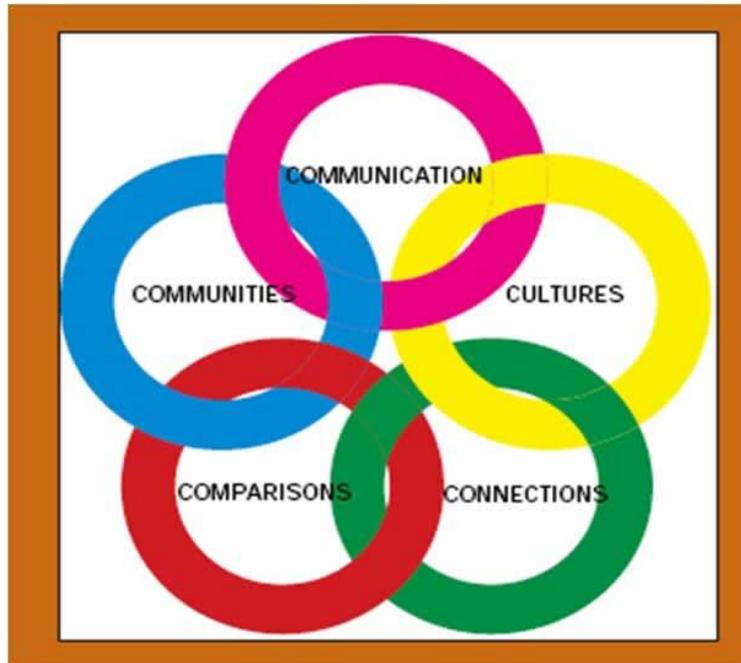




ACM Chapter on Elearning  
&  
Technical Communication



# ACM Chapter - IEEE PCSJ 2nd Technical Meeting

**November 2<sup>nd</sup>, 2013**

**Venue: University of Aizu, Aizuwakamatsu City, JAPAN**

**About the Chapter:** The Professional Communication Society - Japan Chapter (PCSJ) is Japan's leading society on scientific, technical, and professional communication practices. The Chapter holds regular technical meetings, workshops, and an annual conference.

**Chapter Officers (2012 – 2013):**

**Chair:** Debopriyo Roy (University of Aizu)



**Vice Chair:** Pauline Kawamoto (Shinshu University)



**Secretary:** Kevin Cleary (Tokyo Medical and Dental University)



**Treasurer:** Terumi Miyazoe (Tokyo Denki University)



**Webmaster:** Laurence Anthony (Waseda University)



**Saturday, November 2, 2013**

**Meeting venue:** Research Quadrangle iLabs 1 and 2 (2<sup>nd</sup> Floor)

University of Aizu, Aizuwakamatsu City, Fukushima 965-8580

<http://www.u-aizu.ac.jp/e-access.html>

**Lunch:** On-campus Cafeteria

**Dinner:** To be decided

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## SCHEDULE

**10:00 am** – Registration, PCS-J Technical Meeting (Members: 1,000 JPY, Non-members: 2,000 JPY)

**10:20 pm** – Opening Speech by PCSJ Chair

**10:30 – 12:00 pm** – 1<sup>ST</sup> Keynote Speech: From “user friendly” to “user friendlier”

- ***Thomas ROBB***

**12:00 – 1:30 pm** – Lunch Break

**1:30 – 3:00 pm** – 2<sup>ND</sup> Keynote Speech:

**Open-source programming: My why and how**

Presentation (40 mins)

**HotPot and TaskChain modules for Moodle 2.x**

Workshop (40 mins)

- ***Gordon BATESON***

**3:00 – 3:20 pm** – Coffee Break

**3:25 – 4:15 pm** - Learning to express engineering results in the universal language of mathematics

- *Pauline KAWAMOTO*

**4:20 – 5:10 pm** – Educational Technology: Predictions and Unintended Outcomes

- *John BRINE*

**5:10 – 5:50 pm** – Towards the Development of Smart Systems for Body-Area Networks

- *Abderazek Ben ABDALLAH*

**5:50 ~ 6:15 pm** – PCSJ Board Meeting (Subject to attendance of members)

**6:15 – 7:30 pm** – Dinner

# MEETING THEMES:

## COMPUTER ASSISTED LANGUAGE LEARNING

### Defining Computer Assisted Language Learning

**Computer-assisted language learning (CALL)** is succinctly defined in a seminal work by Levy (1997: p. 1) as "the search for and study of applications of the computer in language teaching and learning". CALL embraces a wide range of technology applications and approaches to teaching and learning foreign languages, from the "traditional" drill-and-practice programs that characterized CALL in the 1960s and 1970s to more recent manifestations of CALL, e.g. as used in a virtual learning environment and Web-based distance learning. It also extends to the use of corpora and concordancers, interactive whiteboards, Computer-mediated communication (CMC), language learning in virtual worlds, and Mobile-assisted language learning (MALL).

Source: [http://en.wikipedia.org/wiki/Computer-assisted\\_language\\_learning](http://en.wikipedia.org/wiki/Computer-assisted_language_learning)

### Recent Developments in Technology and Language Learning

Literature in CALL has dealt with the effectiveness of past and current practices in the application of information and communication technology (ICT) in language education and the availability as well as capacities of current ICTs. Research suggests that existing literature on the effectiveness of technology uses in language education is very limited in four aspects: a) The number of systematic, well-designed empirical evaluative studies of the effects of technology uses in language learning is very small, b) the settings of instruction where the studies were conducted were limited to higher education and adult learners, c) the languages studied were limited to common foreign languages and English as a foreign or second language, and d) the experiments were often short-term and about one or two aspects of language learning (e.g., vocabulary or grammar). However the limited number of available studies shows a pattern of positive effects. They found technology-supported language learning is at least as effective as human teachers, if not more so.

Source: Zhao (2003). Recent Developments in Technology and Language Learning: A Literature Review and Meta-analysis. CALICO. 21 (1), 7 – 27.

Sensor and Control Networks will be everywhere...  
with a vast scope of applications



Predictive maintenance



Energy Saving (12E)



Connected Athlete



Defense



New Knowledge



High-Confidence  
Transport and assets tracking



Intelligent Building



Improve Productivity



Food and H2O Quality



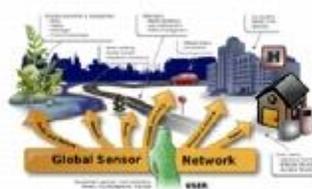
Healthcare



Enhance Safety  
and Security



Smart Grid



Smart Home

Health

Global Sensor Network

IEEE

# Abstracts

**Title:** From “user friendly” to “user friendlier”

**Speaker:** Dr. Thomas Robb

**Abstract:**

The “Reader” module for Moodle has been around since 2008 and the user base has expanded to over 30000 users. Despite that fact that Moodle is relatively “user-friendly” the wealth of unneeded functionality still presented problems for many teachers, particularly for those in charge of maintaining their school site. The inability to support an expanding teacher base forced a redesign of the system to make it less error-prone and to allow the site administrators to become more self-reliant. This presentation will outline the basic principles underlying the creation of the more user-friendly browser-based Mreader.org site.

The presentation will be followed by a workshop that will give the participants a taste of the item-analysis process, whereby quizzes with low pass-rates are analyzed and poorly performing items are either eliminated or improved. “Graded readers” with problematic quizzes will be distributed to the participants for this hands-on activity.

**Title: Open-source programming: My why and how****Speaker: Dr. Gordon Bateson****Abstract:**Presentation

From the mind-set of those used to dealing with commercial software production and consumption, the motivation and methods of open-source programmers often appear bizarre and untenable, essentially boiling down to the question: why would anybody work for free? However, to posit such a conundrum is to misunderstand the essential nature of open-source software development. In this presentation, I will put forward my personal view of the process, based on over fifteen years of experience of developing open-source e-learning software, within both the Hot Potatoes and Moodle communities. I will hope to show aspiring coders the importance of developing a meaningful relationship with users of the software, as well as to share several important "shortcuts" I use to produce and distribute open-source software efficiently.

**HotPot and Task Chain modules for Moodle 2.x**Workshop

Following the above presentation, there will be a workshop featuring the HotPot and Task Chain activity modules for Moodle 2.x. Participants will first practice adding individual Hot Potatoes exercises to a Moodle course using the HotPot module, and then create their own adaptive learning materials using the Task Chain module to create chains of Hot Potatoes exercises, the path through which is determined by pre- and post-conditions on the exercises.

**Title: Learning to express engineering results in the universal language of mathematics****Speaker: Dr. Pauline N. Kawamoto****Abstract:**

Effectively communicating the results of engineering work and explaining how they were derived to the international community is a very important, but sometimes painful task for many researchers and students in Japan. Unless students are involved in producing technical writing many times a year, it is difficult for them to learn these skills during a typical time-constricted engineering curriculum. This presentation will introduce some of the story of the development of a software system called Mizar which has helped researchers and students at Shinshu University to express the theories and results of their engineering work in a language of formalized mathematics and collaborate in international research teams using this special language. The Mizar system includes a proof checker which allows users to automatically verify the logical reasoning of each line of their formally written mathematical texts. Once a block of work has been thoroughly checked, it becomes eligible for submission to a repository of machine-verified knowledge shareable with researchers around the world. Although communicating results with mathematics is not always less painful than with natural language, we will look at some of the ways Japanese researchers have succeeded in training their teams to use the language of formalized mathematics to share the results of their work with the international community.

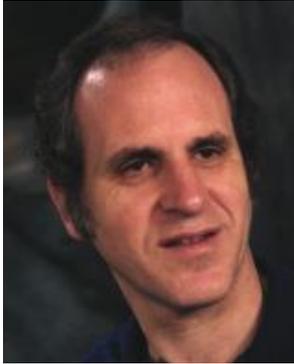
**Title: Educational Technology: Predictions and Unintended Outcomes****Speaker: Dr. John Brine****Abstract:**

In the late 1970s and early 1980s, the availability of the first microcomputers in North America made the realization of their educational potential seem imminent. A widely held expectation among educators at the time was that computers with the necessary hardware and software characteristics for useful application in schools were almost ready for delivery. For example, even if intelligent computer-assisted instruction (ICAI) were not yet possible, it was commonly believed that, with more memory and improved programming languages, ICAI would soon arrive. However, in the ensuing years, as computer technology increased in power and diffused widely, and as networked and mobile technologies made it possible to be connected persistently, it is not surprising that unmet prior predictions were often updated or revised. For example, early expectations about intelligent computer-assisted language learning (ICALL) have been superseded by new predictions emphasizing the relevance of mobile technology to language acquisition. Repeatedly, the promise of the educational potential of technology continues to motivate enthusiasm for each new development. However, focusing excessively and optimistically on potential seems to contribute to inadequate attention to the unintended outcomes, or side-effects, of new technologies. (This is not to say that all unintended outcomes are negative.) Given that the use of mobile technologies in Japan is pervasive, paying attention to unintended outcomes within this context may provide insights into social, cultural and educational features that will help to inform our educational practice. This presentation will discuss the importance of considering both predictions about technology and unintended outcomes.

**Title: Towards the Development of Smart Systems for Body-Area Networks****Speaker: Dr. Abderazek Ben Abdallah****Abstract:**

Recent technological advances in sensors, low-power microelectronics, and wireless networking enabled the proliferation of wireless sensor networks for wide applications. These sensor nodes can be used to achieve an integrated monitoring capability by sensing various physiological quantities, process and communicate sensor data with on/in-body or remote base stations. This keynote addresses design of next-generation smart platforms for personal health monitoring systems, and discusses the main design challenges of this type of emerging body monitoring systems. To achieve the autonomy required by long-term ambulatory monitoring, this talk advocates enabling more embedded smart sensors through a complete design approach that exploits the bio-signals features to develop adaptive and ultra-low-power multi-core processing architectures.

## Speaker Bios



**Thomas N. Robb** is Professor and Chair of the English Department, Faculty of Foreign Languages, Kyoto Sangyo University. He received his Ph.D. degree from the Department of Linguistics, University of Hawai'i at Manoa. He is a long-time computer user and programmer and the author of a number of websites for language learning. Most recently he has developed the MoodleReader/Mreader software for taking quizzes on books for extensive reading.



**Gordon Bateson** has a B.Sc. degree in Software Engineering from Imperial College, London and a M.Sc. in Teaching English for Specific Purposes (TESP) from Aston University, Birmingham, U.K. He has lived and worked in Japan for the last 20 years. He teaches English at Kanazawa Gakuin University and develops add-ons for the Moodle.



**Pauline N. Kawamoto** is an associate professor at Shinshu University, Faculty of Engineering, Department of Computer Science and Engineering. Her research focuses on the formalization and applications of Petri nets and the formalization of hardware/software design and verification techniques. She has served on the board of PCSJ since 2008.



**Abderazek Ben Abdallah** is a Senior Associate Professor at the School of Computer Science and Engineering, the University of Aizu, Japan. Previously, he was a Research Associate, then an Assistant Professor at the University of Electro-Communications at Tokyo (2002–2007). He has been a regular visiting Professor at Huazhong University of Science and Technology (HUST), and Hong Kong University of Science and Technology (KUST) since 2010. His research interests lie primarily in systems, including embedded real-time systems, energy-efficient system design, on-chip interconnection networks, parallel systems, and innovative architectures. He participated in new architecture development and led several middle-scale VLSI development efforts on several projects. He received the 2010 national prize for outstanding research in the field of computer systems and information technology. He has published more than 100 peer-reviewed journal and conference papers, edited one book, wrote two books, and several book chapters in these areas. He serves on the chair, editorial, and review boards of several journals and transactions, including steering chair of the IEEE MCSoc Symposium series, reviewer in IEEE Micro, IEEE Network Magazine, IET journal of Circuits, Devices & Systems, Journal of Parallel and Distributed Computing, and Journal of Parallel Computing. He is a member of IEEE, ACM, and IEICE.



**John Brine** is a Professor in the Center for Language Research at the University of Aizu, Fukushima, Japan, and is a member of the Graduate School for Information Systems. He received his PhD from the Ontario Institute for Studies in Education (University of Toronto) where he held a doctoral scholarship from the Social Sciences and Humanities Research Council of Canada (SSHRC). Following the completion of his doctorate, John was a Japan Foundation visiting scholar at the Tokyo Institute of Technology where he also held a post-doctoral fellowship from the SSHRC. His post-doctoral fellowship continued in the Department of Philosophy at the University of Waterloo, Canada, where he taught courses in the Centre for Society, Technology, and Values. At the University of Waikato, New Zealand, he co-founded the Department of General and Applied Linguistics, and established the first CALL courses in New Zealand. His research interests include the sociocultural aspects of computer-assisted language learning and learning management systems, and the side-effects of information media. He is also interested in developing-nation contexts for eLearning and has received funding from the Japan Society for the Promotion of Science to support research collaboration between universities in Vietnam and Japan. He has initiated several agreements between the University of Aizu and universities in Vietnam and New Zealand. He also recently co-founded an Association for Computing Machinery (ACM) chapter in eLearning and Technical Communication. John is currently a Research Associate in the Digital Library Laboratory at the University of Waikato, New Zealand. He has held academic positions at universities in Canada, Japan, and New Zealand.

## University of Aizu – Campus Access Map



### Access to the University of Aizu

