

Colloquium on Brain Fitness and Smart Aging

Organized by

Smart Ageing International Research Center, Tohoku University and AARP

Supported by

University of Central Florida

Date: Wednesday, September 29, 2010

Time: 8:30 am – 4 pm

Venue: Rosen College of Hospitality Management, University of Central Florida

9907 Universal Blvd, Orlando, Florida 32819

<http://www.hospitality.ucf.edu/index.html>

<Timetable>

8:30 Informal breakfast

9:30 Brain Fitness Session

12:00 Luncheon

Smart Aging Session

13:00 Opening Remarks: Harry Moody, AARP

13:05 Purpose of the Session, Aging in Japan, Introducing SAIRC
Hiroyuki Murata, SAIRC, Tohoku Univ.

13:20 Entertainment and Human Brain Function
Ryuta Kawashima, SAIRC, Tohoku University

(1) Improvement of cognitive functions by reading, writing and arithmetic
in elders

(2) Changes of brain structures and improvement of performance of sport
activity by working memory trainings

(3) Evidences of transfer effects on cognitive functions by playing the
Nintendo DS brain training in elders

13:50 Discussion (Moderator by Hiro Murata)

- 14:10 Break
- 14:20 Entertainment and Biofeedback
Shinichiro Kanoh, IDAC, Tohoku University
- (1) Biofeedback to improve mental and physical properties of the subjects.
 - (2) Changes of cortical activities during motor imagery of the limbs by neurofeedback training using EEG and NIRS, to improve the accuracy of command detection on BCI system.
 - (3) Effects on mental stress reduction by playing "biofeedback games" using portable NIRS meter.
- 14:50 Discussion
- 15:10 Entertainment and virtual reality
Makoto Yoshizawa, Cyberscience Center, Tohoku University
- (1) Test and rehabilitation systems for brain diseases in virtual environment
 - (2) Emotional feedback to cyberspaces as well as entertainment machines
 - (3) Multimodal interface for virtual trip to prevent dementia by using life review and co-imagination enhancing episodic memory function, segmentation of attention, planning function
- 15:40 Discussion
- 16:00 Closing Remarks: Richard Tucker, Univ. of Central Florida