Banquet is at 18:00 on 8th of Oct.  
CW main track is 3 days, (7th - 9th of Oct.)  
Special session of Bio. will be held on the 7th of Oct. in the afternoon  
Special session of Art will be held on the 8th of Oct.  

<table>
<thead>
<tr>
<th>Day 1; Oct 7 (Wed)  @E22</th>
<th>E-31</th>
<th>Day 2; Oct 8 (Thu)  @E22</th>
<th>E-31</th>
<th>Day 3; Oct 9 (Fri)  @E22</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00</td>
<td>Registration open</td>
<td>8:30</td>
<td>Registration open</td>
<td>8:30</td>
</tr>
<tr>
<td>9:00-9:20</td>
<td>Opening Ceremony</td>
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</tr>
</tbody>
</table>
| 9:00-10:20 | Keynote 1  
Anders Ynnerman  
"Inside Information - From Martian Meteorites to Mummies" | 9:00-10:30 | CW Session 3:  
5 papers  
5,18S,24,36,75 | Art session 1:  
5 papers  
85,30,21,38,93S | 9:00-10:25 | CW Session 6:  
5 papers  
17,31,74S,77S,45S |
| 10:30-11:30 | Panel Session  
“Cyberworlds: Human-Computer Interaction”  
| 11:30-11:50 | Invited talk 1  
Rae Earnshaw | 12:20-12:40 | Invited talk 3  
Tosiyasu Kunii | 12:20-12:40 | Closing |
| 11:50-12:10 | Invited talk 2  
Bill Seaman | 12:50-13:00 | Lunch | 13:00-14:00 | Lunch |
| 12:10-12:40 | Poster Fast Forward  
2 minutes presentation  
112,110,92,82,41,72,27,109,108,107 | 12:50-13:00 | Lunch | 15:00-15:20 | Coffee Break |
| 12:50-13:30 | Lunch | 13:30-14:00 | Poster Presentation  
@ Café near E22 | 15:20-16:45 | CW Session 5:  
5 papers  
33,44,52S,68S,78S | 16:45-18:00 | Free time  
Campus Tour |
| 13:30-14:00 | Poster Presentation  
@ Café near E22 | 14:00-14:30 | Keynote 2  
Katsushi Ikeuchi  
"e-Heritage Project" | 15:20-16:45 | CW Session 5:  
5 papers  
33,44,52S,68S,78S | 16:45-18:00 | Free time  
Campus Tour |
| 14:00-15:40 | CW Session 1:  
5 papers  
26,28S,34,61S,63S | 14:00-15:00 | Keynote 2  
Katsushi Ikeuchi  
"e-Heritage Project" | 15:20-16:45 | CW Session 5:  
5 papers  
33,44,52S,68S,78S | 16:45-18:00 | Free time  
Campus Tour |
| 15:40-16:00 | Coffee Break | 16:00-17:30 | CW Session 2:  
5 papers  
29S,66,80,83S,91 | Bio session 2:  
3 papers  
84,59,95S | 18:00-20:00 | Banquet  
@Visby Museum |
| 16:00-17:30 | CW Session 2:  
5 papers  
29S,66,80,83S,91 | 16:00-17:30 | CW Session 2:  
5 papers  
29S,66,80,83S,91 | Bio session 2:  
3 papers  
84,59,95S | 18:00-20:00 | Banquet  
@Visby Museum |
### Invited talk

**Invited talk 1**  
(Oct. 7, 11:30–11:50, E22, Chair Alexei Sourin, Nanyang Technological University, Singapore)

<table>
<thead>
<tr>
<th>13</th>
<th>Ten Unsolved Problems with the Internet of Things</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Professor Rae Earnshaw (University of Bradford and Glyndwr University, UK)</td>
</tr>
</tbody>
</table>

**Invited talk 2**  
(Oct. 7, 11:50–12:10, E22, Chair Masaki Hayashi, Uppsala University, Sweden)

<table>
<thead>
<tr>
<th>90</th>
<th>Neosentient Architecture Generator</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Professor Bill Seaman (Duke University)</td>
</tr>
</tbody>
</table>

**Invited talk 3**  
(Oct. 8, 15:00–15:20, E22, Chair Masayuki Nakajima, Uppsala University, Sweden)

<table>
<thead>
<tr>
<th>43</th>
<th>A case study of component configuration information management in manufacturing using a position information formula and the processing map of the cellular data system</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Toshiyasu Kunii (The University of Tokyo)</td>
</tr>
</tbody>
</table>

### Cybeworlds Main Track

#### CW Session 1: Animation and Visualization

(Oct. 7, 14:00–15:40, E22, Chair Olga Sourina, Nanyang Technological University, Singapore)

<table>
<thead>
<tr>
<th>26</th>
<th>Semantic Annotation of Patient-Specific 3D Anatomical Models</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Imon Banerjee, Asan Agibetov, Chiara Eva Catalano, Giuseppe Patanè and Michela Spagnuolo</td>
</tr>
</tbody>
</table>

28(S) An Interactive Risk Visualization of Snow Sliding from Roof with a Particle-based Real-time CG

<table>
<thead>
<tr>
<th>34</th>
<th>Schematization of Node–Link Diagrams and Drawing Techniques for Geo–Referenced Networks</th>
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<tbody>
<tr>
<td></td>
<td>Alberto Debiasi, Bruno Simoes and Raffaele De Amicis</td>
</tr>
</tbody>
</table>

51(S) Open Framework Facilitating Automatic Generation of CG Animation from Web Site

<table>
<thead>
<tr>
<th>63(S)</th>
<th>Hybrid City Lighting: Improving pedestrians’ safety through proactive street lighting</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Andreas Sieß, Kathleen Hübel, Daniel Hepperle, Andreas Dronov, Christian Hufnagel, Julia Aktun, and Matthias Wölfel</td>
</tr>
</tbody>
</table>

#### CW Session 2: AR and VR

(Oct. 7, 16:00–17:30, E22, Chair Xiaoyang Mao, University of Yamanashi, Japan)

<table>
<thead>
<tr>
<th>29(S)</th>
<th>Acceleration of Dynamic Spatial Augmented Reality System with a Depth Camera</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Ryo Koizumi, Daiisuke Kobayashi and Naoki Hashimoto</td>
</tr>
</tbody>
</table>

66 A Microsoft Kinect-based virtual rehabilitation system to train balance ability for stroke patients

<table>
<thead>
<tr>
<th>80</th>
<th>Augmented Reality Visualization for Sailboats (ARVS)</th>
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<tbody>
<tr>
<td></td>
<td>Eduard Wisernig, Tanmana Sadhu, Catlin Zilinski, Brian Wyvill, Alexandra Branzan Albu and Maia Hoeberechts</td>
</tr>
</tbody>
</table>

83(S) A User-Perspective View for Mobile AR Systems Using Discrete Depth Segmentation

<table>
<thead>
<tr>
<th>91</th>
<th>Application for Real-Time Generation of Virtual 3D Worlds Based on L-System</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mikael Fridenfalk</td>
</tr>
</tbody>
</table>

#### CW Session 3: Shape Modeling

(Oct. 8, 9:00–10:35, E22, Chair Issei Fujishiro, Keio University, Japan)

<table>
<thead>
<tr>
<th>5</th>
<th>Parameterized Shape Grammar for Generating Islamic Geometric Motifs</th>
</tr>
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<tbody>
<tr>
<td></td>
<td>Zahra Sayed, Hassan Ugail, Ian Palmer, Jon Purdy and Carlton Reeve</td>
</tr>
</tbody>
</table>

18(S) Modeling and Simulation of Weft Knitted Fabric Based on Ball B-Spline Curves and Hook’s Law

<table>
<thead>
<tr>
<th>24</th>
<th>Writing Chinese Calligraphy on Arbitrary Surfaces</th>
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<tbody>
<tr>
<td></td>
<td>Qian Fu, Zhongke Wu, Xiang Ying, Mengdi Wang, Xia Zheng and Mingquan Zhou</td>
</tr>
</tbody>
</table>

36 3D Maquetter: Sketch-based 3D Content Modeling for Digital Earth

<table>
<thead>
<tr>
<th>75</th>
<th>Bat Algorithm for Curve Parameterization in Data Fitting with Polynomial Bézier Curves</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Andrés Iglesias, Akemi Gávez and Marta Collantes</td>
</tr>
</tbody>
</table>
**CW Session 4: Image Processing**

(Oct. 8, 10:50–12:20, E22, Chair Masaki Hayashi, Uppsala University, Sweden)

32. Graph cut based mesh segmentation using feature points and geodesic distance
   Lei Liu, Yun Sheng, Guixu Zhang and Hassan Ugail

40(S). Dynamic Image Adjustment Method and Evaluation for Glassless 3D Viewing Systems
   Isao Nishihara and Takayuki Nakata

42. Foreground object extraction using variation of blurs based on camera focusing
   Natsumi Takayama and Hiroki Takahashi

47(S). Depth Map Super-Resolution for Cost-Effective RGB-D Camera
   Ryotaro Takaoka and Naoki Hashimoto

76. Relevance Feedback Based Retrieval of Cloth Image With Focus on Collar Design
   Kazumi Shimizu, Wei Yang, Masahiro Toyoura and Xiaoyang Mao

**CW Session 5: Brain Machine Interface**

(Oct. 8, 16:00–17:40, E22, Chair Bill Seaman, Duke University, USA)

33. Does the Perceived Identity of Non-Player Characters Change how We Interact with Them?
   Christopher J. Headleand, James Jackson, Lee Priday, William Teahan and Llyr Ap Cenydd

44. CogniMeter: EEG-based Emotion, Mental Workload and Stress Visual Monitoring
   Xiyuan Hou, Yisi Liu, Olga Sourina and Wolfgang Mueller-Wittig

52(S). Prediction of Human Cognitive Abilities based on EEG Measurements
   Yisi Liu, Wei Lun Lim, Xiyuan Hou, Olga Sourina and Lipo Wang

68(S). A New Stimulation for Steady-State Visually Evoked Potentials Based Brain-Computer Interface Using Semi-Transmissive Patterns with Smartglasses
   Koji Tsuru, Harunari Miura and Daisuke Matsui

78(S). MIND - An EEG Neurofeedback Multitasking Game
   Wei Lun Lim, Olga Sourina and Lipo Wang

**CW Session 6: Interface**

(Oct. 9, 9:00–10:10, E22, Chair Naoki Hashimoto, The University of Electro-Communications, Japan)

17. Haptic interaction with video streams containing depth data
   Shahzad Rasool and Alexei Sourin

31. Increasing Stability of Mark Projections on Real World with Precise Observations of Angular Velocity
   Kyota Aoki and Naoki Aoyagi

74(S). SeeGroove: Supporting Groove Learning through Visualization
   Issei Fujishiro, Naoki Haga and Masanori Nakayama

77(S). A GUI for Urban Wind Flow CFD Analysis of Small Scale Wind Applications
   Anders Goude, Bahri Uzunoğlu, Gabriele Giovannini, Javier Magdalena and Antonio Fernández

45(S). Automatic Composition by Body-part Motion Synthesis for Supporting Dance Creation
   Yuho Yazaki, Asako Soga, Bin Umino and Motoko Hirayama

**CW Session 7: Simulation and Social Agents**

(Oct. 9, 10:30–12:10, E22, Chair Alexei Sourin, Nanyang Technological University, Singapore)

97. Homotopy Type Theory for Big data
   Tosiyasu L. Kunii and Masaki Hilaga

64. Crowd Simulation by Applying Individual Human Model with Vision
   Nobuhiko Mukai, Kensuke Tanaka and Youngha Chang

65. Social Engineering Attack Detection Model: SEADmv2
   Francois Mouton, Louise Leenen and H.S. Venter.

79. Association Rules for Clustering Algorithms for Data Mining of Temporal Power Ramp Balance
   Nurseda Yildirim and Bahri Uzunoğlu

49. Using Locomotion Models for Estimating Walking Targets in Immersive Virtual Environments
   Markus Zank and Andreas Kunz

23(S). LiTu - A Human-Computer Interface Based on Frustrated Internal Reflection of Light
   Marc R. Edwards and Nigel W. John
## Special Session of Arts, Design and Virtual Worlds

### Session 1: Art and Design

(Oct. 8, 9:00-10:40, Room 2, Chair: Gianluca Mura (Politecnico di Milano University, Italy))

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<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>ARS METAPLASTICA: A Cyber Metadiscipline of Creativity and Innovation between Science–Art–Design</td>
<td>Gianluca Mura</td>
</tr>
<tr>
<td>30</td>
<td>Azimuth to Cypher: The Transformation of a Tiny (Virtual) Cosmogony</td>
<td>Elif Ayiter</td>
</tr>
<tr>
<td>21</td>
<td>To Be There, or Not to Be There, That is the Question</td>
<td>Matthias Wöfel and Ulrich Gehmann</td>
</tr>
<tr>
<td>38</td>
<td>Art behind the mind. Exploring the new art forms by implementation of</td>
<td>Alena Mésárošová and Manuel Ferrer Hernández</td>
</tr>
<tr>
<td>93(S)</td>
<td>Garment Design System Based on Body Model</td>
<td>Masaki Oshita and Syouma Yamanaka</td>
</tr>
</tbody>
</table>

### Session 2: Art and Design

(Oct. 8, 11:00-12:40, E31, Chair: Gianluca Mura (Politecnico di Milano University, Italy))

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Multi-Disciplinary Creativity and Collaboration: Utilizing Crowd-Accelerated Innovation and the Internet</td>
<td>S. Cunningham, D. Berry, R.A. Earnshaw, P.S. Excell and E. Thompson</td>
</tr>
<tr>
<td>9</td>
<td>Created Beings: From Commonplace Motifs to Robot Myths and Simulacra</td>
<td>Geoffrey Drake-Brockman</td>
</tr>
<tr>
<td>3</td>
<td>Bubble Play: an Interactive Learning Medium for Young Children</td>
<td>Rojin S. Vishkaie and Richard M. Levy</td>
</tr>
<tr>
<td>37(S)</td>
<td>Installation Using Arduino with Interlock Sensors</td>
<td>Abdullah Al-Khatib, Kazuo Sasaki, Mutaz Arif</td>
</tr>
</tbody>
</table>

### Session 3: Art and Design

(Oct. 8, 16:00-17:00, E31, Chair: Gianluca Mura (Politecnico di Milano University, Italy))

<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Authors</th>
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</thead>
<tbody>
<tr>
<td>20</td>
<td>Responsive Type: Introducing Self-Adjusting Graphic Characters</td>
<td>Matthias Wölfel and Angelo Stitz</td>
</tr>
<tr>
<td>16</td>
<td>Curly Hair based on Statics of Super-Helics</td>
<td>Fei Shao, Xingce Wang, Qianqian Jiang, Zhongke Wu and Mingquan Zhou</td>
</tr>
<tr>
<td>25</td>
<td>The Design of a Visual Tool for the Quick Customization of Virtual Characters in OSSL</td>
<td>Yungang Wei, Xiaoran Qin, Xiaoye Tan, Xiaohang Yu, Bo Sun and Xiaoming Zhu</td>
</tr>
</tbody>
</table>
Special Session of 2nd International Workshop on Biometric Security and Cybersecurity

Session 1 : Biometric and Cyber Security
(Oct. 7, 14:00–15:00, E31, Chair Marina L. Gavrilova, University of Calgary, Canada)

22(S) On Accuracy of Classification-based Keystroke Dynamics for Continuous User Authentication
Alaa Darabseh and Akbar Siami Namin

96 Instant Messenger with personalized 3D Avatar
Yuangang Lu, Yun Sheng and Guixu Zhang

89 Bitcoin Message: Data Insertion on a Proof-of-Work Cryptocurrency System
Matthew D. Sleiman, Adrian P. Lauf and Roman Yampolskiy

Session 2 : Biometric Security and Human Factor
(Oct. 7, 16:00–17:00, E31, Chair Marina L. Gavrilova, University of Calgary, Canada)

84 A Novel Index-based Rank Fusion Method for Occluded Ear Recognition
Madeena Sultana, Padma Polash Paul and Marina Gavrilova

59 Fingerprint Quality Assessment With Multiple Segmentation
Z. Yao, J.-M. Le Bars, C. Charrier and C. Rosenberger

95(S) Gaze Estimation using Human Joint Rotation Angle
Takashi Otani, Hironari Matsuda, Hideaki Touyama, and Takayuki Nakata

Poster
Poster : Poster Fast Forward
(Oct. 7, 12:10–12:40, E22, Chair Hiroki Takahashi, University of Electro-Communications, Japan)
Poster Presentation @ Café  13:30–14:00

112 An Interactive Augmented Reality Chess Game using Bare-Hand Pinch Gestures
Marios Bikos, Yuta Itoh, Gudrun Klinker and Konstantinos Moustakas.

110 A Method of Touching and Moving Virtual Shadows with Real Shadows
Hiroko Iwasaki, Momoko Kondo, Rei Ito, Saya Sugiura, Yuka Oba and Shinji Mizuno.

92 StarWatch: Radio Astronomical Monitoring in Virtual Environment
Stanislav Klimenko, Valery Malofeev and Igor Nikitin.

82 Cyber Tai Chi – CG-based Video Materials for Tai Chi Chuan Self-Study
Takahiro Iwaanaguchi, Mikio Shinya, Satoshi Nakajima and Michio Shiraishi.

41 Simple Coordinate Transformation Method for 3D Interaction Systems
Isao Nishihara.

72 Creating 3DCG objects like toy blocks from a picture on a sketchbook
Shinji Mizuno and Nanako Kondo.

27 A Particle-based Real-Time CG Rendering of Carbonated Water with Automatic Release of Bubbles
Kazuki Yanai and Mitsunori Makino.

109 Towards Crowd-Sourced Parameter Optimisation for Procedural Animation

Ayano Miyazaki, Ayumi Miyamoto, Yoshio Nishio and Shinya Miyazaki

107 Particle system
Roberto Zanata.