

**The 3<sup>rd</sup> International Workshop on**  
**"Digitization and E-Inclusion in Mathematics and Science 2016"**  
**DEIMS2016**  
**Program**

**04 February, 2016 (Thursday)**

**12:30 -13:15     Registration**

**13:15 - 13:30     Opening Address**

**13:30 - 14:30     Keynote Lecture 1**

Volker Sorge (The University of Birmingham)

"Assistive Technologies for STEM Subjects - From Bitmap Graphics to Fully Accessible Chemical Diagrams"

**14:30 - 15:30     Session A1**

Fumiyasu Sato and Akio Fujiyoshi

"Recognition of Condensed Structural Formulas of Chemical Compounds Using a Formal Grammar"

Giovanni Yoko Kristianto, Goran Topić, and Akiko Aizawa

"Combining Effectively Math Expressions and Textual Keywords in Math IR"

**15:30 - 16:00     Coffee Break**

**16:00 - 17:30     Session A2**

Lukáš Másilko and Ondřej Nečas

"From Electronical Questionnaires to Accessible Maths on Web"

Colin Fitzsimons, Emma Murphy, Catherine Mulwa and Donal Fitzpatrick

"SpatialMaths: a Library for Conveying Content and Structure of Equations"

A. Jonathan R. Godfrey and James M. P. Curtis

"Simple Authoring of Statistical Analyses by and for Blind People"

**17:30 - 18:00     Special Session for Demonstration**

Tatsuo Motoyoshi, Yuji Masaki and Noboru Takagi

## **05 February, 2016 (Friday)**

### **09:00 - 10:30 Session B1**

John A. Gardner

"The Progress in Making Figures Universally Accessible"

Noboru Takagi, Shingo Morii and Tatsuo Motoyoshi

"Consideration of the Experiences of Blind People Using Four User Interfaces for Independent Editing of Tactile Graphics"

A. Jonathan R. Godfrey and Paul Murrell

"Statistical Graphs Made Tactile"

### **10:30 - 11:00 Coffee Break**

### **11:00 - 12:00 Session B2**

Kunal Kwatra, Renu Kaushik, Lipika Vidawat, Vibha Choudhary, Mayank Aamseek, Kameshwar Chesetti, M. Balakrishnan

"Converting Mathematics Textbook to Tactile Form: Process and Experiences"

Tetsuya Watanabe and Toshimitsu Yamaguchi

"A Five-Year Practice of the Tactile Map Creation Service"

### **12:00 - 13:30 Lunch**

### **13:30 - 14:30 Keynote Lecture 2**

Sam Taraporevala (St. Xavier's College)

"STEM Education for Blind and Low Vision Students - The Socio-Technical Challenge: The Indian Perspective"

### **14:30 - 15:30 Session C1**

Takuya Takaira, Yoshiaki Tani, and Akio Fujiyoshi

"Development of a Semiautomatic Production System for Efficient Production of Multimodal Textbooks."

Vashkar Bhattacharjee, Farzana Sultana, and Ayesha Parvin

"Production of accessible reading materials including science and mathematics books for the students with print disability of class I-class-X through DAISY standard"

### **15:30 -16:00 Coffee Break**

### **16:00 - 17:00 Session C2**

Yoshiaki Tani, Takuya Takaira, and Akio Fujiyoshi

"Trial Production of Sound-Embedded Accessible PDF"

Cristian Bernareggi, Andrea Gerino, and Sergio Mascetti

"Accessible Mathematics on Touchscreen Devices: New Opportunities for People with Visual Impairments"

### **17:00 - 17:30 Special Session for Demonstration**

Masakazu Suzuki and Katsuhito Yamaguchi

"Current state of Infty system to make STEM documents accessible"

### **18:30 -20:30 Banquet**

## **06 February, 2016 (Saturday)**

### **09:00 - 10:00    Session D1**

    Davide Cervone, Peter Krautzberger, and Volker Sorge

        "Towards ARIA Standards for Mathematical Markup"

    Siddhartha Gupta, Manshul V Belani, Dinesh Kaushal, and M. Balakrishnan

        "Microsoft Excel Charts<sup>TM</sup> Accessibility: An Affordable and Effective Solution"

### **10:00 - 10:30    Coffee Break**

### **10:30 - 11:30    Session D2**

    Dorine in 't Veld and Davy Kager

        "Math notation used in The Netherlands: quick fix or lasting solution?"

    Dominique Archambault and Marie Carpio

        "Developing a culture of accessibility in a university context"

### **11:30 - 11:45    Closing Remark**

### **13:30 -            Excursion around Kamakura    (Including a dinner.)**