



# The Irish Ergonomist

Newsletter of the Irish Ergonomics Society

<http://www.ies.ie>

## The Irish Ergonomics Society Useful contacts:

### Chairman

Mr. Steven Chan  
Dept. Industrial Design, NCAD,  
100 Thomas Street, Dublin 8  
Email: [chans@ncad.ie](mailto:chans@ncad.ie)

### Secretary

Dr. Leonard O'Sullivan  
Dept. Manufacturing & Operations  
Engineering,  
University of Limerick, Limerick.  
Email: [Leonard.O'Sullivan@ul.ie](mailto:Leonard.O'Sullivan@ul.ie)

### Treasurer

Mr Gerry Holmes  
11 Woodlands Drive, Dun Laoghaire,  
Co. Dublin.

## Thanks to the outgoing officers

The new committee would like to thank Enda Fallon (ex. chairman) and Lisa Thomas (ex treasurer) and other outgoing co-opted members of the committee for their valuable contributions to the IES during their term in office. The new committee will endeavour to build on their achievements to further the aims of the society.

Steve Chan

*Contributions needed: articles, book reviews, upcoming conferences etc.  
Send to :*

### Newsletter Editor

Dr. Sara L. Cox  
Dept Mechanical & Aeronautical  
Engineering,  
University of Limerick, Limerick.

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## Feature Personality:

### PROFESSOR TIM GALLWEY

Former Chairman of the I.E.S.  
Honoured with Professorship  
at UL.



Dr Timothy Gallwey, the founder and former Chairman of the Irish Ergonomics Society (IES) was recently awarded an Adjunct Professorship in Ergonomics by the University of Limerick in the Department of Manufacturing and Operations Engineering. This prestigious award formally recognises Dr. Gallwey's expertise in Ergonomics, as well as his contribution to the development of the discipline in Ireland over the past 20 years.

Dr Gallwey founded the IES (the society registering professionals practising in the areas relating to ergonomics) in 1992, the membership has now grown to over xx full members and xx Associate members.

Dr Gallwey recently retired from full-time academic duties in Industrial Engineering at UL where he was also course leader in the postgraduate course in Safety & Ergonomics. He continues in a part-time capacity running his part of an EU project on musculo-skeletal injuries and their prevention called MIRTH, and supervising his Ph.D students.

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## **Feature Article:**

### **2003 AGM Conference @NUI Galway**

#### **THE IRISH ERGONOMICS REVIEW 2003**

*Proceedings of the Irish Ergonomics Society Annual Conference 2003.*  
Ed. Dr. Leonard W. O'Sullivan.

The annual conference of the Irish Ergonomics Society was held on Saturday 7 June 2003 in NUI Galway. Ten papers were given.

The papers demonstrated a broad use of the application of ergonomics in the workplace. This ranged from a formal study of the use of different types of gloves in a clean room, through a reliability study of the measurement of head posture to the usability of routers and web sites.

Many of the papers were the result of academic research but it was interesting to have an insight into how the theory is used in a commercial business. Frank Long gave a very interesting talk on the methods used in their consultancy, to evaluate the usability of web sites using the Aerlingus site as an example. Sara Dockrell reported on the workgroup activity to examine teacher's knowledge of ergonomics relating to the correct posture for using computers on the part of children in schools.

Researchers from the University of Limerick presented six research papers ranging from a study of grip strength, through an analysis of workbenches for use by wheelchair users, to an ergonomic evaluation of hand-held routers. These ranged from scientific analysis to an empirical assessment.

Enda Fallon, NUI Galway, presented a paper on the evaluation of different types of clean-room gloves and Joe Brunton, Tralee Institute of Technology, presented a paper on the reliability of using the craniovertebral angle for measuring head posture. This paper had interesting insights into why we now generally develop bad posture.

In all it was an interesting conference and, hopefully it will be followed by many more with broad interests ranging from scientific research through the application of ergonomics.

For further information on the papers that

were presented, the abstracts will be put onto the web site. Copies of the full papers can be bought from:

Dr. Leonard O'Sullivan  
Dept. Manufacturing & Operations Engineering  
University of Limerick  
Email: Leonard.O'Sullivan@ul.ie

#### **IRISH ERGONOMICS SOCIETY: CHAIRMAN'S REPORT 2003 – SYNOPSIS.**

The IES committee had 3 meetings between September 2002 and June 2003. Frank Power and Chris McCormack were co-opted onto the Society during the second half of the year. Membership now stands at approximately 61 with continued interest resulting in new applications of which 1 was renewed and 2 accepted. Two others were returned pending further information. There is concern that some current members are not up to date with subscriptions.

#### **Occupational Safety and Health Institute of Ireland**

Enda Fallon took over in January 2003 for an interim period of six months to give OSHII a breathing space and during this period specific works undertaken included:

- A project with an insurance company was negotiated, ready for signing.
- Topic Centre for Research with the Bilboa Agency
- Development of Occupational Health and safety services for primary carers
- Organisation of a conference in conjunction with the IES

Unfortunately the monies due to OSHII failed to materialise and the Institute terminated all business on 30/05/03.

#### **Expert Working Groups**

1. *Ergonomics in Schools*  
This group succeeded in attracting funding of €13,000 from the National Centre for Technology in Education (NCTE). A survey has been completed and the following publications prepared:

1. The IES Annual Internal Conference
2. The IEA Congress
3. The Journal of "Applied Ergonomics"

Sara Dockrell deserves special credit for her efforts in continuing the good work of the group.

2. *Manual Handling*  
There has been little activity in this group since September 2001.

#### **Centre for Registration of European Ergonomists (CREE)**

Rob Saunders is the IES representative at CREE. There was one new successful application to CREE. The CREE steering group visited Limerick in May where they met the members of the IES committee. Enda Fallon presented the IES and its activities followed by an exchange of views. It is worth noting that those societies with most members were those that represented ergonomics rather than ergonomists.

#### **International Ergonomics Association (IEA) and Federation of European Ergonomics Societies (FEES)**

Enda Fallon attended the Council meeting of the IEA in Chile, September 2002 of which the main outcomes were:

- Ergonomics could be represented by more than one society within a geographical region.
- The IEA would shortly produce a document on Ergonomics Quality in Design (EQID). This would be a standard similar to ISO 9000, 1400 etc.

The next Council meeting is in Korea in August.

IES is now a full member of FEES. Leonard O'Sullivan is the IES representative and attended a meeting in Munich.

#### **Conferences**

The proposed joint conference with OSHII did not take place for reasons given above. The 8<sup>th</sup> International conference on Human Aspects of Advanced Manufacturing Agility & Hybrid Automation (HAAMAHA'04) will be held in NUI Galway during August 04. The conference has been endorsed by the IES and an application for endorsement has been submitted to the IEA.

#### **DAN: design for all**

The IES has been invited to participate in the European network, DAN, which promotes the idea that design should be inclusive and not just for the able bodied.

#### **Other items:**

No further developments have taken place on the legal status of the society. Due to protracted technical difficulties, the web site is not online. There have been no issues of the Irish Ergonomist this year.

Enda J. Fallon  
June 2003

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**Elections**

At the AGM a new committee was elected as follows:

Mr. Stephen Chan was elected as Chairman replacing Mr. Enda Fallon

Other members elected were:

- Dr. Leonard O’Sullivan
- Ms. Eleanor McMahon
- Mr. Rob Saunders
- Mr. Gerry Holmes

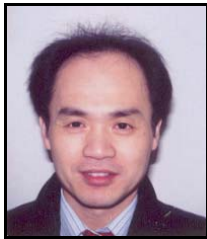
Co-opted onto the committee:

- Ms Fiona Moclair
- Dr. Sara L. Cox

**IES NEWS**

• **New Committee:**

**Chairperson: Steve Chan FIES**



Lecturer in ergonomics @ NCAD, Dublin

**Interests:**  
Design ergonomics, Manual handling workstation design,

Inclusive/universal design, Sensori-interactive design  
Usability evaluation testing

**Contact:** chans@ncad.ie

**Secretary: Leonard O’Sullivan MIES**



Lecturer in ergonomics @ University of Limerick, Limerick

**Interests:**  
Work related musculoskeletal disorders Workstation design, Office

ergonomics, Computer aided ergonomics, Human reliability modelling, Product/hand tool Ergonomics, Work systems design

**Contact:** Leonard.O’Sullivan@ul.ie

**Treasurer: Gerry Holmes MIES**

Retired Health and Safety Authority Inspector



**Interests and experience:**  
Prevention of low back pain national policies, Manual Handling and

VDU regulations, Ergonomics and safety in offshore drilling.

**Contact:** 11 Woodlands Drive, Dun Laoghaire, Co. Dublin.

**Committee Member: Robert Saunders MIES**



CREE representative for Ireland. Partner in the practice Ergo Consulting.

**Interests/Areas of Work:**

Ergonomics/

Human Factors: - industrial/manufacturing/ pharma-chem environments; - design; - capital projects (concept to approval); WRULD’s; -manual handling; - ergonomic training (engineers); - product design/trials; Occupational hygiene & environmental engineering. Expert witness and ‘forensic’ investigations.

**Contact:** rob.saunders@ergo.ie

**Committee Member: Eleanor McMahon FIES, Eur. Erg.**



Health and Safety Consultant in Ergonomics and Manual Handling Guest Lecturer in U. C.D. and U.L. Expert Witness for either Defendant or Plaintiff.

**Interests:**

Ergonomics/Physical Human Performance in all areas of Occupational Health (production and service industries) Wide experience in Manual Handling and workstation design in Canada, the U.S. A. and Ireland. Analysis of musculo-skeletal disorders in litigation cases.

**Contact:** mcmahonea@eircom.net

**Committee Member: Fiona Moclair MIES**



EMEA Ergonomics Programme Manager (Intel Corporation)

**Interests:**

Postural analysis, office furniture (desk & chair) design, design for usability, equipment design, ergonomics standards/legislation, ergonomics in different cultures.

**Contact:** [fiona.m.moclair@intel.com](mailto:fiona.m.moclair@intel.com) <<mailto:fiona.m.moclair@intel.com>>

**Committee Member/Newsletter Editor Sara L. Cox MIES**



Lecturer in Industrial Design @ University of Limerick

**Interests:**  
Designing for the disabled/ elderly  
Developing design curricula  
Inclusive design/Design Methodology

**Contact:** Sara.Cox@ul.ie

- The New Web Site:(see over page 8)
- A New Newsletter Editor:

The Committee of the Irish Ergonomics Society have asked me to edit your newsletter.

A potted biography.

I am a lecturer in Industrial Design at the University of Limerick in the Department of Mechanical and Aeronautical Engineering. I have responsibility for teaching design to both undergraduate and postgraduate students. My own research work has been in the field of semi-medical design (a mountain rescue stretcher – B.A. Hons. and an ambulance stretcher trolley – M.Phil.) and design for disabled children (a seating system for children with developmental dysplasia of the hip – Ph.D.).

I also have an interest in the problems that the aging population faces and was the co-ordinator of the Case studies workgroup of the GENIE (Gerontechnology education

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## Scientific Programme

There were 4 sessions on Ergonomics for Children and Educational Environments (ECEE) during which delegates presented 17 papers. USA, Canada, New Zealand, Australia, Finland, UK, Japan, and Ireland were represented in the paper presentations. Some of the topics that were presented were:

- Studies of school furniture
- Anthropometric measurements of school children
- Schoolbag carriage
- Teaching of ergonomics in schools
- Physical problems associated with computer use in school
- Future generations dealing with current levels of computer exposure.

## Site visit

A site visit was arranged to see Seoul National University Elementary School. On arrival we were introduced to the principal and some of his staff. It was a normal working day for the school therefore most of the staff were in the classrooms teaching at the time. We discussed the school with the principal with the help of an interpreter. We were served Ginseng tea and traditional biscuits. After tea, we were given a guided tour of the school where we were permitted to observe the normal workings of this Korean school.



Children at Seoul National University School

IEA Technical Committee on Ergonomics for Children and Educational Environments  
A meeting of the IEA technical committee on Ergonomics for Children and Educational Environments was held. I attended this meeting where future plans for

the group were discussed. There was a general consensus that establishing guidelines for teachers, children and parents is a priority of the group. There was also concern expressed about the fact that there is not much scientific evidence available upon which to base the guidelines. It was agreed to establish guidelines for now, in the knowledge that they will be reviewed as evidence emerges. Working groups were set up to address the issues.

## Conclusion

Overall this was a very worthwhile conference covering a wide range of topics and providing the chance to gain some insight into Korean education, culture and life. The conference was well organised but tended to have too many simultaneous sessions (usually 18). Attendance at the conference proved to be an excellent opportunity to discuss issues about ergonomics in schools with other interested researchers from around the world both at conference sessions and at social events.



Conference delegates and school staff on the site visit.

## Schoolbags – Don't have to be a pain in the Back.

Sara Dockerell

Carrying a schoolbag is frequently associated with pain or discomfort and can be associated with poor posture. This is a topic of worldwide concern for parents and children. However, these effects can be greatly decreased if some attention is given to the choice of schoolbag, the contents of the schoolbag and the way the schoolbag is lifted and carried.

### Choice of Schoolbag

Buy a schoolbag that can be carried on the back, which has a padded back, adjustable padded shoulder straps and waist strap. It is important that it is the correct size for the child. Don't buy one that is too big, as it will hit against the child's bottom as he/she walks.

### Contents of the Schoolbag

The child should only carry what is necessary in the schoolbag, with heavier items placed closest to the child's spine. There is a general rule of thumb that a child should not carry more than 10% of his/her own bodyweight.

### Schoolbag Lifting and Carriage

The way the schoolbag is lifted and carried and the length of time for which it is carried are very important. Avoid swinging the bag around to get it on to your back. Put the bag on a surface and then with your back to it, put your arms through the straps. Alternatively

another person could help.

A schoolbag that is worn on the back i.e. over both shoulders is the best. It requires less effort, and promotes a better posture than carrying the bag over one shoulder or in one hand. A survey of some Irish 10-year olds found that only 62% of them carried their bags on their backs although 93% of them had schoolbags that could have been carried that way. It may not always be considered to be the cool thing to do. The schoolbag should only be carried when necessary so leave it on something until you are ready. Don't stand around with the bag on your back when you don't have to.

The problems associated with schoolbag carriage are also associated with poor posture generally, and in particular, sitting posture. The current trend towards an increase in sedentary activities among children means that they are sitting for long periods of time, often in a poor posture. This factor along with falling levels of fitness are all contributing to the pain and discomfort associated with schoolbag carriage. Recent research suggests that fitness may play a role in how well a child can carry his/her schoolbag.

Addressing the problems of schoolbags will involve a bit of thought and co-operation on the part of parents, children and teachers but if it can help to make schoolbags safer and more comfortable to carry it will be worthwhile.

Sara Dockerell is a Chartered Physiotherapist\* and Lecturer in the School of Physiotherapy, Trinity College, Dublin.

She is involved in teaching and research on problems associated with schoolbag carriage and schoolchildren's posture at computers.

Tel 6082126 Fax 4531915 Email [sara.dockrell@tcd.ie](mailto:sara.dockrell@tcd.ie)

## Academic Focus:

It is intended to have This section focussing on work and research in ergonomics in an academic institution.

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## What's happening out there:



International Ergonomics Association

### INTERNATIONAL ERGONOMICS ASSOCIATION

Ergonomics International

Issue 77 August 2003

Editor

ANDREW MARSHALL

Marshall Associates

38 Western Road

Havant, Hampshire PO9 1NJ, UK

The IEA Web site has an interesting link as shown below for school use



### Headlines from the IEA newsletter:

#### **IEA Council Meeting**

#### **IEA 2003 Congress**

**Fiftieth Anniversary of the Gesellschaft für Arbeitswissenschaft (GfA) Annual Spring Conference of the GfA and XVIIth Annual Conference of the International Society for Occupational Ergonomics and Safety (ISOES), Munich, May 07 – 09, 2003**

#### **The Ergonomics Society Annual Conference 2004**

Ergonomics Society Annual Conference 2004

Date: 14 to 16 April 2004

Venue: University of Wales, Swansea, UK

#### **Triennial Congress, Maastricht**

### **2006, 10 - 14 July**

#### ***IEA2006: will this ergonomics congress really be ergonomic?***

The news letter contains a report on the IEA meeting and election of new members and a report on the congress held in Seoul.

The news letter will not copy across so will have to be accessed electronically on the web address  
[Http://www.iea.cc/](http://www.iea.cc/)

### **CREE**

*Rob Saunders*

Rob Saunders is the new IES representative at CREE. He is replacing Professor Tim Gallwey and has attended his first meeting in June, in Munich. Tim is stepping aside, both as Irish Rep and as Treasurer. Rob replaces him as Irish Rep, and a new Treasurer is to be appointed in November. There will be more news after the November meeting.

In November, 3 of our Eur Erg's will be applying for renewal (must do every 5 years), and we hope to have at least one new applicant in the Spring, with possibly 2 others.

In June '04 in Paris, there will be the first CREE Conference. More info will be available closer to the date, but suffice to say that the Conference will be structured around 3 parallel sessions and the themes will all be regarding the professional practice of ergonomics in Europe by Eur Ergs.



#### **New ergonomics network in Europe founded**

*Leonard O'Sullivan*

After a preparation period of more than 5 years finally on 7th May 2003 the Federation of European Ergonomics Societies (FEES) could celebrate in Munich its inauguration.

The major objective for FEES is to enhance

the recognition of ergonomics, contributing to economic development, to quality of life, to health and safety at work and to social progress in Europe. More specifically:

a. To support -under the umbrella of the International Ergonomics (IEA) - the development of ergonomics within the European region by:

- Enhancing mutual communication between various European Ergonomics societies.
  - Encouraging and facilitating contact and exchanges between ergonomists (educators, researchers and/or practitioners)
  - Organizing and running European conferences about evolving Ergonomics
- b. To enable the good establishment of ergonomics in EU policy and Programmes
- c. to assist in the access to EU resources and facilities for ergonomics
- d. To stimulate networking in the widest sense for ergonomics

### **HSA news:**

*Dan Murphy and Frank Power*

For HSA news but the message from Frank Power is that there is no news at present.

We hope to have some for the next newsletter.

### **Competitions:**

For your pleasure and leisure. Please send in any competitions that you can think of that you think will interest others.

### **Events Diary:**

#### **CHILE: 1st NATIONAL ERGONOMICS CONFERENCE**

In the third meeting of the Latin American Union of Ergonomics's Council, our Chilean Society of Ergonomics - SOCHERGO received the mandate to organize the first Latin American Conference of Ergonomics, ULAERGO 2004.

In the road of this encounter, we want to invite to every people interested In the study, research and application of ergonomics to our First National Ergonomics Conference.

Our interest is to share experiences, questions, answers and opinions from the speeches and papers.

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This activity is scheduled to be developed November 3, 2003, at Santiago de Chile, so we invite to present original articles and to attend the conferences and round tables.

More info: <http://www.ergonomia.cl/jornada/index.html>

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Dr. Miguel Acevedo, MD, MPH (Epid), ErgoDipl Médico del Trabajo, Magister en Salud Pública (c), Epidemiólogo, Ergónomo Diplomado en Educación de Adultos Diplomado en Administración Miembro Titular de la Sociedad Chilena de Ergonomía Encargado de Comunicaciones de la Sociedad Chilena de Ergonomía Miembro de la Sociedad de Ergonomistas de México A.C.  
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Avda. Andrés Bello 2113, Providencia, CHILE

### 7th International Conference on Work with Computing Systems

[Update on WWCS 2004](#)

Proposals for papers, panels and tutorials are due by 15 November 2003. Details may be accessed at [www.wwcs2004.org](http://www.wwcs2004.org).

Submit an abstract of 700-800 words. Shorter abstracts will be rejected. All abstracts will be blind - and peer reviewed .

Three best paper awards will be conferred. Select papers will be invited for publication in the journal Behaviour and Information Technology

The registration package comprises: Attendance to 3-days technical sessions, 3 lunches + 6 coffee/tea breaks, 1 conference proceedings, welcome reception and conference dinner. The rates are:

- Paper presenters US \$ 325
- Paper presenters ( from ASEAN Countries ) US \$ 250
- Student presenters US \$ 250
- Student presenters ( from ASEAN Countries) US \$ 200
- Non paper presenters US \$ 375
- Virtual presenters (1 day session + proceedings) US \$ 80
- Accompanying person (reception + conf. dinner) US\$ 55

1 US \$ = 3.8 Malaysian Ringgit

4. The venue for the conference is the Renaissance/New World hotel in the prime 'golden triangle' of Kuala Lumpur, and within walking distance to the twin peak towers of Petronas. Hotel accommodation at the 5-star

Renaissance wing is about US\$ 75 nett and the 4-star New World wing at US\$ 58 nett. Accommodation is inclusive of breakfast.

5. Invited plenary speakers and tentative topics are:

- Prof Erik Hollnagel, Sweden: Cognitive engineering in automation
- Prof Sebastiano Bagnara, Italy: Oblivion in knowledge management
- Prof Gitte Lindgaard, Canada: Usability of WWCS systems
- Dr Kenneth Boff, USA: Future WWCS technologies
- Tom Stewart, UK: Computer friendliness @ work

6. There will be special panel sessions on WWCS in:

- Telecommuting/teleworking
- Call Centers
- Supply Chain/ERP

Our best wishes

Halimahtun Khalid & Martin Helander Co-Chairs WWCS 2004

### International Conference on Computer-Aided Ergonomics and Safety 2004

May 26 - May 29, 2004 - Košice, Slovak Republic

[www.tuke.sk/caes2004](http://www.tuke.sk/caes2004)

Abstracts due by November 30<sup>th</sup>

### Premus, 2004, Fifth International Scientific Conference on Prevention of Work related Musculoskeletal Disorders, Zurich, 12-15<sup>th</sup> July 2004.

<http://www.premus2004.ethz.ch/>

Abstracts due 1<sup>st</sup> December

### The New Web page

The above is a sample of what the new IES web page will look like. The new web address is <http://www.irishergonomics.com>

When this is completed, the newsletter will be published electronically.

## Views and Spiels:

A Readers Column for you to air your voices in letters and opinions on any ergonomics related subject.

## Advertisements:

For any advertisements that companies or individuals wish to place.



Merry Christmas  
And a Happy new 2005  
year