to society
- 8. Elaborate and promote the benefits of ergonomics to improve the quality of life for individuals, organisations, and society.

# SUBGOAL C2: Promote Applications of Ergonomics in All Aspects of Life

- 1. Promote ergonomics as a means to improve the quality of human life, work effectiveness and economic benefits
- 2. Mobilize ergonomics profession to address major global challenges
- 3. Promote collaboration in ergonomics projects among government and international bodies
- 4. Stimulate the involvement of ergonomics in the emerging fields of application (e.g. management sciences and mass communication).
- 5. Support member societies in taking positions on major public issues and in their use of the media
- 6. Promote ergonomics in geographical regions where particular support is needed
- 7. Develop program of certification of ergonomic quality in design

# IEA Achievements – 2006-2009

# GOAL A – Contribute to the development of federated societies

 The major initiative to assist the federated societies to participate at a global level has been to focus on **communication**. During this Executive a number of initiatives have been implemented.

1.1 **IEA Website** – the redesign of the website was completed in 2007 to provide a broader focus beyond the needs of federated societies to provide a global window into the domain of ergonomics. This site provides a "one stop" link for the federated societies to link into and be involved with the IEA and developments of the ergonomics domain.

Apart from providing updates on conferences, special events, new publications, and details of all the federated society executives, a range of additional information is now provided such as the complete list of International Standards relating to ergonomics; the top ten publications from the Elsevier journals relating to ergonomics, and access to ergonomic evaluation tools through the University of Cornell, USA.



www.iec.cc

1.2 A **monthly IEA Newsletter** has been circulated to all federated societies and also to external stakeholders to the IEA to provide up to date information on interesting news and events relating to the IEA and ergonomics.

Federated societies have been able to incorporate this information into their own newsletters and to assist the development of ergonomics in their own country through providing information and links with other federated societies and their activities and programs.

During 2008, a "Members Only" section was introduced to the IEA website. This was to provide opportunities particularly for the Technical Committees to interact directly via the web using a "chat room" style of interaction.

Autocontext, Same Series Teaching Series Teaching Series Teaching Series S	sound! Members. Lighted to provide our April 2008 Newsletter to members of the IEA Federated es and Technical Committeen (TC). IEA 2009 Congress applate ray visits to Taiwan last membrix was a pleasure to reset with the IEA 2009 Congress Shang Wang from China together with Dric Wang and membrars of the Taiwan netwo Society to discuss the plantaing for the Congress. This membrase STP Chin. than Khuldh here visited Tailing superfrase with Memir Heldney's to need with the IEA.
RORM	ss consulture. This was a very productive meeting and the Congress subsitu will a launched with the latest information.
Allow Taxo Information Please At the two speet taxon with the speet taxon with taxon with the speet taxon with taxon	na Congress Factsheet will be previded in April, sogether with the next Newsleite rote that the Call for Poposals will close on November 15, 2008. Templates for to (500 works) can be obtained three the Congress website and all TC Chain- EOURD socker
Andreases Andreases	very fortunate to have Michel Nied (Forovie) and Radph Bruder (Gormany) leading harmont and enduation of the EQUID design process treel. An agreed at the 2008 coursil meeting these flowarests were cloudated to all Federated Societies for three ad discussions in year own constraints. It am bepeful that this will be available in our is distribution to you. It may be appropriate for you to discuss now who you will in the consultation and availation of this IEA resource that reflects the
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#### 2. Collaboration between ergonomics societies.

The members of the "IEA family" have provided opportunities for federated societies to directly assist and support each other. Examples include:-

- The Association of Canadian Ergonomists has been hosting online webcast seminars with free places offered to IEA members from developing countries.
- The Nordic Ergonomics Society has supported the travel of the IEA delegate from Latvia to attend their first IEA Council meeting in 2009.
- The IEA hosted conferences by federated societies have been donating CDs of their conference proceedings for free circulation to IEA developing country members.



Future of Ergonomics Conference – Bali, Indonesia, 2006.



Mining Seminar – Chile, 2008

### 3. Global Ergonomics Month

This initiative was commenced in 2008 to focus on October as the month where the federated societies share programs and resources at a local and international level to promote ergonomics outreach activities. The leadership of this program has been provided by HFES and FEES who have been conducting ergonomics month activities in the USA and Europe respectively. This program now showcases all of the activities on the IEA website and has subsequently brought collaboration from other ergonomics societies as an example of sharing resources to promote ergonomics to the community.

#### 4. Registration of the IEA

The IEA has a registered mailing address with the HFES in the USA and a bank account in Canada. Until 2009 however, the IEA has not had a legally represented home for some decades. With the assistance of the Swiss Ergonomics Society, the IEA was registered in Zurich, Switzerland through the Registry of Commerce.

#### 5. Council meeting format

The IEA Council meetings have introduced a welcome reception on the evening prior to the Council. This provides Council members, old and new, to informally meet each other and to share experiences relating to the federated societies prior to the Council meeting commencement.

During the Council meeting, the delegates have been encouraged to participate in a series of informal discussions / workshops to further promote their contribution to the council on behalf of their federated society and to share and learn from each other.



Sub EC meeting in San Francisco, USA - 2006



IEA Council meeting in Reykjavik, Iceland, 2009



IEA Sub EC – Amsterdam 2009

# 6. Financial Support

The IEA has financially supported activities in developing countries through the "Foundation for Professional Ergonomics" program hosted by Hal Hendricks (USA). This program provides members of ergonomics societies who are willing to share their time in travelling to other countries to offer their services towards the development of ergonomics. Two examples relating to the mining industry resulted in the IEA supporting Pat Scott to led workshops on mining and ergonomics in Botswana, Africa and Barbara McPhee to provide a similar support to a conference on ergonomics in mining in Chile.

In 2007, Halimahtun Khalid hosted an IEA conference on Ergonomics in Agriculture in Kuala Lumpur, Malaysia. This IEA conference provided an opportunity for an international focus on ergonomics and agriculture. It also provided an opportunity for the joint IEA / ILO publication on Ergonomics Checkpoints in Agriculture hosted by Dr Kazutaka Kogi (Japan) with Dr Shengli Niu from ILO Geneva. This workshop obtained funding from the ILO to support participation from IEA delegates from developing countries including Bangladesh, Poland, and Iran.

# 7. IEA Best Practice Initiative

This program was coordinated by the Chair of the IEA Development Committee, Jan Dul and involved sharing between Federated Societies on those activities that they have found beneficial to the development of ergonomics. During this Executive, this program was finalised with the outputs being posted on the IEA website and circulated to all the IEA members.

# 8. IEA Dues Restructure

A significant change was voted at the IEA Council meeting in Boston in 2007 to change the complete structure of IEA dues paid by Federated Societies. The support provided towards the restructured process resulted in the larger societies collecting higher levels of dues from their members contributing a larger contribution to the IEA. Conversely, the smaller societies, particularly in developing countries that have low levels of dues, have resulted in a lower level of contribution. This provides a more equitable approach towards supporting the IEA activities and we thank the cooperation and support from all Federated Societies for this important, but fundamental change in our operating process. The net effect of this change was to have a similar level of income from IEA dues contributed by our member societies.

# GOAL B – Advance the science and practice of ergonomics at an international level

#### 1. Endorsement of new Certifying Bodies

The IEA received applications from the Ergonomics Societies in Japan and in New Zealand seeking endorsement for their certification programs. The Professional Standards and Education committee considered both applications and approved an endorsement for the:-

- Japan Ergonomics Society Certification Program For Professional Ergonomists
- Board for Certification of New Zealand Ergonomists (BCNZE)

The Chair of the Professional Standards and Education Committee was Professor Tom Smith (USA). The Certification subcommittee also included:-

- Professor Kazuo Aoki, Chair, Japanese Certification Program (Japan Ergonomics Society)
- Dr Peter Budnick, Director, Board of Certification in Professional Ergonomics (BCPE, USA)

Certifying bodies that have been accredited by the IEA include:-

- Australia
- Europe (Committee for Registration of European Ergonomists CREE)
- Japan
- New Zealand
- United Kingdom
- United States (BCPE)

During 2007, there was extensive consultation on the definition of a **certified ergonomist**. This debate highlighted the various types of ergonomists that can be defined depending on their interest in education, research or practice.

The definitions adopted in relation to these were:-

- "an ergonomist is an individual whose knowledge and skills concern the analysis of human/system interaction and the design of the system in order to optimise human wellbeing and overall system performance".
- "an IEA / Recognised Certified Ergonomist is a professional ergonomist whose practice and training have met the quality criteria set by an IEA / endorsed certifying body".

#### 2. Education in Ergonomics

The Education sub-committee included:-

- Professor Bob Bridger, UK
- Professor Francois Daniellou, France
- Dr Ian Gibson, Australia

This sub-committee reviewed the IEA document relating to "Guidelines on the minimum specifications for a Masters Degree in Ergonomics / Human Factors (including guidance about distance learning)". This debate focussed on the need for education programs to be appropriately structured and conducted to product a range of competencies from the graduate. Consequently, the inputs to the program may vary depending on the educational stream within which the program is conducted.

The IEA Council identified that the major requirement for support from the IEA would be for developing countries or courses seeking external support. There are many well established courses around the world which currently provide excellent educational outcomes without seeking guidance from the IEA.

A process of developing guidance on education programs, particularly focussing on distance learning, is under consultation and development.

The concept relating to the IEA accrediting organisations that assess the educational programs conducted by universities around the world was discussed by the IEA Council. It was agreed that the IEA itself does not have the resources nor capability to independently accredit every education program that is listed on the IEA website.

Further consultation and investigation is ongoing in relation to the feasibility of the IEA accrediting organisations in the same way that is undertaken for the certification of ergonomists.

The Portuguese Ergonomics Society continued to assist the IEA by translation from English to Portuguese of a Distance Learning course provided to the IEA from the University of Nottingham. This would then be made available for Portuguese speaking countries in Africa such as Mozambique.

# 3. IEA Code of Conduct for Ergonomists (COCE)

The Code of Conduct was agreed at the Council meeting in July 2006. This has subsequently been added to the IEA website and adopted by individual ergonomics societies.

#### 4. IEA Endorsed Journals

The IEA has continued to support and promote those journals who seek endorsement due to their focus on publishing research relating to ergonomics and human factors. The Science Technology and Practice committee currently has 13 journals that have been endorsed by the IEA.

All these journals are profiled on the IEA website. The publishers of the journals provide a discounted subscription rate for all members of IEA federated societies as an additional benefit for their membership.

The IEA welcomed Elsevier as a Diamond Level Sustaining Member in 2007. They also were the successful publisher who provided interest in publishing the keynote addresses for the IEA 2009 Congress. The IEA Council also agreed that other publishers would be welcome to negotiate with the Chinese Congress Committee to select and publish follow up research papers from those presented at the Congress.

#### 5. Research Awards

The IEA has continued to promote research through the Awards Program.

In 2007, the Liberty Mutual Medal in Occupational Safety and Ergonomics was revised to provide an annual cash prize of US\$10,000 and certificate for the most outstanding original research leading to the reduction or mitigation of work related injuries and/or to the advancement of theory, understanding and development of occupational safety research.

Liberty Mutual provided funding for the IEA to engage a consultant during 2008 to promote the award and to develop strategies to encourage nominations from potential candidates. This resulted in a significant increase in the number of applicants and an increased profile for the winners.

The winner of the 2008 award was Andrea Shaw and Verna Blewett et al from Australia with their macro ergonomics research in the mining industry called "Digging Deeper".

The KU Smith Award encourages research and presentation by students at the Triennial IEA Congress. Due to the generosity of the Smith family and the investment of funds through their HFES, the IEA is now able to provide two awards in 2009. Each award is valued at US\$3,000 and the candidate will be provided an opportunity for a special presentation at the IEA Congress.

The winners of the KU Smith Award for 2009 were Monica Lees and Molly Story both from the USA.

#### 6. Promoting Ergonomics through Technical Committees

The growth of Technical Committees and their participation within the IEA has been significant during the last three years.

Under the leadership of Dr Halimahtun Khalid, the Science Technology and Practice Committee has identified new areas of ergonomics research and practice.

As a result, there are now 26 active Technical Committees within the IEA as well as additional areas of the domain that have the potential to form a Technical Committee in the near future. A total of 40 different Technical Tracks were identified for the IEA 2009 Congress.

The different Technical Committees provide opportunities for IEA members with research and practice interest in the same area to interact in relation to their work and to participate in programs such as special editions of Technical journals and to organise and participate in conferences together. The Technical Committees will also utilise websites and chat rooms to share information.

In 2008, the IEA hosted the Healthcare Ergonomics & Patient Safety (HEPS) Conference in Strasbourg, France. This was a collaborative program between the ergonomics societies in Italy, France and Germany to focus on the needs of this technical area of the ergonomics domain. The leadership provided by the Italian Ergonomics Society with this conference is greatly appreciated.



Health Care Ergonomics Technical Committee meeting – Strasbourg, France 2008

# 7. Ergonomics Quality in Design (EQUID)

The development of the Ergonomics Quality in Design template document has progressed during these three years initially under the leadership of Lena Bonapace from Italy and subsequently under Ralph Bruder from Germany. We are extremely grateful for their enthusiastic leadership of this IEA project as well as their committed members of the EQUID Committee.

A total of 12 Versions of the EQUID design template document were developed and evaluated. In May 2007 this document was circulated to all Federated Societies for consideration as a resource for global consideration by designers, design managers and manufacturers to reflect the ergonomics requirements in product design.

Benchmarking of the EQUID document was undertaken with major global companies. This provided feedback on the EQUID processes and criteria used to assess the user requirements. Consultation also was undertaken with the International Organization for Standardization (ISO) to investigate opportunities for the ISO to disseminate the EQUID process as Guidance document or to integrate it into their Standards documents. This potential relationship will be developed with the incoming Executive Committee to determine the future directions.

# 8. IEA 2009 Congress – Beijing China

The IEA have been extremely grateful to the Chinese Ergonomics Society for hosting the IEA 2009 Congress in Beijing, China. We are thankful to the IEA Congress Chair, Professor Sheng Wang and the Co Chairs of the Scientific Committee, Professor Kan Zhang and Dr Halimahtun Khalid. The Congress Committee work extremely hard since the 2006 Congress in Maastricht, The Netherlands to ensure the success of this Congress. The assistance provided by Ergonomics Societies in Taiwan and Hong Kong, China was very supportive to the Chinese Congress team.

This Congress was planned during the period of the Global Financial Crisis when the delegates were challenged by the costs of international travel. Despite these challenges the IEA were delighted with the submission of over 1,200 Abstracts and Sessions to participate in the Congress.

The assistance of the Chairs of the 26 IEA Technical Committees and Co Chairs to encourage papers and review the Abstracts and papers for the Congress was greatly appreciated. One feature of this Congress was the integration of selected technical Tracks where the Technical Committees developed joint sessions.

The support from the Chinese Government to assist with the arrangements for the Congress and to form the Advisory Committee enabled a strong participation from Chinese delegates. This included a strong representation from students.

### GOAL C: To Enhance the Contribution of the Ergonomics Discipline to Global Society

This goal has been a major strategy area for development during 2006-2009. The promotion of ergonomics in research and application has been enhanced through our partnerships with external bodies.

### 1. Tripartite Memorandum of Understanding

Through meetings of the Presidents from the International Commission on Occupational Health (ICOH) and the International Occupational Hygienists Association (IOHA) a tripartite Memorandum of Understanding was developed and signed in 2008. This reinforces the commitment for each international association to recognise each other and to promote their areas of related activities.

Examples of these activities have included:-

1.1 A meeting hosted at the ICOH Conference in Cape Town, 2009 to investigate opportunities to develop practical guidance materials for the prevention of musculoskeletal disorders (MSD). In particular, this project emerged from the process of Control Banding originally developed by IOHA to offer simple practice advice relating to chemical exposure.

A joint working group was established involving representation from the three organisations to investigate options for documenting the research outcomes and recommendations in a range of simple guidance tools.

- 1.2 The IEA has invited the IOHA members to contribute papers to the next CybErg Conference to be hosted by Brazil in 2011.
- 1.3 The ICOH Conference "PREMUS" was hosted in Boston, USA following the IEA Council meeting in 2007. As a gesture of support, the IEA President was invited to participate in the opening ceremony to recognise the joint interest in musculoskeletal disorders between ICOH and IEA members.

### 2. Emerging Relationships with other Professional Associations

As the diversity of ergonomics continues to grow, so do the opportunities to investigate Memoranda of Understanding or less formal relationships in sharing with other international professional associations.

In 2008/2009 consultations have occurred in the areas of:-

- Marine Ergonomics, and
- Industrial Design

The International Committee of Societies of Industrial Design (ICSID) has been communicating with the IEA in relation to the potential joint work in the EQUID program.

### 3. World Health Organisation (WHO)

- 3.1 In 2009, the IEA was formally approved as an NGO (Non Government Organisation) by the WHO. Not only does this recognise the IEA as the representative body for the ergonomics domain, it also increases the profile of ergonomics within the broader agendas covered by the WHO at the global level.
- 3.2 The WHO Global Plan of Action has been derived on five key areas of research and application. In 2008 the IEA has offered to contribute towards these areas of action both directly through projects such as the development of the Ergonomic Tool Kits coordinated through the IEA Technical Committee on MSD.

Representatives from the IEA participated in the WHO collaborating centres workshop hosted in Seoul, Korea in 2008. The ongoing recognition and growth of universities and institutes involved in ergonomics and human factors research to register as WHO collaborating centres continues to occur.

This is a program of outreach to share research findings at the global level. These can then be shared through the WHO and their many programs targeted to the prevention of ill health and injury within the workplace and community.

3.3 The IEA was invited to attend the World Assembly of the WHO in 2009. Our Executive Committee member, Ralph Bruder represented the IEA at the pre-assembly meetings to discuss the applications of ergonomics in the WHO global agenda.

#### 4. International Labour Organisation (ILO)

4.1 In 2008 the IEA was invited, together with ICOH, to be official delegates in Seoul, Korea for the discussion and signing of the Seoul Declaration.

This was a landmark document developed by the ILO together with ISSA (International Society Security Association) together with the Korean government.

This Declaration was signed by 50 representatives from government, employer associations, trade unions, as well as IEA and ICOH to support the recognition of a focus on reduction of injury and ill health within the workplace. It also recognised the respective roles of the tripartite stakeholders in receiving this goal.

The presentation to this seminar reinforced the important role of the scientific community, as represented by their professional associations to provide the technical input into the injury and illness prevention process.



Seoul Declaration at World OHS Summit - Korea 2008

4.2 An ongoing relationship between the IEA and ILO in the development of "Ergonomic Checkpoints" has been proceeding since 1990.

In 1996, a joint publication on Ergonomic Checkpoints was released by the ILO and has become one of the largest circulating documents from their series.

In 2006, the IEA and ILO recommenced this process with a review and subsequent development of the 2<sup>nd</sup> Edition of the Ergonomic Checkpoints.

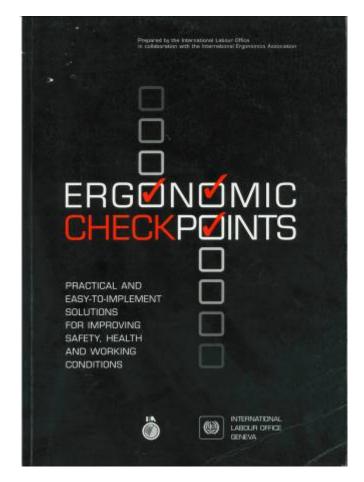
In 2009, it is proposed to launch this second edition as a further demonstration of partnership and commitment between the IEA and the ILO.

In 2007, the IEA and ILO jointly hosted a workshop in Kuala Lumpur, Malaysia to develop Ergonomic Checkpoints relating to Agriculture.

It is proposed that this publication will also be jointly launched in 2009.

The IEA is grateful for the financial support and resources that were provided by the ILO to assist in the development of the Ergonomic Checkpoint publications. We are also grateful for the support provided by Dr. Khi and Dr. San in Vietnam in the development of the illustrations.

The overall leader for these joint projects has been Dr. Kazutaka Kogi from Japan. Dr. Kogi has been tireless in his commitment and dedication in the development of these publications.



### 5. Industry Partnerships

5.1 Support has been provided to the IEA by external industry partners in providing opportunities to promote conferences and workshops relating to ergonomics.

In 2007, the IEA contributed to a series of workshops in Botswana, Africa relating to ergonomics in the mining industry. This was supported by the De Beers company and involved an invited speaker, Pat Scott representing the IEA.

In Chile, the Ergonomics Society invited an IEA representative, Barbara McPhee from Australia, and Shu Shutte from South Africa to participate in a further industry based program relating to ergonomics in mining.

The two Diamond Sustaining Members of the IEA are:-

- Liberty Mutual
- Elsevier

Liberty Mutual has been the major sponsor of the most significant award hosted by the IEA relating to research in the area of occupational health and safety.

During 2008, Liberty Mutual supported the IEA to pay an independent consultant in the USA to review, revitalise and relaunch the Liberty Mutual Award at an international level. This resulted in the largest number of applicants for the award that the IEA had received for 5 years.

Liberty Mutual also hosted the 2007 IEA Council meeting at their research laboratories outside Boston, USA.

Elsevier has been a major supporter of the IEA, not only through the endorsed journals relating to ergonomics, but also in offering a range of services to IEA members. These have included the free access to the 10 most requested journal articles offered via the IEA website.

Elsevier also were selected by the IEA for the publication of keynote papers as well as selected other presentations from the IEA Congress in Beijing, China.

A new company to provide sustaining membership to the IEA has been Gulf Petrochemical Industries Co, Bahrain. This support has emerged following a visit to Bahrain by the IEA President and a demonstration of their commitment to implementing ergonomics within their manufacturing processes.

### 6. International Standards Organisation (ISO)

During 2007, a meeting was held in Geneva between the ISO and the IEA President to revitalise the relationship particularly in the work undertaken by the ISO on ergonomics and human factors.

The ISO has continued to have consultations with the IEA in relation to the EQUID project and opportunities for joint collaboration.

In 2009, the ISO 159 Standing Committee will host their annual meeting at the IEA Congress in Beijing, China. This will not only provide an opportunity for closer collaboration between the organisations, but also an opportunity for open participation and discussion between Congress delegates and the ISO committee members.

The ISO also has provided direct access on the IEA website to all of the Standards that have been developed through the ISO in relation to ergonomics.

### 7. Ergonomics Quality in Design (EQUID) Project

This project has been funded and developed by the IEA since 2000 and version 1.11 of the design template document was circulated to all Federated Societies in May 2008. This provided an opportunity for external review and reflection on the scientific validity and the practicability of the document.

This project has been led during 2006-2009 initially by Lina Bonapace from Italy, and subsequently by Ralph Bruder from Germany.

They have been ably assisted by a committed group of committee members in developing, reviewing and evaluating the EQUID materials.

In 2007, the IEA Council agreed to finalise the development of the document and to determine an implementation plan. One aspect of this plan was that the Council did not wish for the IEA to commercialise the product and to have any direct involvement in assessing and endorsing particular products for manufacturers.

In 2008, the EQUID committee continued in testing the EQUID document and refining it ready for presentation to the Council in 2009. At this time, the Council will vote on potential public release of the EQUID document and to make decisions in determining the most suitable implementation plan.

This project has enabled an exposure to the ergonomics process to a wide range of international companies particularly involved in product design.

### 8. Launch of the Work Engineering Anthropometric Resource (WEAR)

An international team of volunteers working in the ergonomics areas of anthropometry have been progressively collating an interactive database of validated three dimensional anthropometric measurements. This database known as WEAR, will be the first scientifically collating collection of three dimensional anthropometric data to be made available to industry.

The IEA Technical Committee on anthropometry will be hosting a launch of the WEAR database at the IEA 2009 Congress in Beijing.

Prior to this release, members of the IEA have been involved in testing and validating the anthropometric content on this database to ensure its scientific validity.

### 9. Collaboration between Ergonomists employed by Governments

Around the world, governments employ ergonomists to assist in the development of Guidance materials, legislation, standards, as well as supporting inspectorates involved in law enforcement relating to working conditions.

In Europe, the ergonomists employed by governments meet regularly together to discuss and exchange research and guidance information. The same occurs within countries such as Australia and New Zealand to ensure contemporary understanding and professional development for the ergonomists.

In 2009, special sessions will be held at the IEA Congress in Beijing for governments to extend this collaboration at an international level.



AEDEC – Opening Ceremony Kuala Lumpur, 2007

### 10. Federation of European Ergonomics Societies (FEES) industry conference

In 2009, the FEES network is hosting a conference in Belgium relating to the application of ergonomics in government laws.

This will be a first conference arranged by the FEES network to invite parliamentarians, public sector leaders, and industry partners to discuss the integration of ergonomics requirements into European legislation.

### 11. The Application of Ergonomics as a Royal Charter, UK

The Ergonomics Society, UK has been progressively working on the application to obtain a Royal Charter approved by government for the profession of ergonomics. This application has taken many years of research and development by the Ergonomics Society.

If successful, this would be one of the first recognitions by government around the world of ergonomics as a legitimate profession.

### 12. Ergonomics Roadmap, Japan

The Japanese Ergonomics Society has been working with the Japanese government in developing a Roadmap on the future directions of ergonomics research and practice.

The process of Roadmap development has been an important contribution for the government to plan future policy and funding directions as well as a formal recognition of ergonomics as a contributor to this process.

### 13. Government Recognition of Ergonomics Research in India

The Indian government has targeted specific challenges for the future development of the workforce in India. These include subjects such as aging workers, musculoskeletal disorders, technical advancements in agriculture, and drudgery work particularly for women in rural communities.

The support of ergonomics research in contributing towards the policy and program direction has been recognised at a government level.



Indian Society of Ergonomics - Conference – Bhopal, India 2007

### FINANCIAL REPORT 2006-2008

### **Accounting and Banking Procedures**

The IEA carries out its financial operations in U.S. Dollars (US\$). The IEA fiscal year coincides with the calendar year, January 1 through December 31. A cash basis of accounting is employed. On this basis, revenues are noted and recorded when received, and expenses are noted and recorded when paid. The IEA maintains and carries out its financial activities with Scotiabank in Ottawa, Canada. Two types of accounts are maintained. The first type is an Active Cash Account (ACA) that can be characterized as a working account into which income is deposited and from which payments are made. The second type is Guaranteed Investment Certificates (GICs). These accounts in the various accounts so as to maximize interest income while enabling financial affairs to be carried out efficiently.

The IEA finances its activities with revenue from a number of different sources including membership fees of its member societies, sustaining memberships, capitation fees, donations, and other sources. Categories of expenditures include the work of the officers and standing committees, awards, meetings, grants and other miscellaneous activities. As noted in the tables in this section, the financial situation of the IEA remained stable during the report period 2006-2008.

Because the IEA Congress is held every third year, and because there are significantly greater expenses during years of the Congress, it is customary for the Triennial Report to show revenue and expenditures for the past three years. This additional information provides the basis for better understanding revenue and expenditures as well as a longer-term picture of IEA's financial status.

### **Assets and Equity**

Table 1 presents IEA's assets and equity for 2006, 2007 and 2008 as of December 31 of that year. From the table, the total assets as of December 31, 2008 were US\$204,067. Forty two percent of these assets were in the cash account and 58% were in GICs at Scotiabank. The Seed Fund Receivable is a loan for the IEA Congress, and there was no loan during the past three years.

While IEA's funds are held in the Scotiabank accounts indicated above, the money is actually earmarked for certain categories of expenditures. The equity portion of Table 1 presents the various categories for which funds are earmarked. Two general categories are annual operations and special funds. The annual operations are labeled loan and cash reserves, and include expenditures for administrative and other recurring activities. These expenditures are funded with revenues from membership fees, capitation fees, interest, and other receipts. There were four special funds in this category whose purpose generally is to promote and support ergonomics is developing countries (IDCs), and it is now combined into one IDC fund. Another special fund is for the Liberty Mutual Prize and Medal.

*Liberty Mutual Fund* – Funding for the IEA/Liberty Mutual Prize and Medal is provided by Liberty Mutual Insurance Company. The fund provides financial support for the Prize of \$10,000 that is awarded annually.

### Table 1. IEA Assets and Equity (As of December 31 of the Year)

Year	2008	2007	2006
ASSETS			
Cash Account	86,679	42,235	24,516
Term (GIC) Deposits	117,388	132,018	116,388
Seed Fund Receivable	0	0	0
Total	204,067	174,253	140,904

Year (As of December 31)	2008	2007	2006
EQUITY			
Annual Operations Loan Reserve Cash Reserve	35,000 118,118	35,000 114,401	35,000 74,762
IDC Funds ESA Fund (S.E. Asia) HFES Fund (IDCs) SELF Fund (Africa, SA) JES Fund (IDCs) ESK Fund	36,262 5,426 8,496 7,647 13,705 988	34,300 5,426 8,496 7,647 12,731 -	32,670 5,426 8,496 7,647 11,101 -
Liberty Mutual Fund	14,687	(9,448)	(1,528)
Total	204,067	174,253	140,904

# **Revenue and Expenditures**

Table 2 presents a summary IEA's revenue and expenditures for 2006, 2007 and 2008. From the table it can be seen that both revenue and expenditures were higher for 2006, a year of an IEA Congress. A significant portion of IEA functions and activities are carried out by the officers and standing committees. It can be seen that expenditures in every category were smaller in 2007/2008 than during the Congress year 2006, and there was a significant reduction in travel costs in 2008 by utilizing alternative methods of communication such as skype and international teleconferencing.

Year	2005	2004	2003
REVENUE Membership Dues Fed and Aff Societies Sustaining Members Capitation Fees Interest and Exchange Value Contributions Liberty Mutual Fund Misc(ILO–Checkpoints) (Surplus from 2006 Congress)	32,815 16,350 2,424 6,003 1,962 15,000 49	32,740 15,400 790 5,957 3,300 15,000 5,080	28,655 2,600 24,000 4,425 2,312 15,000 5,000 13,345
Total	74,603	78,267	95,337

# Table 2. Statement of Operations for 2006, 2007and 2008

52,878	140,874
	00,002
	30,952
591	228
7,920	31,065
7 000	04.005
3,460	16,503
1,208	3,478
13,658	8,645
0	6,918
3,320	1,813
1,861	3,092
- ,	-,
6,908	16,499
13,616	21,681
225	
	335

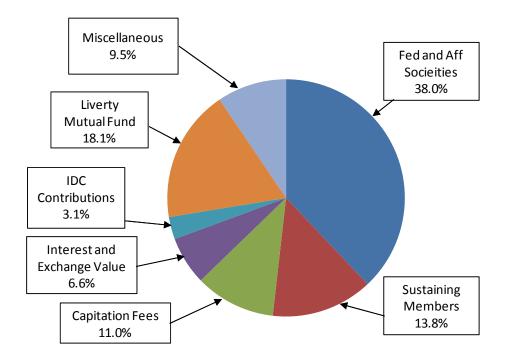
OPERATING SURPLUS 3	5,500 25,389	(45,537)

Figure 1 shows the proportion of revenue for the different categories for the three-year period 2003-2005. As indicated in the figure, more than one-third of IEA revenue is provided by federated society membership fees.

Figure 2 shows the proportion of expenditures in the different categories for the three-year period 2003-2005. A significant portion of IEA functions and activities are carried out by the orricers and standing committees. The percentage of expenditures for these two categories is 28% and 42% respectively, a total of 70% of expenditures.

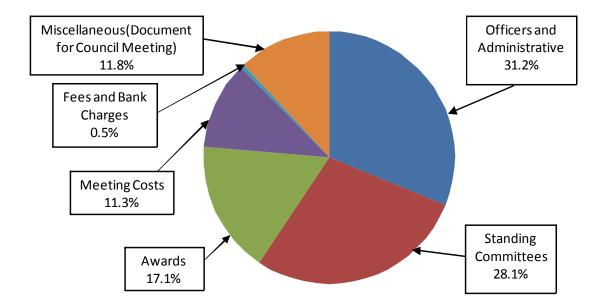
### **Concluding Statement**

Overall, the revenues and expenditures during the 2003-2005 period are similar to previous years. As IEA has grown and its activities have expanded, totals have increased, but proportions such as displayed in Figures 1 and 2 have remained similar.



### FIGURE 1. REVENUE SOURCES 2006-2008

### FIGURE 2. EXPENDITURES 2006-2008



## **IEA Executive Committee**



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### Past President - Awards

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IEA2009 Congress Chair Prof. Sheng Wang President of Chinese Ergonomics Society (CES) Peking University

## **Past Officers**

1961-1964:	President Secretary-Treasurer	S. Forssman E. Grandjean
1964-1967:	President Secretary-Treasurer	G. Lehman E. Grandjean
1967-1970:	President Secretary-Treasurer	P. Ruffell-Smith E. Grandjean
1970-1973:	President Secretary General Treasurer	B. Metz F. Bonjer J. de Jong
1973-1976:	President Secretary General Treasurer	F. Bonjer R. Sell J. de Jong
1976-1979:	President Secretary General Treasurer	A. Chapanis R. Sell H. Scholz
1979-1982:	President Secretary General Treasurer	J. Rosner H. Davis H. Scholz
1982-1985:	President Secretary General Treasurer	S. Sugiyama H. Davis J. Rutenfranz/B. Shackel
1985-1988:	President Secretary General Treasurer	H. Davis I. Kuorinka B. Shackel
1988-1991:	President Secretary General Treasurer	I. Kuorinka H. Hendrick B. Shackel
1991-1994:	President Secretary General Treasurer	H. Hendrick P. Rookmaaker I. Noy
1994-1997:	President Secretary General Treasurer	M. Helander P. Rookmaaker I. Noy
1997-2000:	President Secretary General Treasurer	I. Noy W. Karwowski K. Kogi

2000-2003:	President Secretary General Treasurer	W. Karwowski P. Falzon K. Kogi
2003-2006:	President Secretary General Treasurer	P. Falzon S. Bagnara K. Laughery
2006-2009:	President Secretary General Treasurer	D. Caple P. Carayon M. Chung

## **Past IEA Triennial Conferences**

1961 Stockholm, Sweden 1964 Dortmund, Germany 1967 Birmingham, United Kingdom 1970 Strasbourg, France 1973 Amsterdam, The Netherlands 1976 College Park, USA 1979 Warsaw, Poland 1982 Tokyo, Japan 1985 Bournemouth, United Kingdom 1988 Sydney, Australia 1991 Paris, France 1994 Toronto, Canada 1997 Tampere, Finland 2000 San Diego, USA 2003 Seoul, Republic of Korea 2006 Maastricht, Netherlands 2009 Beijing, China

### **Past Meetings of IEA Council**

- 1964 Dortmund, Germany
- 1965 Paris, France
- 1967 Birmingham, United Kingdom
- 1967 Brighton, United Kingdom
- 1969 Noordwijk, The Netherlands
- 1970 Strasbourg, France
- 1971 Brussels, Belgium
- 1972 Schipol, The Netherlands
- 1973 Amsterdam, The Netherlands
- 1974 Amsterdam, The Netherlands
- 1975 Dortmund, Germany
- 1976 College Park, USA
- 1977 Hayes, USA
- 1978 Luxemburg and Munich, German
- 1979 Warsaw, Poland
- 1980 Bournemouth, United Kingdom
- 1981 Richester, USA
- 1982 Tokyo, Japan
- 1983 Turin, Italy
- 1984 Toronto, Canada
- 1985 Bournemouth, United Kingdom
- 1986 Vancouver, Canada
- 1987 Stuttgart, Germany
- 1988 Sydney, Australia
- 1989 Noordwijk, The Netherlands
- 1990 Kyoto, Japan
- 1991 Paris, France
- 1992 Berlin, Germany
- 1993 Warsaw, Poland
- 1994 Toronto, Canada
- 1995 Rio de Janeiro, Brazil

1996 Breckenridge, CO, USA
1997 Tampere, Finland
1998 Cape Town, South Africa
1999 Santorin, Greece
2000 San Diego USA
2001 Florence, Italy
2002 Santiago, Chile
2003 Seoul, Korea
2005 Funchal, Madeira
2005 San Diego, California, USA
2006 Maastricht, Netherlands
2007 Boston, USA
2008 Reykjavik, Iceland
2009 Beijing, China