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Editorial

In my first editorial I wish to outline my vision for the journal. I thank Phil Clark and Michael Michaliades for initial comments, and to the many members who subsequently provided comment on an earlier draft of this editorial.

My comments are prefaced with sincere thanks also to Ross Armstrong, the previous editor, for the excellent work undertaken to bring the journal to its current high standard.

The Aim of Ergonomics Australia

The aim of the Ergonomics Society of Australia Inc. is:

"to advance the science of ergonomics in Australia by promoting research and education in ergonomics and the application of its principles".

Ergonomics Australia exists to contribute to this aim.

The Functions of Ergonomics Australia

The journal has two key functions which support the society's aim.
1. Communication.

The journal provides the primary means of communication between the ESA council and members, between state branches and members, and between members. Regular features such as the President's Message, Federal News, State Branch News, News and Views; and not least, The Grapevine; have performed this function well, and will continue to do so.

2. Professional development.

The journal provides members with opportunities for professional development. Regular features such as the Noticeboard, Tools and Techniques (including book and software reviews) and one-off articles on a range of topics have performed this function.

Editorial Vision for Ergonomics Australia

Opportunity exists for expansion of the professional development function. My goal is:

an Ergonomics Australia which enables every member to continually develop their knowledge and skills.

The problem: The diversity of members needs.

One barrier to this achieving this goal is the extreme diversity of members' interests, and the difficulty of obtaining material of appropriate standard across this range of interests. Even if such material could be obtained, economic realities would prevent conventional publication of sufficient pages to fulfil this function satisfactorily.


The parallel and complementary publication of an electronic edition of the journal - Ergonomics Australia On Line - in the form of hypertext pages located on a publicly accessible server (colloquially, on the World Wide Web), allows the possibility of enhanced professional development opportunities, and new ways of promoting the society's aim.

The electronic edition is not a replacement for the current paper edition. Receiving the journal in the mail, flicking rapidly through the contents, perhaps marking sections for more detailed reading at a later date, will remain the primary interaction between the journal and the ESA membership. In the future, however, the sections marked for later reading might include abstracts of, or references to, items which can be retrieved from the electronic version.

One advantage is that there are no practical limits on the amount of text which can be included in the electronic edition. Lengthy items such as complete research reports, case studies, critical reviews of literature, or detailed expositions of theoretical positions can be included in the electronic edition without restriction, and a short abstract or summary included in the paper edition. Similarly, items which are of peripheral relevance to ergonomics, or of potential interest to a small
proportion of members, can be included in full in the electronic version and briefly referred to in the paper edition. The inclusion of colour graphics, animations, and short video clips in the electronic edition is also feasible. Short items, particularly those of interest to members in general, will continue to be published in full in the paper edition.

While it may be some time before the majority of members are equipped with computer, modem, and an account with a service provider; access for most members is available now through a library in their vicinity. The electronic edition is equivalent to a collection of items relevant to ergonomics which are effectively lodged in libraries around the country for members to peruse at their leisure, with an index and summary of the contents posted to members in the form of items within the paper edition.

If the content can be obtained, the mechanism exists by which it can be made available to members. The problem is to solicit sufficient suitable content. Given the small number of ESA members this is unlikely to be achieved at a national level. However, locating *Ergonomics Australia On Line* on a publicly accessible server means that the potential audience explodes from the 600 or so ESA members to the world wide community of ergonomists and related professions.

The first steps in achieving this goal have been taken. A framework for the electronic version is in place and, hopefully, by the time you read this, it will also be available in electronic form. The first step in soliciting materials has also already been taken, in the form of distributing an announcement, and call for submissions, to relevant list servers. A copy of this is included in this issue. Please distribute to anyone, especially students, or professionals in related fields who may be interested.

**Role of the Editorial Board**

The success of *Ergonomics Australia*, and *Ergonomics Australia On-Line*, will require the involvement of many people. In particular, I envisage the involvement of an active editorial board to assist with policy formulation (through provision of comment on proposals such as this) and reviewing submitted material. In addition, I envisage individual board members taking responsibility for regular features of *Ergonomics Australia* e.g., a book reviews editor responsible for liaison with publishers, soliciting reviews, and editing reviews; a branch news editor responsible for liaison with branches to solicit news, reports of meetings etc; a council news editor responsible for soliciting information from federal council and executive officer; and a special interest group editor responsible for soliciting items from special interest groups, especially CHISIG.

I'm excited by the possibilities, and just a little daunted by the task ahead. More than anything though, I'm looking forward to meeting many more members in the process. See you on the Gold Coast, if not before!

Robin Burgess-Limerick

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Responses to the Editorial

A draft version of the editorial and announcement/invitation to contribute was circulated to councillors, editorial board members, and a sample of members for comment. In view of the time constraints imposed by publication deadlines, I suggested I would include comments in this issue, and invite the members to join the debate. (The comments received are reproduced below). A couple of issues were raised, including the following:

1. Decrease in membership if access to EA is free?

Concern was expressed that members may allow their membership to lapse if Ergonomics Australia is available in electronic form, free of charge. One possible way of alleviating this concern is to restrict access to the current issue of Ergonomics Australia On-Line to members and subscribers, while allowing free access to past issues.

My own opinion is that the advantages of a paper edition arriving in the mail will still be an incentive for membership. More importantly, I believe it is more likely that more people will be enticed to join the society by the reports of exciting scientific activities, conferences etc, which they see in Ergonomics Australia On-Line. This is our chance to position our society as a credible modern professional body, and expand our membership by publicising the activities of the society to the community of students and professionals in related areas, at no extra (financial!) cost.

2. Potential for revenue generation through advertising?

The potential for generating advertising (or sponsorship) revenue was raised. To attract advertisers/sponsors, we have to demonstrate that our web pages are frequently visited, and this will depend on soliciting sufficient interesting material.

3. Sufficient interesting material?

Whether Ergonomics Australia On-Line can attract sufficient material of interest (and quality) is the crucial question. I strongly encourage all members to consider contributing material, particularly that which does not readily find outlet elsewhere (e.g., case studies; critical reviews).

4. Role of the editorial board/preempting due process

One editorial board member suggested (see Michael Michaliades' letter to Ian Gibson below) that the model of editor/editorial board relationship proposed in the above editorial was inappropriate, as was releasing the draft editorial, and announcement/invitation, beyond the editorial board without seeking the board's, or council's formal approval.

The model of editor/editorial board relationship proposed by Michael (the editor responsible to an editorial board) is not one I am familiar with; and does not
represent common practice, at least not in academic journals. Additional comment regarding these roles is invited.

An electronic edition of *Ergonomics Australia* offers ultimate flexibility. Unlike more permanent structures, it is not necessary for the final shape to be debated and final decisions made before commencing work. It is also better thought of as a continually evolving structure which can be modified at any point. My proposition is to maximise member involvement through inviting ongoing discussion in these pages.

**Want to have your say?**

Your views on any of this (or anything else for that matter!) are very welcome. Additional comments will be included in the next issue.

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**Responses**

From Maurice Oxenburgh (100400.1620@compuserve.com)

The item that interested me most was about expansion in the WWW and being able to solicit items from abroad as well as Aust. Probably the most useful (from my point of view) would be short articles; not for details as this will be published in journals and not to be pre-published (copyright etc.).

This is somewhat different from what you envisage but could be a lead-in for new members or ones starting in a new area. Immediate access to where the good gen is kept and who is doing it. I am thinking that selected leaders in ergonomics could be asked for a few hundred words outlining their activites with reference to their papers and so on. The IEA'97 will be an ideal starting point to determine who are the leaders across the whole gamut of ergonomics. There will be at least 50 session topics and that will keep us going for new items, and who is who, for a long time.

This could of course be just as easily put in the paper edition but I note that people are more ready to type in the electronic medium than in paper. Perhaps because we are brought up with paper and it lasts longer - electrons are more ephemeral.

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From Bill Green (W.S.Green@io.TUDelft.nl)

I like your initiative. It especially appeals to me because of the time lag involved in snail-mailing the journal to the other side of the world, and in any case, it is time we had a presence on the web. You seem to have thought it through and have most of the points covered, but the one danger which can apply to these ventures is the tendency towards folksy, increasingly personalised chatter amongst the 'in crowd'. It requires a firm editorial hand to prevent this. I realise that you are not attempting to subsume the refereed journal article, but I nonetheless think that it might be good to move toward an outlet which eventually gains proper academic status. .... The way to go might be to provide a wider audience for stuff already published in more esoteric outlets, and move from there to a reviewed publication (even reviewing should be faster electronically).
From Shirleyann Gibbs (shanng@gibbsplus.com.au)

Many thanks for your email about future directions for the Journal. Firstly, I'm in full agreement with your views about the overall structure of the hard copy content and the exciting possibilities of an electronic extension. The latter makes absolute sense as a practical solution to disparate membership interests and capabilities in a very numerically restricted local circulation. The opportunity for international nattering should prove invaluable. It is a logical progression from the Cyberg initiative for which I have nothing but praise.

As to editorial board roles and delegations: yes, I have always believed that roles without responsibilities are somewhat empty vessels; that has certainly been the case since the Board was appointed at the Adelaide Conference and has probably been an inevitable victim of circumstances.

From Christine Aickin, on behalf of the NSW branch

We discussed your editorial vision last night at our first ESA committee meeting for the year. The general reaction was one of excitement and agreement especially with the idea of Ergonomics Australia On Line. The issues which came up in discussion were the following:

Will the editorial review be able to be demanding enough to ensure good quality material in ergonomics Australia On Line? The was some confusion concerning the difference between Ergonomics Australia On Line and a learned journal;

The role of the editorial board needs to be further defined. At present there is room for considerable increase in the involvement of the editorial board. Perhaps the board could be introduced (pictures etc) and their role could be further discussed in Ergonomics Australia;

There was some discussion whether the ready availability of information through Ergonomics Australia On Line would result in declining membership of the society because it is so easy to obtain information without being a member;

There could be opportunities for developing advertising revenue through ergonomics Australia On-Line.

From Barbara McPhee (bmcphee@ozemail.com.au)

Congratulations on your appointment as Editor of Ergs Australia! You appear to be tackling the challenge head on and your proposal for an electronic newsletter to supplement the hard copy version sounds terrific - I would support it entirely. You may even be able to link in with the IEA and other federated societies for exchange of information on a regular basis. The IEA Newsletter could be put onto the internet - although I am not sure if Taylor and Francis would be too happy. I think
if the ESA were to pull information from a range of sources this would be much easier for people who do not have the time or the inclination to 'surf'.

My only comment would be that we need to take care that electronic communication does not take over from hard copy in terms of the richness of professional information. That is, the two types of information dissemination (and interaction) could split into two groups of users - those who love the internet and want to work from it on a daily or weekly basis and those who are not so in love with it and cope with it more or less - if they have access to it. The main problem I could see is that the former group could start to take over in time, being younger and more computer literate, leaving the latter group (probably older and less confident with computers) not knowing exactly what they are not getting! Just a comment.

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From Rodney Powell (POWELL@worksafe.wa.gov.au)

Thanks for the info on the "Editorial Vision". I like what you have proposed. The "Ergonomics Australia On Line" certainly has promise. Do you think it would be worthwhile including some sort of keyword searchable index of previous issues and Conference Proceedings?

One area of concern to me is sponsorship. At the moment EA costs us approx. $15 K pa to produce while being offset by less that $3 K in subscriptions and advertising. I would not like to see EA become too commercial but there should be some scope to increase the amount of sponsorship. How we go about this I'm not sure.

We have engaged LynParry at the National Office as the promotions officer. Perhaps nominated members in each state could forward details of potential sponsors to her to at least to contact. I would be interested in your thoughts on this matter.

Broadening the "readership" of EA online certainly has potential. The only problem I can think of is what extra benefit do ESA members then get? For many members (i.e. those who do not regularly attend technical meetings) the only tangible benefit of belonging to the ESA is getting EA. If they can access it on-line for free, why pay for membership?

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From Michael Michaliades (michaliades@atea.mat.army.defence.gov.au) addressed to Ian Gibson.

Dear President,

I am writing to you as an individual EA Editorial Board member to express some concerns regarding a recently announced initiative by the ESA's appointed Editor of the publication "Ergonomics Australia" (EA).

In January this year the newly elect Editor of EA released two email messages,
titled "EA" and "Ergonomics Australia On-Line", which purport to present the Editor's vision for EA. The addressees (which appear to extend far beyond the members of the EA Editorial Board) were urged to immediately respond to the contents of the email via an informal (one-to-one) process. One controversial aspect of the Editor's vision was the creation of `Ergonomics On Line', a hypertext version of the present EA hardcopy.

It is my personal opinion that whilst the aforementioned `vision' is much welcomed, the Editor's intentions to proceed with the implementation of this EA vision through premature (and unauthorised) public advertising of `EA On line' (via a number of relevant server lists and the proposed February edition of EA) is considered to be premature; furthermore, such intended action is of considerable concern, particularly given the fact that the aforementioned matter has not been formally authorised by the ESA Council following a process of informed debate and formal endorsement by the EA Editorial Board.

Contrary to the Editor's assertions that EA Board members are to act as `assistants' to the Editor, it is kindly reminded that the function of the EA Editorial Board is to:

1. develop policies (editorial, advertising, other) for subsequent ESA Council approval and final implementation by the Editor;

2. prepare proposals for the development of EA (or assess other external proposals) and to be responsible for the implementation of these proposals;

3. be accountable for its decisions and report to the ESA Council annually (and as otherwise required).

Consequently, the principle function of Editorial Board members is not to assist an Editor to carry out the fundamental duties of soliciting member submissions, editing submissions and preparing the final publication. To the contrary, it is an Editor's duty to assist the policy deliberations of the Editorial Board (of which the Editor is only one member) and to subsequently implement Council-approved Editorial Board proposals.

Given that the EA Board has not convened to formally debate the advantages/disadvantages of the Editor's proposal to develop `Ergonomics Australia-On Line', it is strongly recommended that all intended public announcements regarding `EA On line' be withdrawn pending a formal consultative process by the EA Editorial Board. Sadly, the simple fact that the EA Editorial Board has yet to develop appropriate internal consultative processes to handle EA policy development is illustrative of the many outstanding (but nevertheless important) issues that require expedient resolution prior to proceeding with `Announcements' & `Invitations' to contribute to half-baked (and poorly justified) proposals such as `EA On Line'.

As a result of the aforementioned developments, I wish to advise you that I will be raising a number of EA related issues (eg. function of EA Editorial Board, role of Editor, expected standards of performance by the ESA Editorial Board, etc) at the next ESA Council meeting for further Council consideration and review.
Finally, any offer by an Editor to assist the members of an Editorial Board is most welcomed; this, however, should not be misinterpreted as an empowerment by one to proceed to act alone with apparent disregard to the workings of the Editorial Board and the wider democratic and formal consultative processes governing Societal bodies.

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Ergonomics Australia On-Line

http://www.uq.edu.au/eaol/

Announcement & Invitation to Contribute

Ergonomics Australia is the official journal of the Ergonomics Society of Australia Inc., a federated society of the International Ergonomics Association. The primary role of the journal in the past has to provide the means of communication between the society and its members. In 1997 this role, and the intended audience, is to be expanded through simultaneous and parallel publication of a hypertext edition - Ergonomics Australia On-line. This edition will utilise the potential of the internet to enable the rapid dissemination of information related to Ergonomics in a forum comparable to conventional conference.

Access to Ergonomics Australia On-Line will be provided free of charge as a service to the international community of ergonomists, and related professions, and all are invited to take advantage of this offer. A table of contents for each bi-monthly issue will be emailed to relevant list servers and interested persons; if you wish to be added to this list please send email to robin@hms.uq.edu.au.

The international community is also invited to submit contributions for publication in Ergonomics Australia On-Line, subject to a (rapid) review process. Reports of basic or applied research are welcomed, but other material which does not readily find outlet in archival journals is especially encouraged. Suitable items would include critical reviews of literature, case studies, teaching materials, work in progress, and items of anecdotal, speculative, controversial, or even polemic character. Anything related to ergonomics/human factors in the broadest sense will be considered. Prospective authors are invited to discuss their proposed submission with the editor (contact details below).

One aim of the journal is to allow opportunity for authors to receive feedback, either privately or publicly, and to stimulate discussion and debate, which can take place in the form of letters and responses linked to the hypertext edition. Hypertext also has the advantage of allowing incorporation of graphics, or (low quality) video. Graduate students in particular, especially those for whom attendance at international conferences is expensive, may find this a cost-effective way of publicising their work.

Please note that, although submissions will be reviewed by an editorial board for suitability, the intention is not to provide a substitute for publication in peer reviewed archival journals. Publication in Ergonomics Australia On-Line should not preclude submission to such journals, but rather is a complementary medium equivalent to publication in conference proceedings with limited availability. The
primary advantage of this medium is speed. An editorial decision will be provided within 3 weeks of receipt, and publication within 2 months of acceptance.

Submission may occur in a variety of ways. Authors conversant with hypertext markup language may prefer to send final html files, otherwise documents saved as Rich Text Format are preferred, although any common format should be fine. Files should be sent as an attachment to email, or copied to 3.5" floppy and sent by post (provide an email address for reply if possible please).

All submissions, proposals, expressions of interest, (or offers to edit a special issue!), should be sent to the Editor:

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**Presidents Message**

Dear fellow ergonomes

By the time you read this I shall be in sunny/cloudy/rainy/snowy Italy (Tuscany to be precise) and given the seemingly odd state of the weather worldwide it will probably be unseasonable for the time of year. No, I'm not going to a conference - "they don't have conferences in Europe in winter, silly, what do you think conferences are for?" - but simply on holiday to visit my daughter who is working near Florence. Though on holiday I shall, of course, keep my eyes open for misdemeanours ergonomic to add to my ergorogues gallery. I'll be back in Perth on 14 March (you can bother Jenni Miller or Ian Mitchell with your problems before then) and if I fall asleep during the council teleconference on 17 March I hope councillors will charitably put it down to jet-lag and not St Patrick's Day induced post-prandial soporificity!

We do want to speed up the decision making process in the ESA and I would urge councillors to raise matters of interest with their branches as soon as possible after council meetings and not wait for the next agenda to arrive, because it's too late by then. If it's already too late to get feedback or opinions for the March teleconference then get going for the May face-to-face council meeting. The executive hope after the March meeting to give you a full run down on current important issues, particularly those affecting our standing in the wider community and with government organisations.
The thought of overseas travel leads me to share with you some info about ergonomics societies internationally - 37 national ergonomics societies are federated with the IEA, totalling some 16500 members in countries with a combined population of 3.6 billion people. These figures are, of course, out of date, especially the population ones, but they give a figure of 4.5 ergonomes per million population, ranging from 0.8/million in South-East Asia to 165/million in Denmark. The world figures are actually higher than this because some ergonomes work in countries not affiliated to the IEA. These figures are taken from IEA News in the journal Ergonomics, June 1996, and could be a source of fun for the statistically inclined, especially if one includes data on GDP, standard of living etc. Seriously though, there is a need for us to look outside the boundaries of Australia and not to leave it all to the IEA, which is pursuing ways of promoting ergonomics in industrially developing countries (IDCs). An IEA survey of needs in 25 federated societies (not all in IDCs) found that training and education, and diffusing ergonomics into industry were major needs, and that international collaboration in research and information exchange was top of the list of planned actions. The full details of the survey and IEA programmes for IDCs is well worth reading - Ergonomics, June 1996, pp 887-891. There is plenty of scope for action by individuals and the ESA.

Finally, a reminder about our national conference in November 1997 - a top priority, folks, and I hear it will be first-rate. And if you want to encourage the SE Asian Ergonomics Society why not go to their conference as well - it is in early November in Kuala Lumpur (for details see elsewhere in this issue of EA).

I'm looking forward to getting to know councillors' voices better in March.

Arrivederci.

Ian Gibson.

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Branch News

Vic Branch News

Scientific Meeting - 2 October 1996

(Mike Michaliades)

The last Scientific meeting for the 1996 year was held on October 2nd at Optus Oval. A summary of the main points of each of the two presentations is provided:

Dr Oldfield (Air Operations Division, AMRL at DSTO) presented on the design aspects of modern aviation auditory displays (eg. F18 aircraft). Particular attention was given to the role of the human factors researcher in the design of advanced cockpits. Some human factors challenges for designers and operators of contemporary and future auditory displays (eg. high visual pilot workloads, projected imagery, helmet mounted displays, virtually reality) were presented.

The main advantages associated with the use of auditory displays (including potential for reducing high visual workloads and the use of auditory displays as 'attention grabbers' for situations involving aviation warnings that require immediate response) were noted. Specific issues raised were: speech vs non-speech, tones/beeps and 'attentions', literal and metaphoric sounds, sound localisation issues, etc. Application of auditory displays in military applications (eg. radar guided weapons, search radars) were shown.

Finally, 3D auditory displays (ie. displays based on impulse response functions that enable the synthesising of sounds at particular locations) were described. Potential advantages of such displays (particularly, in terms of aiding pilot's visual search skills by reducing search/response times or using aural cues to detect airborne threats beyond the pilot's visual range) were discussed. The presentation concluded with the display of some selected human factors findings from recent AMRL research on 3D auditory displays.

Second speaker was Karyn Burger, a senior cognitive project officer employed with Logica Multimedia (an ex-Telstra employee with extensive experience in Web site design) who gave a succinct presentation on suability issues in multimedia. Major clients of Logica include banking organisations and telecommunications industries. Logica is also involved in kiosk based multimedia design and interactive TV applications.

Multimedia was briefly described (although Karyn emphasised that multimedia appears to be interpreted in different ways by different people). Logica views
multimedia as the integration of multiple media technologies in order to create a user interface (eg. text, graphics, audio, video, animation, etc). There are many challenges for multimedia designers, including the needs to precisely identify user requirements and to concurrently satisfy many different customers. In fact, this lack of a clearly definable multimedia user group was seen to be one of the biggest design challenges confronting contemporary multimedia designers.

Furthermore, multimedia designers are (somehow) expected to accommodate a broad range of users (ie. both experienced vs. new PC users, young vs. old) with rapidly changing demographic characteristics (eg. rich vs. poor or Australian vs. international audiences). Multimedia developers are also increasingly challenged to develop multimedia applications that are suitable for different practical applications (eg. entertainment vs. formal academic use) and different work environments (eg. university, formal workplace, shopping centre).

Task related aspects of Web design (ie. user expectations) and potential uses (eg. information search, online product ordering, product reviews and demos) were briefly discussed. Some findings from recent Web user surveys were presented.

Other Web design challenges confronting multimedia designers include: choice of most appropriate input devices (eg. keyboard, mouse, remote control, touch screen); selection of appropriate operating platform type; flexibility of design for multi-site operation (ie. suitable for use at home, work tertiary institutions, Net cafe); particular choice of: Net browser type, Web processing language and graphical design characteristics (eg. choice of screen size, resolution, display colours, etc.).

Finally, the current Telstra Homepage (prepared by Logica) was presented as a good example of a successful multimedia Homepage design.

These presentations were amongst our most interesting for the year. Sadly, the turnout of members for this last scientific meeting for 1996 was disappointing. The reviewer acknowledges the contribution of Margaret Juhasz in the preparation of this article.

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**WA Branch news**

**Report on WA branch Technical Meeting**

**Kinematic comparison of patient handling using slings - Wendy Elford**

This talk formed part of the technical meeting of the WA Branch on 16 October. Wendy Elford presented the results of her research project for her Master of Science in ergonomics. Her study compared a two-person transfer from chair to chair under 3 different conditions - no slings, one sling, and two slings. (Slings used were fabric slings from Pelcan Products, Perth) The study collected psychophysical and biomechanical data. The kinematic data looked at the angle, velocity and acceleration of the trunk in the three planes of movement, using the lumbar motion monitor. Subjective data was collected on body part stress ratings and preference. The subjects were 22 female nurses who did 5 trials of each of the 3 lifting techniques. Wendy found that when not using a sling, there was
significantly greater flexion, rotation and side flexion of the trunk compared with either technique using slings. The velocity and acceleration were also greater in most planes.

The subjects showed no difference in body stress rating between the one or two sling conditions, but experienced greater stress when not using a sling. The subjects' preference was for the technique using slings, but there was no strong preference between the latter two conditions.

Both increased trunk angles, velocities and accelerations have been associated with risk of injury to the handler. Thus the study indicated that using slings to manually transfer patients can reduce trunk angles, velocities and accelerations. The use of slings should therefore be encouraged as an aid to transferring patients from chair to chair, as this is one method of reducing the stress on the nursing staff who are involved in patient handling in hospitals and nursing homes.

Jenni Miller.

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**NSW BRANCH NEWS**

A new year and a new "EA" Editor to whom we all send greetings, thanks for tackling it, and best wishes for bigger and better things as the Society grows in wisdom and understanding of its role and influence.

The NSW Committee has been very active in getting its house in order for the year's activities - starting with its "Competency Workshop" on Wednesday 19 February. This is seen as crucial to our development as ergonomists and for professional acceptance among other (perhaps) more easily defined and cohesive disciplines. Our state newsletter gave members an overview of the current and proposed future context of developments, prepared by Neil Adams, and we hope that a significant number of our members will come to the workshop and contribute their ideas as to how to build on the excellent work already undertaken by the national competency committee.

Interesting speakers have been confirmed for our March and April meetings on "Shiftwork"; and "Designing for Solutions", respectively. The former will discuss research to date, and the April meeting will focus on solutions rather than problems ... seems obvious - but not always the traditional order of things in health based approaches to ergonomics.

The dates for meetings this year are:

February 19, March 19, April 23, May 21, June 18

July 23, August 20, September 17, October 22, November 19

Details will appear progressively in our state newsletter and in this column. There will also be site visits and a major seminar in the eventual line-up of good things to do as a member of the ESA NSW Branch. We look forward to meeting as many of our members as possible during the year and extend a welcome to any interstate members who may be in Sydney on any of our meeting dates.
Shann Gibbs
NSW Correspondent
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Productivity, Ergonomics & Safety -

The Total Package

International Occupational Health & Safety Forum
and 33rd Ergonomics Society of Australia Conference

Conrad Jupiter's
Gold Coast

24 - 27 November, 1997

An invitation

Mark your diary now for the Productivity, Ergonomics & Safety - The Total Package conference to be held on Queensland's Gold Coast, 24 - 27 November 1997.

The conference will focus on the practical aspects of workplace health and safety and ergonomics with particular emphasis on productivity.

The Productivity, Ergonomics & Safety - The Total Package conference is jointly organised and presented by the Division of Workplace Health & Safety, Queensland Government and the Ergonomics Society of Australia, Inc.

Conference Structure

The conference will consist of two components:

Workplace Health and Safety sessions Monday 24 and Tuesday 25 November, 1997

Ergonomics sessions Tuesday 25, Wednesday 26

and Thursday 27 November, 1997

Delegates will have the option of registering for either or both components of the conference.

Call for Papers

The conference invites paper submissions to be considered for inclusion in the program. Paper submissions must be topical and should preferably address one or more of the following topic themes:
ERGONOMICS TOPICS

* Organisational Design - *Enhancing productivity, work environments and workability*
  - designing management systems and effective working groups
  - minimising stress at work
  - enhancing communication in organisational structures
  - shiftwork and rosters - effects on productivity and safety

* Consumer Products and Industrial Design - *Designing for people*
  - safe and efficient work environments, tools and jobs
  - useability testing
  - designing manuals
  - humans in the built environment

* Human-Computer interaction - *Emerging technologies and productivity*
  - user-interface design
  - effective use of multi-media

* Rehabilitation Ergonomics - *Promoting safe return to work*
  - musculoskeletal disorders
  - occupational overuse syndrome
  - injury prevention
  - assistive technologies

* Human Reliability - *Optimising human responses to work systems*
  - information processing and decision making
  - alarms and warning systems
  - mental workload in high and low stress work environments.

Scientific papers, case studies and workshop presentations are particularly encouraged.

WORKPLACE HEALTH & SAFETY (WHS) TOPICS

* Case studies and "how to" workshops describing solutions, implementations and outcomes
* Risk management - new examples and practical approaches
* Integrating WHS with other management systems (including quality assurance) and incorporating practical examples
* Development of pro-active key performance indicators for WHS
* Communication in the workplace on WHS issues (including preparation of a WHS communication plan)
* Promoting a positive health and safety culture in organisations
* Legal requirements - liabilities and costs associated with poor WHS management

**Conference Secretariat**

A Call For Papers brochure will be sent out within the next month.

For further information and general enquires please contact:

Conference Secretariat

PO Box 177

RED HILL QLD 4059

AUSTRALIA

Telephone: 07 3368 2644 (International callers: + 61 7 3368 2644)

Freecall: 1 800 811 510 *Australian callers from outside Brisbane only*

Facsimile: 07 3369 3731 (international callers: + 61 7 3369 3731)

e-mail: carillon@ozemail.com.au

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**Ergonomics and Competency-based Standards - Issues for Consideration**

*(the following is a brief article on the issue of competency-based standards and a review of some of the recent history as it relates to ergonomics)*

There are numerous areas of professional ergonomics practice with a corresponding broad range of knowledge and a variety of skills needed in order to perform at a competent level.

Ergonomics competencies are based upon a depth of knowledge in, and an understanding of related disciplines relevant to the practice of ergonomics and on a comprehensive understanding of the principles and philosophy of ergonomics as applied to a variety of contextual areas.

**Core Competencies and Areas of Specialisation**
The last two conferences of the International Ergonomics Society (in Paris in 1991 and Toronto in 1994) have demonstrated lively debate on the issues of harmonisation of professional ergonomics standards and competency based standards. Central to these issues is the topic of core competencies of ergonomists and their areas of specialisation.

The career paths by which professionals travel to become ergonomists vary greatly. The vast majority of people practising ergonomics today come from a particular "profession of origin". This is demonstrated by the Van Cott and Huey (1992) survey and the survey undertaken by the Ergonomics Society of Australia in 1994. Ergonomists will often apply ergonomics methodologies and expertise over one or two professional practice areas. For example, a physiotherapist may practise ergonomics in the specialty area of musculoskeletal health and biomechanics, and the cognitive psychologist in the area of human error and reliability. Both practice ergonomics in their own particular area of speciality.

The Board of Certification in Professional Ergonomics (BCPE) of the United States and the Centre for Registration of European Ergonomists also acknowledge the multivariate paths that ergonomists may take to practice the profession. Both certification programs recognise that there are areas of application and of specialisation. The opportunity is offered to applicants of the certification programs to undergo assessment in one area of application across three areas of specialisation. Application areas include consumer products; manufacturing; office work; transport; process industry; health care; automation; architecture; recreation; arts and leisure activities. Areas of specialisation include human reliability; health, safety and well-being; training and instruction; occupational hygiene; work place design; information design; and work organisation design (BCPE, 1994; Corlett, 1994).

Ruth (1994; 3-4) developed a model outlining the competence profile of individual ergonomists. This model is based on three levels of competency. The "core competencies" consist of basic professional understanding such as a knowledge of relevant legislation, rules, culture, traditions and organisational participants. All ergonomists (and other professionals for that matter) have to possess this level of competence in order to work professionally in an organisational or social context. The next level, or "generalist competencies", consist of a minimum standard of the broad diversity of knowledge in different disciplines that traditionally constitutes the subject of Ergonomics, plus the ability to integrate this knowledge in order to apply the ergonomics approach and ergonomics methodologies. This is the level that the current project is attempting to define. The third level of competence are the "specialist competencies" of an individual. This level consists of deeper theoretical and practical knowledge in one or two of the relevant areas, such as technology or the behavioural sciences. The nature of the specialist competencies would usually be the "professional of origin" of the individual. Diagrams depicting this model are portrayed in Figure 1 and 2.
Recent Developments in the Development of Competency-based Standards for Ergonomists in Australia and New Zealand

In New Zealand, the New Zealand Qualifications Authority (NZQA)[1] approached the New Zealand Ergonomics Society in order for the Society to provide input to the draft Unit Standard on Occupational Ergonomics. This Unit Standard would then be included as part of the New Zealand Qualification Register of the National Qualifications Framework[2]. In February 1995 a draft set of units, elements and performance criteria for Occupational Ergonomics was released. The draft units are included in Table 1.
Table 1: Units for Occupational Ergonomics from the NZQA Draft Unit Standard.

- 1. Develop a proposal for an ergonomics project
- 2. Collect data for an ergonomics analysis
- 3. Analyse data from an ergonomics perspective
- 4. Develop recommendations for improving ergonomic conditions
- 5. Implement recommended ergonomics project/intervention
- 6. Evaluate outcomes of an ergonomics project/intervention

The Victorian Branch of the Ergonomics Society of Australia began discussing the issue of competency standards for ergonomists in response to the implementation of the Society's professional certification scheme. This process commenced in 1985 (Rawling, 1992) and the first members were awarded with professional certification status in 1990 (Bullock, 1996). Bullock (1996) contends that the certification process in Australia recognises the multidisciplinary nature of ergonomics by accepting any relevant qualification as the basic starting point. It relies heavily on the recognition of skills in ergonomics acquired through experience in the field as attested to by referees. Bullock goes on to say that:

"... without reference to a range of competency standards, this could offer the possibility for certification of ergonomists with varying levels of skills and abilities." (Bullock, 1996: 42).

Rawling in 1990 argued that what constitutes professionalism is a combination of technical knowledge and application of appropriate behaviours to task. Here, Rawling (1990) cites Dulewicz (1989) who outlined a number of core competencies that differentiated between effective managers and less effective managers. Rawling used the same model and applied it to ergonomics (1990). This application is demonstrated in Table 2. Rawling continues:

"Clearly, considerable work is required to take this concept further in an ergonomics context. However, the potential returns to the Society are enormous. Not only would we have a better base on which to assess (membership) applications, but also a framework through which to implement programs of benefit to all members.

The process to identify these competencies is relatively straightforward. We would need to convene a series of study groups to get members and users of the Society to identify what they see as good and poor behaviours governing the professional practice, research and /or teaching of ergonomics ..."

(Rawling, 1990: 240)

In 1992, Rawling and the Victorian Branch of the Ergonomics Society of Australia continued with the development of these initial ideas and concepts. Under the direction of Rawling, Parsons (1992) conducted two workshops in Victoria with the aim of identifying the common skills and behaviours required to be an effective ergonomicist. Ten competency clusters were identified. These competencies were divided into two groups: core ergonomics competencies and support competencies. They are outlined below in Table 3.
Since this work in 1992, there has been no endeavour by the Ergonomics Society of Australia (ESA) to further advance and pursue this work. However, the advantages to the professional association of doing so were clear. The establishment of a set of competency-based standards will lay the foundation of a comprehensive quality assurance program for the profession. A set of agreed competency-based standards can be used by educators when reviewing curriculum, and by the ESA if it should decide to undertake a program of accrediting courses (or modules of courses). They may also be used by the ESA to develop a targeted continuing professional development program for its members (or those wishing to attain membership). However, the greatest benefit will be a clear statement of the competencies expected by the professional association for entry into the ergonomics profession.

In December 1994, the Federal Council of the ESA decided to continue the pursuit of developing competency-based standards for the profession. The standards are those that are required by the ESA to be demonstrated by those wanting to hold themselves out as ergonomists. This is to be developed as a self-regulatory mechanism of the ESA in order to maintain some basis for quality standards for the profession. This effort is the subject of the current project.

Jim Carmichael

Competency-based Standards Project Officer

References


Competency-based Standards Project Update

By now members in most states should have had the opportunity to participate in a workshop/information session regarding the ergonomics competency-based standards project.

The steering committee member from your Branch was requested to advertise and convene a workshop of interested members within their branch in order to finalise the consultative process of the project to date. The aim of this workshop was to:

(i) provide an opportunity for the general membership of the participating societies to inform themselves of the status of the project;

(ii) seek the views of those who attended; and

(iii) validate the results of the prior consultation as a true reflection of the minimum competencies required of a person entering the profession and calling him or herself an ergonomist.

I participated in the workshop held in Brisbane by the Queensland steering committee member, Robin Burgess-Limerick. The purpose and methodology of the whole project was explained at the beginning of the workshop. Background information was then provided to the participants regarding the project. Participants were then provided with the entire set of competency-based standards developed to that time. However, the Queensland group (like other groups) was asked to consider in detail just two of the draft units of competency. This was due to the period of time it was expected for the workshop to require.

A small and enthusiastic group of members turned up for the Queensland workshop and toiled away for 3 hours on a Saturday morning in January. Feedback from a number of other Branches has already been received and the remainder is expected shortly. Once this has been compiled, the final draft will be recirculated to the steering committee and then to federal council. I would like to see Council consider this document at their face to face meeting in May.

The aim of this project is to come up with a set of competency statements that describe what the Society, in general, believes an "entry-level" ergonomist should possess. To do this it has built on the work already done by the Victorian Branch and structured the statements in the format required by the National Training
Board. Once finalised, the competency standards should be of course subject to review every couple of years (finding people willing to do this may be another thing). It would be unreasonable to expect that every member of the Society will be extremely satisfied with the final outcome of the project. The vast majority have indeed expressed satisfaction with the process. Unfortunately, the process has been a slow one. This has been unavoidable due to the methodology the committee has used, and a consequence of the limited funding the federal council has at its ready disposal.

Looking ahead, the next project that the Society must consider is the development of an assessment methodology to be used in conjunction with the work that has already been done.

Jim Carmichael
Project Officer

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REGISTER of CERTIFIED OHS AUDITORS

Dr Ian Mitchell
Executive Officer
ESA
Canberra
Dear Ian

REGISTER of CERTIFIED OHS AUDITORS

The Quality Society of Australia (QSA) is accredited by the Joint Accreditation System of Australia and New Zealand (JAS-ANZ) as the auditor certification body for Quality (ISO 9000 series) and Environment (ISO 14000 series) auditors

The Register of Certified Auditors is administered by the Quality Society of Australia under the management control of a Board of persons knowledgeable in their disciplines and management

A panel of "experts" consider each application for auditor accreditation, taking into account both academic standards and experience. Please note that accreditation is for auditing only. An auditor checks compliance but does not recommend actions to achieve compliance as does a consultant

About a year ago, a QSA working group was formed to establish the criteria for registration of OHS auditors, one of the members was the Safety Institute of Australia (SIA), ESA was not invited to attend even though one of the eight audit categories was Ergonomics. Similarly the Australian Institute of Occupational Hygienists (AIOH) was not aware of the working party

A draft OHS Auditor Certification Criteria document was released by QSA in
September 1996 and the SIA brought it to the attention of the retiring ESA Executive

At the September ESA Council meeting, Malcolm Dispain was appointed to represent ESA in this matter

A teleconference was arranged with SIA, AIOH and ESA to discuss the draft OHS Auditor certification procedure in detail. We agreed in principle with a Register of OHS Auditors with appropriate competencies, a draft letter to QSA was prepared and a second teleconference, this time including QSA was arranged

QSA said it wanted to work with ESA, AIOH, SIA and for the three organisations to be involved in the Certification system for OHS auditors. A face to face meeting in Sydney for 22 November was arranged to agree details and a letter to QSA (published in the last Journal) was sent

At the meeting in Sydney, ESA was represented by Malcolm Dispain and Christine Aicken. The meeting agreed

- a single Register of Certified OHS Auditors is sensible
- the certification is for auditing only
- ESA, AIOH and SIA each nominate a person who is experienced in management as an (unpaid) Board member for a two year period
- ESA, AIOH and SIA nominate members of the OHS Auditor Certification Panel
- ESA prepare and run Ergonomics training for OHS auditors
- ESA membership competencies are the basis of Ergonomics auditor certification
- the accreditation system be administered by QSA in association with ESA, AIOH and SIA
- the changes be incorporated into a new draft for certification of OHS auditors

**OHS Auditor accreditation levels**

**Associate OHS Auditor**

May only work under the supervision of a Senior OHS auditor

Affiliate ESA membership, with three years auditing experience in the basis for accreditation

**OHS Auditor**

Full ESA Membership with five years auditing experience, able to work without audit supervision for ergonomic audits

**Senior OHS Auditor**

ESA Member or Professional Member having led audit teams

Ergonomics auditors may also apply for auditor status for the other seven auditor categories which are
• OHS management systems
• plant
• emergency preparedness
• occupational hygiene
• dangerous goods
• legislative compliance
• post injury management

With time, further categories may be added

Your representatives agreed this system as sensible, cost-effective and already operating. A huge amount of ESA member work would be required to seek independent ESA Ergonomics Auditor accreditation with JAS-ANZ

The advantages of a joint accreditation system include

• minimum cost to ESA and members
• international as well as national recognition
• opportunity for ESA to prepare and present ergonomics auditor accreditation training
• recognition of ESA as the ergonomics authority
• maintaining ESA influence on accreditation and registration process

Malcolm G Dispain

Since this explanatory letter there has been further progress

Malcolm Dispain has been nominated as ESA representative on the Board

Christine Aickin, Maurice Oxenburgh, and Mike Stevenson have been nominated as rotating Sydney based panel members

We require a further nomination for Accreditation panel membership from someone based in Melbourne to attend the occasional Accreditation panel meeting there.

All positions are unpaid and require time to be trained and attend Accreditation panel meetings

If you would like to be considered for one of the Accreditation panel members, please let Malcolm Dispain know by the end of March 1997 at the latest

The Certification and Registration program will start in mid February (not midMarch)

Requirements for certification now includes

"Note OHS professionals who have been assessed by the Safety Institute of Australia, the Ergonomic Society of Australia, or the Australian Institute of Occupational Hygienists, and meet the education and work experience requirements of Member or Fellow grades will be deemed as satisfying the formal education and
work experience for all grades of auditor certification Candidates seeking this exemption will need to provide objective evidence of their professional membership attainments. Certification as an auditor may not qualify an individual for professional membership to one of those bodies Training in auditing skills and actual auditing experience set out in these criteria will however need to be demonstrated"

Fees will be

Application $100
Annual fee
Associate OHS auditor $120
OHS auditor $220
Senior OHS auditor $220

Application information and forms are available from
Quality Society of Australia
P O Box 742
Crows Nest
NSW 2065
Phone 02 9901 9940
Fax 02 9901 4677

ESA will also need to run training courses for aspiring OHS / ergonomics auditors which may also double as professional development, count toward ESA membership upgrading and a source of new members. A great deal of work will be needed to ensure our ongoing and increasing professional status in the eyes of other professional associations. Again, volunteers will be needed

The OHS Auditor accreditation and registration system will be published around March 1997, you can be sure ESA will work to ensure the professionalism of ergonomics auditors in general and ESA members in particular continue to increase

As developments procede, this Journal will keep you informed

Malcolm Dispain

ph. 08 8363 1583; fx 08 8362 2596; email dispain@senet.com.au

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Register of Certified Auditors

Occupational Health & Safety Auditor Training
Auditor Training Course Objectives

* Understanding the range and application of management systems relevant to OHS.
* Understanding a systematic approach to OHS auditing.
* Understanding the scope of OHS auditor responsibilities.

Auditor Training Course Syllabus

Introduction and Overview on OHS auditing

* Definitions eg what is an OHS audit?
* Overview of national and international approaches to OHS management.
* Comparison of different OHS management systems, standards and other audit protocols.
* Categories of OHS audit.
* Case study(s) demonstrating the application of OHS systems and how these systems should be audited taking into account both auditing methodology and the technical scope of the audit.
* Explanation of the minimum requirements for a competent OHS management system.
* Performance criteria for OHS systems.
* Explanation of the need for systems to develop and change.
* Integrated management (business systems) eg quality, environment, OHS.

Auditing Skills

* Explanation of auditing standards eg ISO 10011 parts 1, 2 and 3 and ISO 14010/11.
* Pre audit planning.
* Document review,
* On-site auditing activities including entry and exit interviews.
* Audit reporting and follow-up.
* Audit personnel/teams (including identification of specialised expertise required).
* Internal and external auditors.

Communication and Relationship Skills for Auditors
* Principles of communication skills for auditors.
* Relationships with auditees and within audit teams.
* Role play exercise in auditing.

Legal and Ethical Aspects of an Audit

* Legal liabilities of auditors eg:
  Due diligence.

Codes of practice and legal requirements applicable to different Industry sectors.

Reviewing audit scope and outcomes in terms of satisfying legal requirements and/or codes of practice.

* Auditors' Codes of Ethics.

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**On the Grape Vine**

From Barbara McPhee

I would like to report that I left Worksafe Australia (voluntary redundancy - i.e. I went very willingly) in July 1996. I have started my own consultancy company in ergonomics and occupational health. I work mainly in the coal industry in promoting the application and implementation of ergonomics for the prevention of sprains and strains. I have also (with Airdrie Long and Gary Foster) negotiated a contract to continue our research into exposure into Whole-Body Vibration in mining. My contact numbers are 02/9808 2556 (tel); 02/9809 4194 (fax) and bmcphe@ozemail.com.au (email).

Jim Knowles (my husband) has left ALARA and is starting his own consulting business in occupational health and safety risk management, accident investigation and training. He too is working mainly in the coal industry all around Australia. Until mid February he can be contacted on the numbers above, after which time he'll have a raft of new numbers of his own!

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**Professional Development**

A selection of resources available in electronic form.


The University of Colorado, USA
(full text at http://www.activemed.com/neuromus/xbapril96.htm)

[editors note: This technology has enormous potential in contributing to an understanding of the links between muscle fatigue and injury, with obvious implications for ergonomics]

F.W. Taylor Archive

The Taylor archive and the procedure for participating in the study investigating the use of the archive can be accessed from the Taylor Project page at http://attila.stevens-tech.edu/~rdowns

NIOSH back belts report

[editors note: This is a little dated now, but I had a somewhat heated discussion at the Canberra conference with a vendor of "ergonomic" equipment. He wanted to sell me back belts! Anyway I wished I'd been able to recall the details of this report. Next time.....]

I. Memorandum on Back Belt Use and Recommendations

DATE: May 27, 1994

FROM: Back Belt Working Group

SUBJECT: Conclusions/Recommendations on the Use of Back Belts to Prevent Work-Related Back Injuries

TO: Linda Rosenstock, M.D., M.P.H.

Director, NIOSH

Through: Richard A. Lemen, Ph.D. .....(D35)

In the Autumn of 1992, the Director of the National Institute for Occupational Safety and Health (NIOSH) formed a Working Group to review the scientific literature related to back belts. The Group's objective was to evaluate the adequacy of the data supporting the use of back belts to reduce work-related back injuries in healthy, previously uninjured workers. The NIOSH Back Belt Working Group has reviewed the most recent, published scientific information contained in refereed or peer-reviewed literature. Research excluded from this review related to the use of back belts prescribed by medical care providers for the treatment and rehabilitation of injured persons.

Back belts are also known as weight lifting devices, supports, or aids, and abdominal belts, which are primarily designed for use in the general population. The term "back belt" is also applied to therapeutic devices such as spinal braces, supports, corsets, and orthoses.

The term back injury is used throughout the text to refer to all back disorders, injuries, or pain. These disorders can be precipitated by a single traumatic event
such as twisting, slipping, or lifting, or by the cumulative effect of repetitive trauma.

On the basis of the review of pertinent literature, the Working Group has formulated the following conclusions and recommendations.

Conclusions

The Working Group concludes that the effectiveness of using back belts to lessen the risk of back injury among uninjured workers remains unproven.

The Working Group does not recommend the use of back belts to prevent injuries among uninjured workers, and does not consider back belts to be personal protective equipment.

The Working Group further emphasizes that back belts do not mitigate the hazards to workers posed by repeated lifting, pushing, pulling, twisting, or bending.

The Working Group also concludes that:

There are insufficient data indicating that typical industrial back belts significantly reduce the biomechanical loading of the trunk during manual lifting.

There is insufficient scientific evidence to conclude that wearing back belts reduces risk of injury to the back based on changes in intra-abdominal pressure (IAP) and trunk muscle electromyography (EMG).

The use of back belts may produce temporary strain on the cardiovascular system.

There are insufficient data to demonstrate a relationship between the prevalence of back injury in healthy workers and the discontinuation of back belt use.

(complete text available at http://www.ergoweb.com/Pub/Info/Std/backbelt.html)

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**Repetitive Motion Injuries**

**Philip E. Higgs, M.D. and Susan E. Mackinnon, M.D.**

Division of Plastic Surgery, Department of Surgery, Washington University School of Medicine, St. Louis, Missouri 63110


Complete text available at http://www.annurev.org/series/medicine/vol46/higgme46.htm

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**Guidelines for Designing Effective and Healthy Learning Environments for Interactive Technologies**

**Michael Weisberg**, National Library of Medicine
Abstract


An excellent tutorial prepared by Neuromuscular Physiology Lab at the University of California titled "Introduction to muscle physiology and design" may be found at: http://muscle.ucsd.edu/musintro/

The tutorial contains the following topics:

- General Overview
- The Cross-bridge Cycle
- Cellular Energy Stores
- Glucose Metabolism
- Fat Metabolism
- Creatine Phosphate
- Fiber Types
- Microscopic Structure
- Macroscopic Structure
- Intrinsic Properties of Muscle
- Excitation-Contraction Coupling
- Hypertrophy
- Anabolic Steroids
- Electrical Stimulation
- Eccentric Contraction
- Joint Moment Arms
- Muscle-Joint Interactions
- Bibliography

TORQUE ON THE LOW BACK AND THE WEIGHT LIMITS RECOMMENDED BY NIOSH IN SIMULATED LIFTS

Timo LESKINEN and Jari HAIJANEN

Finnish Institute of Occupational Health
Department of Occupational Safety
Laajaniityntie 1
FIN-01620 Vantaa, Finland


Full text & graphics of the following paper available at http://paja.occuphealth.fi/~tles/torque.htm

Papers from a Microsoft sponsored conference titled "Designing for the Web:
Empirical Studies" are available at http://microsoft.com/usability/webconf.htm

One paper was:

"Between the clicks" Skilled Users Scanning of Pages

Else Nygren
Center for Human Computer Studies
Uppsala University

Visual Interaction Design: The Industrial
Design of the Software Industry

Brad Weed
(http://www.acm.org/sigchi/bulletin/1996.3/vid.html)

IEA news
(http://www.spd.louisville.edu/~ergonomics/ergonomicsinternational.html)

Improving working conditions and productivity

The Working Conditions and Welfare Facilities Branch (CONDI/T) of the International Labour Organization(ILO) is now developing a training package for workers and their representatives on how to improve conditions of work, especially at the enterprise level. To the extent possible, we believe it would be useful to give some indications of productivity implications to illustrate that improvements in working conditions pay. This publication will be based on a series of case studies describing the process of introducing improvements. Specifically, we plan to use cases describing how changes and innovations were introduced in manufacturing enterprises, including small or medium-sized establishments. Improvements may describe, for example, small, low-cost changes in workstation and layout design, environmental control, work organization transformations, modifications in material storage and handling, newly introduced welfare facilities and services for workers, etc. These improvements may also involve major technological or organizational changes.

To highlight how the change was carried out, it is important to take into account how obstacles were overcome and specific production and operating procedures and systems were changed to improve working conditions and efficiency or productivity. Further, as this publication is targeted at workers and their representatives, it would be interesting and helpful to describe how workers were involved in the process of change. The ILO is interested in finding case studies for their book. Please contact Ms. F. Dy, Chief CONDI/T, ILO, 4 route de Morillons, CH-1211, Geneva, Switzerland. Fax +41 22 799 8451

Dr. Hal Hendrick, President of the HFES, has published some success stories (Proceedings of HFES, 1996) and would like to have more success stories to
demonstrate that good ergonomics is good economics. His address is Dr. Hal Hendrick, 7100 East Crestline, Englewood, CO 80111, USA; email: HHENDRICK@AOL.com Free copies of Dr. Hendrick's paper on success stories are available from HFES, PO Box 1369, Santa Monica, CA90406-1369, USA. email 70732.2420@compuserve.com

Strategic plan of HFES

The Human Factors and Ergonomics Society (HFES) has prepared and published a strategic plan, with goals, objectives and action plans. For a copy, contact HFES, PO Box 1369, Santa Monica, CA 90406, USA; email:70732.2420@compuserve.com

The five goals are:

1. Articulate the definition and boundaries of the discipline of human factors/ergonomics and its unique technology.

2. Promote the dissemination and exchange of human factors and ergonomics information.

3. Support the advancement of the discipline as a science and practice.

4. Promote the discipline to the outside world.

5. Enhance HFES decision making, resource management, and member services to support strategic objectives.

Vibration database

The database contains data on about 1000 hand-held machines (i.e. tested in accordance with ISO 8662) as well as machines tested in actual work situations (tested in accordance with ISO 5349). The database makes it possible to compare hand, arm and whole-body vibration produced by different hand-held machines. The database is on the Internet (http://umtech.niwL.se). For additional information, contact Prof. Ronnie Lundstrom, National Institute for Working Life, Umea, Sweden. email: Ronnie.Lundstrom@niwL.se

GOT THE OFFICE COVERED??

Office Insurance is a must. Wayne Trezona at Aon Professional Services will offer a competitive Office Insurance package to members of ESA if we have sufficient members interested. The policy would cover such things as Office Equipment, Public Liability, Fire, Burglary, Theft, Accidental Damage. The advantage to members would be:

* cheaper than individually set policies

* premiums are tax deductible

* the more members who take advantage of the scheme, the cheaper the premiums

* savings on the cost of ESA membership
Please return the slip if you would be interested in taking up this policy.

______________________________________________________________

To, Lynn Parry YES, I am interested in the Office Insurance Package

Products & Services Name___________________________________

Ergonomic Society of Aust

Canberra Business Centre Address_________________________________

Bradfield St _________________________________

DOWNER ACT 2602

Conference Calendar

1997

- July 14 - 18, Sydney, Australia Interact 97 - Sixth IFIP Conference on Human-ComputerInteraction http://www.acs.org.au/interact97/ email: interact97@acs.org.au
- Aug 25-29, XVI Congress of the International Society of Biomechanics, Tokyo. http://idaten.c.u-tokyo.ac.jp/ISB97/isb97.html Contact: isb97@idaten.c.u-tokyo.ac.jp; fx +81 3 5454 9494
- September, 14-17 The 7th Int. Conference on Vision in Vehicles will be held in Marseilles, France. A 300 word abstract is due 14 February 1997 to VIV7, Applied Vision Research Unit, Univ. of Derby, Mickelover, Derby DE3 5GX, UK. email: avru@derby.ac.uk; http://www-hcs.derby.ac.uk/avru/viv7
- Nov 6-8, ASEAN ERGONOMICS 97 - 5th SEAES Conference, Kuala Lumpur, Malaysia. Deadline for submissions April 15, 1997. Contact asean97@unimas.my; ph +6 082 672311; fx +6082 672312.
- November 20, 28th NSW OH&S Conference and Convention. Advance Safe 97, Parramatta. Contact Conference Secretariat ph 02 9363 9858; fx 02 9362 0265

November 25-27. ESA National Conference Gold Coast (see elsewhere in this issue).


1998

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- April 22-24 Global Ergonomics Conference, Cape Town, South Africa. Information from Bob Bridger Ph.D, Head: Ergonomics Group, UCT Medical School, Observatory 7925, South Africa email: BRIDGER@anat.uct.ac.za
- May 11-15, Fifth International Congress - Australian Physiotherapy Association, Hobart, Tasmania; Contact: APA (Tas), PO Box 432, Moonah 7009, Australia
- August 14-18, The Third North American Congress on biomechanics, University of Waterloo, Ontario, Canada; Contact Stuart McGill email mcgill@health.waterloo.ca

Information to contributors

The preferable form of submission is via email, either in the body of a message, or as an attachment. Files may also be mailed on floppy, (or Zip disc if very large). Virtually any format of files can be accommodated. Otherwise contributions should be printed in a large (14 pt preferred) non-serif font (such as Helvetica) and faxed to 07 33793545. Printed pages of similar specification may also be sent by post. Handwritten submissions will only be accepted in exceptional circumstances.

Submission deadline for each issue is 10th of the month, ie, April 10, June 10, August 10, October 10, December 10, February 10.

Intending contributors are invited to contact the editor to discuss potential submissions.

All enquiries or feedback should be addressed to the editor, Robin Burgess-Limerick PhD.

Email: robin@hms.uq.edu.au

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