



ISE Newsletter

Quarterly newsletter of the
INDIAN SOCIETY OF ERGONOMICS (ISE)

Web Site: <http://www.ergs.com/india/>

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From the Editor

It is really heartening to forward this particular issue of our ISE Newsletter with a facelift incorporating changes in the layout and content-structure.

We hope this effort will help the Newsletter to be now better equipped to cater to the needs of our coveted readers and encourage exchange of information effectively.

With seasons greetings to all our readers,

On behalf of the Editorial Team,

Asis Goswami

Editorial Board Members

Dr. Asis Goswami, Dr. A. K. Ganguli, Sri. K. N. Sen

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Forthcoming International events

- ☞ International congress on Humanizing Work and Work Environment
Mumbai, December 11 - 14, 2001
- ☞ 3rd International Congress on Women, Work and Health
Stockholm, June 2-5, 2002
- ☞ XVI International Annual Occupational Ergonomics & Safety Conference 2002
- ☞ XV Triennial Congress of the International Ergonomics Association
August 24 – 29, 2003

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* **From the Editorial Office**

In the last few months the new elected committee of the society has taken interest in modification of the newsletter. It was decided to follow a fixed format of newsletter. Some new items were proposed to be added. This issue brings the new items to the members. Members are requested to participate actively in this process of change and improvement.

* **News of Members**

A team of scientists from SAI, western center organized a workshop on Sports Sciences for the coaches of Maharashtra state and SAI. It was held at Pune, on November 27-28, 2001. Dr. A. Goswami delivered lecture on "Functional Diagnostics" and "Training Adaptation".

The following members participated /handled session at the One-day workshop on "Working Environment and Safety in Transportation Projects" conducted at the Kolkata Flyover Project site of Larsen & Toubro Limited on 20th October 2001:

Dr. A. R. Guharay, Sri Ajay Mukherjee, Dr. C. K. Pradhan, Sri Bimal Mukhopadhyay, Sri Devashis Sen, Dr. Somnath Ganguly, Sri K. N. Sen and Sri Indranil Chakraborty.

[Members are requested to send in their news for publication here]

* **Book Reviews**

Excellent collection of categorized research publication abstracts on sports sciences are available in one website. The abstracting service is "Coaching Science Abstracts" at URL: www.rohan.sdsu.edu/dept/coachsci/

The new edition of Ergoweb's Applied Workplace Ergonomics Manual contains practical job analysis methods including checklists, RULA, Strain Index, ACGIH Hand Activity Levels, and NIOSH Lifting Equation. There are chapters on lifting, pushing, carrying, anthropometry, standards/guidelines, ergonomics programs, office ergonomics, etc. Pages 336, \$89
<http://www.ergoweb.com/sponsor.cfm?id=42>

* **Further Education / Training**

American Society of Exercise Physiologists is a professional society. This society conducts an examination and certification programme, EPC (Exercise Physiologist Certified). Interested persons may visit the ASEP website at www.css.edu/users/tboone2/asep/

* **Job Opportunities**

Advertisements for various academic and research posts are available at URL: www.hpcareer.net and www.css.edu/users/tboone2/asep/

* **Help Desk**

This section is added to help ergonomics practitioners by providing help and suggestion.

It is often difficult to get suitable equipment for scientific studies, especially at competitive rates. Interested persons can visit the website www.heartmonitor.com for heart rate telemeter and body composition analyzers. This web site even provides comparative chart on all available models of different manufacturers.

* **Your Opinion**

This section invites opinion of the ISE members on selected topic of discussion.

The opinion of the members on the selected topic will be published in the next issue.

Present topic is "**Specific problems in implementation of ergonomics**".

For example,

- lack of cost-benefit analyses,
- problems of remedial ergonomics,
- inability to suggest local vendors for ergonomic tools or devices, no knowledge about similar implementation experience elsewhere, etc.
- any other specific problems you have encountered

Send your views for inclusion in the next issue.

* **e-rgonomics**

In this section, we will cover new sites of ergonomics interest and also review existing interesting or useful ones. Members may send their suggestions!

Bad Human Factors Designs web site

Bad Design examples have been published on the: www.baddesigns.com website.

The examples are very useful for including in ergonomics lectures! Check it out! If you register (registration is free), you will be notified by email of latest examples.

The site is administered by Mike Darnell darnell@baddesigns.com

* **New Life Members**

No New Member in this period

* **New Initiatives**

Appreciating the need of effective partnership to promote ergonomics concepts in various fields, The executive council has decided to reach out to various institutions for collaborative initiatives. Some of these Institutes are:

Calcutta University
Jadavpur University
Vidyasagar University
Presidency College

* **Knowledge Base**

Classic notions on the frequency and length of rest pauses for keyboard work

David McFarlane

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1. Frequent pauses are effective if they are taken before the onset of appreciable fatigue

(H. Bohrs, 1978 as quoted in Cakir, Hart and Stewart, 1980, pages 250-251).

2. The greater the frequency of the pauses the greater their effectiveness.

Frequent rest pauses 1.5 minutes long produced a productivity increase of 6.45%.

Frequent rest pauses 2 minutes long produced a productivity increase of 11.15% (Hanhart, 1954 as quoted in Cakir, Hart and Stewart, 1980, page 251).

3. Very short pauses ("micro-pauses") of 15 seconds taken frequently (every 10 minutes) can halve the fatigue at the end of a shift of data entry work by half.

(Ehnstrom, 1981 as quoted in Pheasant 1991, page 164).

4. For infrequent rest pauses (every 80 minutes) the optimal rest break length is about 6 minutes.

(Graf, 1922 as quoted in Cakir, Hart and Stewart, 1980, page 252).

5. Poor ergonomics at keyboard workstations can increase the length needed for rest breaks by a factor of three from 5 minutes per hour to 15 minutes per hour (Pheasant 1991, page 245).

References

1. A. Cakir, D. Hart and T. Stewart, (1980) "Visual Display Terminals", pages 247-253.
2. S. Pheasant, (1991), "Ergonomics, Work and Health" (Basingstoke: The Macmillan Press).

**The following two articles are from:
Ergonomics International (IEA)
News and Information - May 2001**

Ergonomics and Production Engineering

Production engineering has been a faithful collaborator with human factors, at least in the United States. The same seems true for Arbeitswissenschaft and ergonomics.

Some of the trends in production engineering have been widely promoted: Just-in-time, lean production, concurrent engineering, collaborative design, agile production etc. In some ergonomists, these trends have created

a lot of interest be seemed to offer a new way to take into account "human factors" and operators' needs. Concurrent engineering, for instance: The aim to lower organizational barriers, increase feed-back and streamline the flow of design and planning seems to offer a golden opportunity to implement 'human factors' in the right place and at the right time.

Experience shows, however, that interdisciplinary barriers are not easy to break down and may only be eliminated under conditions where interdisciplinary competition is reasonably low. But in spite of that, a window of opportunity seems to open to ergonomics to entrench its ideas and integrate ergonomics' values in production engineering.

Conclusions

The trends outlined above seem to point out to the need of increased collaboration and lowering of interdisciplinary barriers between ergonomics and other disciplines. In fact, even relatively minor industrial projects engage numerous specialists and organizational functions. Although an ergonomist clearly has a place in the consortium, the role depends on his skill and energy to entrench himself/ herself. It seems that the guarantee of the success depends on an ergonomist's capacity to collaborate with other actors and integrate his/her discipline with theirs. An ergonomist needs, it goes, without saying, the basic skills of the profession.

Some of the operational skills may be listed as follows:

- Understand the social functions of an organization
- Skills to communicate one's ideas
- Skills to sell an idea and a project to the management
- Understand other professional group's roles and characteristics

ILKKA KUORINKA 13 May 2001

The OSHA Ergonomics Standard

The following paraphrases an article in the April 2001 HFES Bulletin by Carol Stuart-Buttle of the HFES.

LIFE GOES ON

A resolution to revoke the Occupational Safety and Health Administration (OSHA) Ergonomics Program Standard, which was submitted in the last hours of the Clinton administration, has passed the House and the Senate and was signed by President Bush.

OSHA provided a service to our profession through making ergonomics a household word. However, OSHA equated ergonomics with musculoskeletal disorders so the systems-oriented approach to design for ease of use and effective performance got lost. We need to continue demonstrating that good ergonomics is good ergonomics. For example, labor retention is a problem in many industries and we have much to offer there.

In conclusion, individual members need to supplement the efforts of the HFES central office to promote ergonomics. Some examples are articles or press releases demonstrating the benefits of ergonomics, letters to the editor of newspapers and magazines, and informing the central office of HFES of success stories so they can publicize them further.

STEPHEN KONZ

* Quotation of the issue

YOU SEE THINGS THAT ARE
AND SAY, "WHY?"
BUT I DREAM THINGS
THAT NEVER WERE
AND SAY, "WHY NOT?"
- BERNARD SHAW.