

Humanics ErgoSystems, Inc.

Specialists in Ergonomics

Humanics ErgoSystems, Inc. is a consulting firm specializing in occupational ergonomics, training, and product design research since 1982.

President Rani Lueder is a Certified Professional Ergonomist with 20 years' consulting experience in product design research and occupational ergonomics in six countries.

Ergonomic consulting projects include:

- Since 1989 for the **Social Security Administration** analyzed data from their nationwide survey; established a national database for SSA workers; participated in extended negotiations with their union regarding new workstations for their offices across the country. Consulted on SSA's nationwide training; trained Installers on ergonomics quality control. Participated in product evaluation, assessed software user interfaces and monitor sizes.
- Consulted for three years for **Steelcase** on the design of the Leap, a high performance seat.
- Served on extended retainer for several years for the Seating Committee of the **Japan Inst. of Human Posture Research** (Tokyo) for 3 years. Sponsored by the Japanese government.
- Evaluated work environments for **Social Security Administration** (federal & state), **PG&E** (state-wide), **Pacific Bell Directories** (6 sites), **Hewlett Packard**, **GTE** (20 sites), **Los Angeles Times**, and many others. Directed redesign of K-CBS' News.
- Consulted for the **National Institute for Occupational Safety and Health (NIOSH)** on overseeing the research on alternative keyboards.
- Conducted in-depth biomechanics analyses on ergonomic products.
- Conducted extensive research for the **Dept. of Justice** on compliance with the **ADA**.
- Served as a member of the committee revising **American National Standards for VDT Workstation Design** (ANSI HFES 100-1988).
- Consulted on three leading ergonomic programs analyzing workplace risk factors.
- Presented ergonomics training workshops nationwide for clients. Presented at ErgoExpo (several cities), InterPlan for 3 years (New York), ErgoCon (Atlanta & San Jose), World Workplace (Miami), WestWeek, Cornell U., NEOCON, NIOSH, UC Berkeley (two years), and the U. of Wisconsin (Madison). Gave seminars in 18 cities.
- Now co-authoring and editing a book on **Ergonomics for Children** for Taylor and Francis.
- Co-edited (with Dr. Kageyu Noro) "**Hard Facts about Soft Machines: The Ergonomics of Seating**". Published by Taylor & Francis, Ltd. (Dec. 1995). Edited and co-authored "**The Ergonomics Payoff: Designing the electronic office**". Holt, Rinehart & Winston (1986).

Certificant, Board of Certification of Professional Ergonomists

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Selected Clients

<i>Organizations</i>			
Adventist Health	Pacific Bell Directories	ErgoSaverUS	IBM
NIOSH	Unum Life Insurance	Doane Pet Care	Kinesis Medical
US Social Security (Federal)	Leopold Petrich & Smith	Canadian Consulate (3 sites)	Australian Consulate
AARP	Morgan Adams	Mojave Water	PG&E
Los Angeles Times	K-CBS News	Home Insurance	Microtek
The Ergonomics Consortium	Szaferman Lakind Blumstein	Burlington Northern Railroad	Social Security (NY, NJ, P.R.)
Hewlett Packard	Robins Kaplan	Hawthorne Savings	Zenith Insurance
Spitfire Ventures	SouthWestern Bell	Burson Marsteller	City of Camarillo
So Cal Edison	Paul Revere Insurance	Federal Express	Bryan Cave, Ltd.
Cal State Univ. Northridge	Levy Phillips & Konigsberg	Orange County Register	Hettinger and Leedy
New Zealand Consulate	Research & Education Institute	Sunalliance Insurance	Sekisui TA Industries
Chevron	ICF Consulting	SLGG	Capell Coyne Co
Stockman Group	MTA	Make My Day Video	CyberU
<i>Manufacturers</i>			
Steelcase	Allsteel	3M	Dupont
The Knoll Group	Herman Miller	Details	Rubbermaid
Honeywell	Bausch and Lomb	MCA	Compaq
Abbott Labs	Cardiac Sciences	Shaw Walker	Precision
Metamorphosis	Kimball	Kinetics	GTE
JB Research	Public Counsel	'The Right Way'	MEDCO
SwingSeat	Haworth	Accuride	Hynek
Westinghouse	Guardian Medical	Wieder Health	GF

Industrial design firms

Designworks/USA	Splane Design	Ray Carter Design	Mega/Erg
Zamparelli & Co.	Joss Design	Yashar Designs	Mary St. Studios
Emerson Johnson	Keith Muller, Ltd.	Apodaca Design	Hauser & Assoc.
Metaphase	Steve Diskin	IDEO	etc.

Government agencies

Dept. of Labor	Health Welfare Canada	U.S. Courts	Public Works CD
Social Security	NIOSH	US Public Health	Japanese govt.
EDD	EEOC	IRS	etc.

Academia

Eight Chiropractic Colleges	Center Occupational Ergonomics and Health	Waseda University (Tokyo)	UC Irvine
Art Center College of Design	University of Wisconsin (Madison)	Los Angeles College Chiropractic	UC Berkeley COEH
University Michigan	University Hong Kong	Cornell University	UCLA

Ergonomics consulting firms

ETC	HumanTech	Auburn Engineers	US Ergonomics
JA Wise and Assoc.	John Holly and Co.	Shurick Consulting	Converse Consult
BCA	Ergonomics Res Gp	Ergoworks	Innovative Ergo

Grants

Int'l Association of Chiropractic	Foundation Chiropractic Education & Research	NW Consortium of Chiropractic	Architectural Institute of Research
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Selected Presentations

- Invited Presenter, Workshop on seating & posture. *National ErgoExpo*, Las Vegas 2001
- Chair & Presenter, Ergonomics and high tech. *National ErgoExpo*, Las Vegas 2001.
- Invited Panel Chair and Presenter, Posture in a high-tech world. Annual **Human Factors and Ergonomics Society Convention**, 2001.
- Invited Panel Chair, two sessions on ergonomic workplace interventions and high-tech ergonomic implementations. *National Ergonomics Expo*, Las Vegas 2000.
- Panel Speaker on seated posture, *Human Factors & Ergonomics Conv.* San Diego 2000
- Invited Panel Chair at two sessions, "When the cure is worse than the disease... pros and cons of commonly used ergonomics products" and "The aftermath of ergonomics training" *National Ergonomics Expo*, Anaheim 1999.
- Invited Speaker on the Design of Attorney Workstations, *Eleventh Annual University of California Occupational Safety & Health Institute*. Oakland CA, 1998
- Member of Advisory Board for three years, *InterPlan* (Designer's Saturday), New York.
- Invited Speaker, *Occupational Safety & Health Conference* (COEH), Oakland 1998.
- Invited Speaker on Workplace Injuries. *NEOCON*, Knoll Showroom, 1997.
- Invited Speaker & Chair, *InterPlan* (Designer's Saturday), New York, 1996.
- Invited Keynote Speaker, *Conference on Ergonomics Case Studies: Techniques for Success*, COEH, University of California at Berkeley, San Francisco, 1996.
- Invited Speaker & Chair, *InterPlan* (Designer's Saturday), New York, 1995.
- Invited Key Speaker, *ErgoCon '95*, San Jose, 1995.
- Invited Speaker and Chair, *World Workplace '95*, Miami, 1995.
- Invited Speaker, *ErgoCon '95*, Atlanta, 1995.
- Invited Speaker, *Ergonomics Exposition on Workplace Injuries*, Atlanta, 1995.
- Invited Speaker, *Conference Am. Society of Interior Designers*, San Antonio, 1994.
- Invited Key Speaker, *National Office Products Assoc. Conference*, San Diego, 1993.
- Invited Speaker, *WestWeek Seminar Series*, Steelcase Showroom, Los Angeles, 1993.
- Invited Speaker, *University of Wisconsin Workshop Office Health and Safety*, 1992.
- Invited Speaker, *Conference on Work with Visual Display Units*, Berlin.
- Invited Speaker, Conference VDT Workplace Safety, *Cornell Univ.* New York 1992.
- Invited Speaker, *NIOSH Symposium Video Display Terminals*. April & July 1992.
- Invited Keynote Speaker, *Japan Institute for Human Posture Research*, 1992, Tokyo.
- Invited Speaker, VDT/Workplace Legislation, *Pacific Design Center*, Los Angeles 1991.

Invited Keynote Speaker, Symposium on Posture sponsored by the *Institute of Human Posture Research*, September 1991, San Francisco.

Invited Keynote Speaker, Office Hazards Conference, *US Federal Courts*. Irvine 1991.

Invited Keynote Speaker, "Repetitive Strain Injuries in Industry". National Conference sponsored by the *Computer Injury Network*. January 1991, Los Angeles.

Presented workshops on Repetitive Strain Injury to Design Associations in six cities in Canada, November 1990 and four cities in California, May 1991.

Invited Chair, "Ergonomics and Human Factors". *Fifth Annual Engineering Workstation Conference*. Los Angeles, Oct. 1990.

Invited Speaker, "Human Factors in Health Care". *Medical Design and Manufacturing West Conference*. Anaheim, January 1990.

Invited Keynote Speaker, "The Future of Work". *Annual Conference of the Human Factors Society Chapter*. Los Angeles, November 1989.

Invited U.S. Organizing Chair and Presenter. *Second International Symposium on the Science of Seating*, 1989, Tokyo, Japan. Sponsored by the Japanese Government.

Invited Program and Session Chair, "Management and Design of Work Environments", *32nd Annual Human Factors Convention*, Anaheim, CA October 1988.

Invited Session Chair, Ergonomics in Design, *Annual Human Factors Conv.*, NY, 1987.

Invited Speaker, *NIOSH Symposium on Office Planning*, Cincinnati, Ohio, 1987.

Invited Speaker, Design for tomorrow's office work, *Designers' Saturday*, NY, 1986.

Invited Panel Speaker and Session Moderator, "Ergonomics in the Office", *NEOCON 18*, (The World Congress on Environmental Planning and Design) Chicago, 1986.

Invited Tutorial: Facilities Design, *Annual Human Factors Conv.*, Dayton, 1986.

Invited Speaker, *Architectural Research Centers Consortium* on the Impact of the Work Environment on Productivity, Washington, D.C., 1985.

Invited Speaker, *American Federation of Information Processing Soc.*, Atlanta, 1985.

Invited Speaker, *NIOSH-Sponsored Symposium on Office Hazards*, Seattle, 1984.

Invited Speaker, Human Factors and Work, *Annual Human Factors Conv.*, 1983.

Invited Speaker, *Business and Institutional Furniture Manufacturers Association Conference on Productivity*, Chicago, 1983.

Invited Speaker, Human Factors/Architecture, *Annual Human Factors Conv.*, 1982.

Speaker, "Design for Extravehicular Activity", *Annual Conference of the Human Factors Association of Canada*, Toronto, 1981.

Invited Speaker, "You mean I have to live up there? Human factors in spacecraft design", *Environmental Design Conference of the Human Factors Society*, 1981.

Selected Publications

Books

Lueder, R., and Noro, K. (Eds.) *Hard Facts about Soft Machines: The ergonomics of seating*. Available internationally from Taylor & Francis (London/NY) Dec. 1995. 450 ps.

Lueder, R. Editor and co-author of book: *The Ergonomics Payoff: Designing the electronic office*. Published in November 1986 by Holt Rinehart and Winston of Canada.

Lueder, R. Peer reviewer, four books on ergonomics for publishers.

Former Executive Editor, *Office Ergonomics* (Magazine) 1984-1986.

Peer reviewer book: Wilson, J and Corlett, N. (Eds.) (1995) *Evaluation of Human Work: A Practical Ergonomics Methodology* (2nd Ed.) London: Taylor and Francis.

Book Chapters

Lueder, R. Work Postures. Sweere, J. (Ed.) *Chiropractic Family Practice*. Aspen Pub 1992.

Lueder, R. Workspace design. In: Alexander, D. and Pulat, M. (Eds.) *Industrial Ergonomics: Case Studies*. Institute of Industrial Engineers (The Society), 1990.

Contributed four chapters in *The Ergonomics Payoff: Designing the electronic office*. (Holt, Rinehart, and Winston of Canada: available from Humanics) November 1986.

Contributed 4 chapters, *Hard Facts about Soft Machines*, Taylor & Francis, 1994.

Journals

Lueder, R. Developing ergonomic standards: Plans, procedures and pitfalls. *Office Journal*. Spring 1991, 2.

Lueder, R. Seat Comfort: A review of the construct in the office environment. *Human Factors*. 1983, 25(6), 701-711.

Lueder, R. Seat height revisited. *Bulletin Human Factors Society*. 1986, 29(11) 4-5.

Price, D., and Lueder, R. Union and management attitudes towards safety and OSHA. *Journal of Safety Research*. 1980, 12(3), 99-106.

Two journal articles of Lueder's research submitted on the biomechanics of the spine.

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Proceedings (Partial list)

At the request of the Human Factors and Ergonomics Society, wrote a response to Cal/OSHA's ergonomics draft. Printed in December 1996 HFES Bulletin.

Paul, R., Lueder, R., Selner, A., and Limaye, J. Impact of new input technology on design of chair arm rests: Investigation on keyboard and mouse. *Proceedings of the Human Factors and Ergonomics Society Annual Meeting*. Philadelphia, Sept. 1996, 380-384.

Lueder, R. A Proposed RULA for Computer Users. *UC Berkley Center for Occupational and Environmental Health. Proceedings of the Ergonomics Workshop*. San Fran., 1996.

Lueder, R. The economics of furniture adjustability. *American Federation of Information Processing Societies*. Feb. 1985, 105-113.

Lueder, R. Human Factors in the Design of Health Care Equipment. *Medical Design and Manufacturing West Conference and Exposition Proceedings*. January 31-32 1990.

Publications also available on the Ergonomics of Spacecraft Design and on Design for Extra-Vehicular Activity.

Two articles jointly authored with the Research Department of the Los Angeles College of Chiropractic and Humanics:

- Can changes in stature result from sitting at different lumbar support depths? *Proceedings of the International Chiropractic Conference*. May 1990.
- Intra-examiner reliability using the flexicurve to determine lumbar lordosis, sagittal mobility, and range of motion. *International Chiropractic Conference*. May 1990.

Trade Publications (Partial list)

Lueder, R. Developing a quality control program. *Workplace Ergonomics*, Jan 1996.

Lueder, R. Applying Workplace Ergonomics. *The Knoll Group Facilities Report*. 4(4).

Lueder, R. Ergonomics in Today's Office. *Knoll Extra*. March, 1995, 8-10.

Lueder, R. Workplace Ergonomics: Getting the basics. *ASID Reporter*. Sept. 1994, 19-20.

Lueder, R. Revisiting ANSI. *VDT News*. 1992 Jan/Feb. Issue.

Lueder, R. The art & science of ergonomics. *Institute of Business Designers*. 1984, v. 9.

Lueder, R. Computer-aided design: the technical and human aspects (A review). *Office Ergonomics*. 1985, 2(1), 21.

Lueder, R. Designing for tomorrow's office workers. *Admin. Management*. 1986, 58-59.

Lueder, R. How to get the most out of your client-consultant relationship. *Office Ergonomics Review*. 1985, 2(1), 21.

Lueder, R. How to use computers without keyboards. *Office Ergonomics* 1985, 2(1).

Also published in many other business and trade publications.



HARD
FACTS
ABOUT
SOFT
MACHINES

HARD FACTS ABOUT SOFT MACHINES
The Ergonomics of Seating
Lueder and Noro

*The
Ergonomics
of Seating*

**Edited by
Rani Lueder
and Kageyu Noro**


Taylor
&
Francis


Taylor & Francis
Publishers since 1798

LUEDER

THE ERGONOMICS PAYOFF

EDITED BY
RANI LUEDER

DESIGNING THE
ELECTRONIC OFFICE

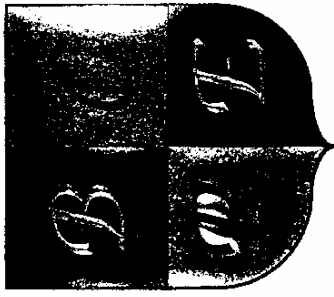
THE
ERGONOMICS
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MRW

BOARD OF CERTIFICATION
IN PROFESSIONAL ERGONOMICS, INCORPORATED

CERTIFIED
PROFESSIONAL ERGONOMIST



Be it known that

Rani K. Lueder, CPE

has met all of the requirements of the Board of Certification in
Professional Ergonomics and is hereby certified as a

PROFESSIONAL ERGONOMIST

so long as this certification is renewed and active.

In witness whereof the Board of Certification in Professional Ergonomics
grants this certificate under its Seal and Signature

on this 31st day of December, 1993

Neil Wankler

President

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BCPEL Certification Number

D. W. Jackson

Executive Director

Virginia Polytechnic Institute
and State Agricultural
Mechanics College

The Board of Visitors of the Virginia Polytechnic Institute
and State University has conferred upon

Kari Karen Lueder

upon the recommendation of the Faculty, the degree of

Master of Science

with all the rights, privileges and honors pertaining thereto.

In testimony whereof, the undersigned, by authority
vested in them, have hereunto affixed their signatures
and the seal of the University at Blacksburg, Virginia
this fourteenth day of March, nineteen hundred and eighty.

Parke C. Brinkley
Rector



F. E. Gavery
President

Paul S. Fox
Dean

David Kelle
Graduate Dean