

## CORRESPONDENCE

An internet listmail discussion forum hosted by the International Society of Gerontechnology is available to promote free exchange of information and views about the subject of gerontechnology, a multidisciplinary field that addresses the interface between technology and older people. The forum welcomes comment and questions relating to ISG activities, gerontechnology research and development, user needs and acceptance, technology delivery, ethics, quality and standards, and more. To subscribe to the ISG discussion list visit [www.jdc.org.il/mailman/listinfo/isg\\_discussion](http://www.jdc.org.il/mailman/listinfo/isg_discussion). Subscription is free and open to ISG members and non-members alike.

During the past few months, the ISG Open Discussion Forum online has distributed news of conferences of interest to Gerontechnology readers, as well as invitations to submit proposals for future conferences. Listserv (forum) members have spoken together, via short emails distributed to all, about universal design, ambient technologies, and aging-related markets.

### The chronic disease paradigm and demand driven care

Bouma<sup>1</sup> raised the question of demand driven care and the attitude of professionals in care. Recently<sup>2</sup> I reported on the same subject from the viewpoint of a geriatrician at the 50<sup>th</sup> conference of the SIGG, the Italian Association for Gerontology and Geriatrics.

I agree with Bouma<sup>1</sup> that the health system is no longer appropriate to the epidemiological realities of today. We live in a world dominated by chronic disease but continue to practice as if we were still dealing with acute illnesses<sup>3</sup>.

Geriatrics can be thought of as the synthesis of chronic disease management, gerontology and gerontechnology. Moving to a system better suited to chronic disease care requires changes in thinking not only in technology and attitude towards technology.

(i) The idea of prevention needs to be recast in terms of preventing the occurrence of expensive and disruptive exacerbations. Good care prevents the transition from impairment to disability and from disability to handicap.

(ii) Time must be re-examined. The heart of chronic disease management, as with geriatrics, is the principle of investing up

front with the expectation for recouping the investment in better results in the future. The current fee-for-service payment system does not support this approach. The idea of ordering patients to return for scheduled appointments should give way to an approach whereby patients are seen (in person or in a telemedicine setting) when their condition changes or deviates from its predicted path rather than just arbitrarily.

(iii) Meaningful, active patient participation in their care is critical to chronic disease management. Patients should be taught to make relevant observations of their status and what to do when the situation changes. Shared decision making requires better information and willingness to share risk as well.

(iv) Accountability in chronic care must be expressed as the difference between actual and expected results. Slowing the rate of decline is an indicator of successful chronic care. Unfortunately the expected course is rarely shown and hence all one sees is decline in the face of good care. Systems for showing the true benefit (expressed by this difference) are critical for better chronic care.

(v) Professional roles must be re-examined. Much of what has routinely been done by primary care physicians can be performed by nurse practitioners. Likewise, many nursing tasks (and other professional tasks) can be delegated to assistants or robots.

(vi) Information systems are the critical technology for chronic disease care. We need to develop ways to deliver relevant information (without too much distraction) in a way that gets the attention of care providers. The current electronic medical record lacks structure and proactivity.

(vii) Medical care and long-term care need to agree on shared goals and communicate effectively. Most people receive long-term care because of serious underlying medical problems but long-term care means more than just attending to illnesses.

To conclude: More must be done to bring the health care system into alignment with the epidemiological reality of chronic illness. We should learn from the experience with geriatrics; geriatricians should be leading the needed reforms.

### References:

1. Bouma H. Gerontechnology, demand-driven care, and care professionals. *Gerontol*

technology 2005;4(3):177-178

2. Kane RL. Geriatrics as a model of the new chronic disease paradigm. *Bollettino SIGG* 2005;2(11):8-9; also available at [www.sigg.it/public/doc/BOLLETTINO/483.pdf](http://www.sigg.it/public/doc/BOLLETTINO/483.pdf)
3. Kane RL, Priester R, Totten A. Meeting the Challenge of Chronic Illness. Baltimore: Johns Hopkins University Press; 2005

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## BOOK REVIEW

**D.C. Burdick, S. Kwon, Gerotechnology. Research and practice in technology and aging. New York: Springer. ISBN: 0826125166. \$41.61 (web price)**

This is the second text book on gerontechnology; the first one being published in 2000 under the editorship of Harrington & Harrington. Now, 4 years later, there is no more need to defend the existence of this interdisciplinary domain, and -as the subtitle of this new textbook states- the new textbook can concentrate on referencing the multiple disciplines involved. In total 27 authors shaped 16 chapters covering social and technological issues in relation to older adults. Successful ageing, functional independence, improved safety, and personal empowerment are the aims of the different authors. Needs and wants of older adults are considered as well as the risks of the technologies concerned. Ethical aspects are not forgotten. The book is divided into five sections and an epilogue.

Section A of four chapters deals with the basics of gerontechnology (called gerontechnology in this textbook) from an international perspective. This concerns commonly used daily life technology, perceptual aspects, design in relation to cognitive ageing and other social sciences approaches.

Section B turns to computers in relation to older adults and communication for care givers and support groups. Benefits and barriers experienced are addressed and made understandable in relation to the social and cultural situation in the USA. A number of myths about older adults are dismissed. They do want to use new technologies when the short-time benefits outnumber the costs.

Assistive technology in the USA home en-

vironment (Section C) addresses the practical issue of "how to apply technology to assist people in overcoming the types of impairments that tend to increase exponentially as people get past their middle adult years". Tools for community participation and daily living are treated, also in relation to the (lack of) universal design and issues such as dignity, choice, control and privacy. Smart houses, personal emergency response systems, automated activity track and analysis systems and telecare are included.

Models, prototypes and specific applications form Section D. Product development, a living laboratory, driving simulators and applying aviation human factors research to health care systems are the subjects of the four chapters in this section. Collaborative design with the target group is mentioned.

The textbook ends with ethical realities (Section E) and an epilogue on how human factors and ergonomics benefit from applications to ageing.

Young scientists, such as PhD or MSc students, will find this book useful as a first introduction to care, compensation and assistance aspects of gerontechnology and the methodologies suitable to study these problems. Senior researchers and designers may enjoy the results of an extensive amount of recent research well organized and reviewed in a comparatively small book of only 288 pages. Unfortunately the technologies treated in the book address older adults only, thus leaving out the preventive part of the domain, in which interventions at an earlier age prevent undesirable effects later. But perhaps this is the difference between gerontechnology and gerontechnology.

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## PEOPLE

### Who is who: Editorial board (4)

*Ramon M. Gutmann*

Ramon Maximo Gutmann (1943) earned a PhD in Social Psychology at the John F. Kennedy University (Buenos Aires, Argentina), took a post master course in Advanced Gerontological Practice at Yeshiva University (New York, USA), as well as a Master in Sociology (University of Buenos



Aires) and a Master in Social Work (University of Buenos Aires). He is currently in charge of the Office of Gerontological Training of the Department for the Third Age at the Government of the City of Buenos Aires. In addition, he is advisor for the older and the disabled part of the population at the National Institute of Industrial Technology, and professor in charge of 'Sociology of Aging' in the School of Health Sciences at Barcelo University (Buenos Aires). Formerly, for 28 years he held the post of executive director of the Coordinating Council of Jewish Communal Social Services with programs in Argentina and in other Latin American countries. He has been Vice-President for Latin America and the Caribbean of the International Federation on Ageing (IFA) and is currently an honorary member of its board of directors. From 2005-2009 he served as a member of the executive board of the Argentine Gerontological Association. His research focuses on gerontology, social policy, sociology and poverty, including their technological aspects. He authored about 80 articles and book chapters on these subjects.

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**ISG BUSINESS**

**BioRobotics for active longevity**

ISG has been the scientific sponsor of a workshop on 'BioRobotics for an active Longevity' that took place as a parallel session in the framework of BioRob2006 (<http://www.biorob2006.org>) in Pisa, Italy on February 20-22, 2006. It discussed the potential of robotics and mechatronics technologies to provide means to identify, measure and slow down the effects of age-related modifications of the nervous system in elderly people. Topics covered included: BioRobotic systems to restore motor function, BioRobotic systems for cognitive disorders, and BioRobotic systems to understand the modification of motor control strategies. Proceedings of the conference are available from the Secretariat of BioRob2006

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**WORLD NEWS**

**1<sup>st</sup> MSc degree program in gerontechnology**

The Graduate school of Gerontic Technology and Service Management (GsGTSM) of Nan Kai Institute of Technology (NKIT),

Tsao Tun, Taiwan, an associate member of the International Society of Gerontechnology, will start an MSc program in Gerontic Technology and Service Management in the fall of 2006, leading towards the degree of MSc in Intelligent Living Facilities for the Elderly Society. The program has received accreditation from the Ministry of Education of Taiwan and it is the first one of its kind in the world.



*Nan Kai vehicle for wheel-chair transport*

Owing to the rapid development of medical care and bio-technology, the lifespan of humans has been extended, and the request for living quality is comparatively upgrading. To respond to the request, NKIT envisions the 'Integration of Gerontechnology and qualified health care service management' as a distinctive developing feature. NKIT set up the Medical Device R&D Center (MDRDC) in 2003; a milestone in establishing education in cooperation with research and industry. MDRDC has invested 35.78 million New Taiwan dollars on apparatus and equipment, such as medical assistance equipment and medical photography and monitoring machines. Establishing all these facilities became the top achievement in Taiwan in 2004. The R&D center not only integrated manpower and resources, but also built five laboratories and explored the relevant techniques for medical treatment industries. Moreover, a project for a smart living space for silver hairs' independent living has been started. In 2005 NKIT initiated an integrated program to promote research ability. This 'Research on Integrating Gerontechnology and Elevating the Management of Caring Service', was subsidized with 20 million New Taiwan dollars by the National Science Council. In addition, NKIT held its 1<sup>st</sup> International Conference on 'Gerontechnology and Caring Services' in 2005, with experts attending from Japan, America, and Canada in addition to Taiwan. The conference was quite successful in of-

fering a forum for researchers, industrial technologists, and caregivers to share leading-edge developments and values in the gerontechnology world.

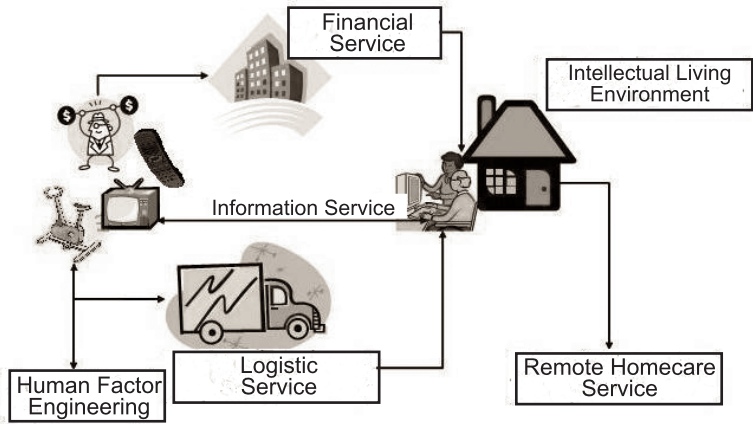
The aim of the Graduate School is to provide graduate education and research in both technology and service management

areas in order to help elders beautify their independent living by meeting not only physical requirements in safety, health, comfort, and convenience, but also mental requirements in peace and calm. To fulfill these objects, the Master program comprises interdisciplinary fields including elderly ergonomics, life care, technologies and service management. In the Master program, ergonomics and gerontology are required courses in the first year, and technology and management is a required course in the second year. About 75% of the 2-year Master program is devoted to research and research training.

Eleven research teams carry the research part of the Graduate School. They are devoted to: (i) Wireless communications, (ii) Automatic health environment technology, (iii) Remote caring system through web-cam, (iv) Medical photography, (v) Smart gerontic vehicle development, (vi) RFID, (vii) VR-situation therapy, (viii) Information platform, (ix) Leisure and financial management service, (x) Human factors engineering, and (xi) Elderly mental care.

The Master program is implemented by 21 faculty members, including 5 full professors, 13 associate professors, 3 assistant professors. Application for the first year in 2006 numbered 63, and the best 15 were selected for the first year. NKIT expects to enrol an increasing number of students in the years to come. The program is open to both domestic and foreign students. Currently the MSc curriculum is given in the Chinese language, but an extension to classes in English is under discussion.

*Pan-Chio Tuan, Professor and Chairperson*  
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## France: Interuniversity graduate diploma program in gerontechnology

The universities of Grenoble, Paris VI and Paris V (France) have developed together a one-year interuniversity graduate diploma program (DIU) in health-services technologies for older adults and handicapped persons. Classes are given in the French language. Enrolment is open to both domestic and foreign students who have earned a licence or health professional degree. Subjects taught include acceptability, ethical and public health dimensions in gerontechnology, compensation for physical and cognitive handicap technologies, technologies and health organisation, telemedicine for home telehealth, prevention and gerontechnology.

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## CALENDAR OF EVENTS

The forthcoming list may be found at [www.gerontechjournal.net](http://www.gerontechjournal.net)

Announcements of meetings and other events for the Gerontechnology Calendar should be submitted by e-mail to:

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The editors decide to include or not include the announcement of a certain event.