CYBERWORLDS 2014

6-8 October Santander International Conference

Schedule-At-A-Glance

October 5th, Sunday (Day 0)	
17:30 – 18:30	**Guided Visit of the Royal Palace** (Royal Palace of La Magdalena)
18:30 – 20:00	**Welcome Reception & Cocktail** (Royal Palace of La Magdalena)

October 6th, Monday (Day 1)		
7:50	Pick-up bus at Hotel Silken Rio	
7:55	Pick-up bus at Hotel Victoria	
8:00 – 9:00	Registration Starts (Conference Desk)	
9:00 – 9:30	Opening Ceremony (Riancho Room)	
9:30 – 10:30	**Invited Talk 1** + Q&A *Professor Tomoyuki Nishita* (Riancho Room)	
10:30 – 11:00	Coffee Break (Salon de Baile)	
	Parallel Session I	
11:00 – 12:35	Session 1: Interaction (F4+S1) (Riancho Room)	Session 2: Arts I (F4+S1) (Bringas Room)
12:35 – 13:00	Poster Fast Forward & Announcements	
13:00 – 14:20	LUNCH (Royal Hall)	
	Parallel Session II	
14:20 – 16:00	Session 3: Multisensory (F5) (Riancho Room)	Session 4: BioSec I (F5) (Bringas Room)
16:00 – 16:30	Coffee Break (Salon de Baile)	
	Parallel Session III	
16:30 – 17:40	Session 5: Arts II (F2+S2) (Riancho Room)	Session 6a: BioSec II (F2) Session 6b: Cyberhumans I (F1) (Bringas Room)
17:45	Conference group picture	
18:00	Bus to the Hotels	
19:30 – 22:30	**Gala Dinner** (Grand Casino of El Sardinero)	

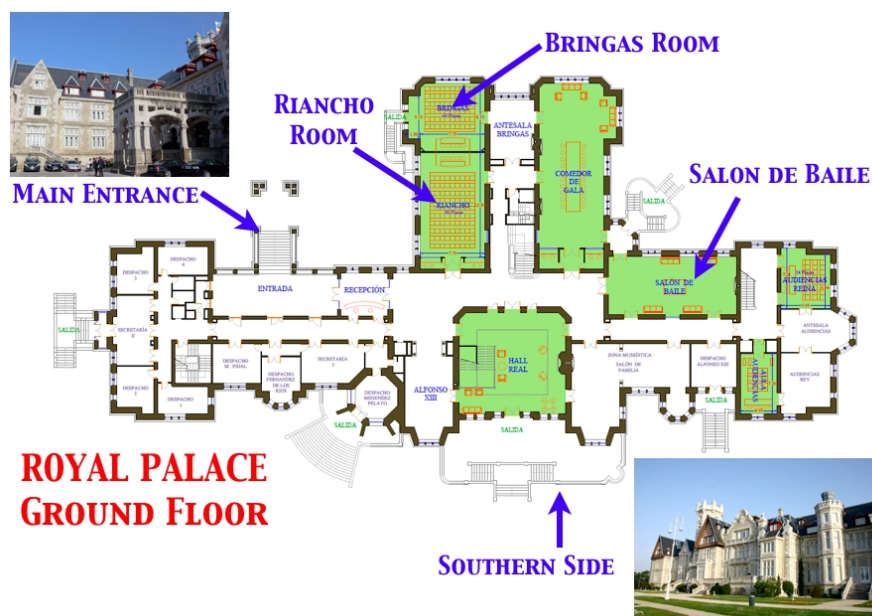F: Full papers (20 mins.), S: Short Papers (15 mins.)

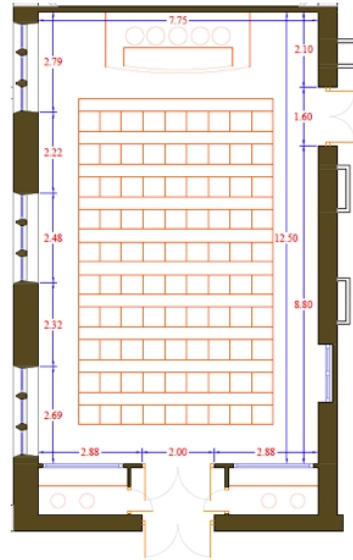| October 7th, Tuesday (Day 2)		
	Parallel Session IV	
9:00 – 10:40	Session 7: Shapes & Curves (F5) (Riancho Room)	Session 8: Cyberhumans II (F5) (Bringas Room)
10:40 – 11:10	Coffee Break (Salon de Baile)	
11:10 – 12:10	Invited Talk 2 + Q&A *Professor Jian Jun Zhang* (Riancho Room)	
	Parallel Session V	
12:10 – 13:30	Session 9: Visualization (F4) (Riancho Room)	Session 10: Geometry & Maths (F4) (Bringas Room)
13:30 – 14:45	LUNCH (Royal Hall)	
15:00 – 21:00	**Conference Tour**	

F: Full papers (20 mins.), S: Short Papers (15 mins.)

October 8th, Wednesday (Day 3)		
	Parallel Session VI	
9:00 – 10:40	Session 11: Simulation & Space (F5) (Riancho Room)	Session 12: Cultural Heritage (F3) (Bringas Room)
10:40 – 11:10	Coffee Break (Salon de Baile)	
11:10 – 12:10	Invited Talk 3 + Q&A *Professor Bill Seaman* (Riancho Room)	
12:10 – 14:15	Poster Session & Art Show & Exhibition Cocktail Lunch	
14:15 – 14:30	**Closing Ceremony** (Riancho Room)	

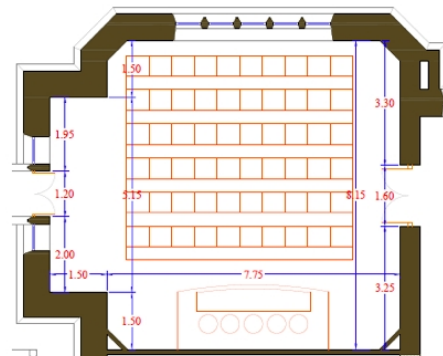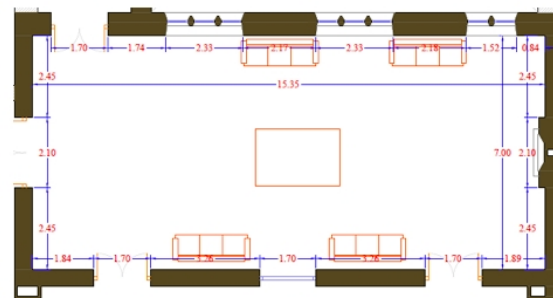F: Full papers (20 mins.), S: Short Papers (15 mins.)

BRINGAS ROOM

RIANCHO ROOM

SALON DE BAILE

MAIN ENTRANCE

ROYAL PALACE GROUND FLOOR

SOUTHERN SIDE

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RIANCHO ROOM

BRINGAS ROOM

SALON DE BAILE

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Detailed Conference Schedule

October 6, 2014 (Monday), 11:00-12:35

Parallel Session I

Session 1: Interaction (F4+S1)
Riancho Room

Chair: *Stanislav Klimenko*

[F] Feasibility Study for Contemporary Dance E-Learning: An Interactive Creation Support System Using 3D Motion Data
Bin Umino, Asako Soga, and Motoko Hirayama

[F] GPU-Based Realtime Hand Gesture Interaction and Rendering for Volume Datasets Using Leap Motion
Junchen Shen, Yanlin Luo, Xingce Wang, Zhongke Wu, and Mingquan Zhou

[F] Exploring Stereoscopic Multi-user Interaction with Individual Views
Vincent Küszter, Guido Brunnett, and Daniel Pietschmann

[F] Sketch-Based Dance Choreography
Elahe R. Moghaddam, Javad Sadeghi, and Faramarz F. Samavati

[S] Feasibility Study on Free Hand Geometric Modelling Using Leap Motion in VRML/X3D
Jian Cui and Alexei Sourin

Session 2: Arts I (F4+S1)
Bringas Room

Chair: *Gianluca Mura*

[F] The Meta Plastic Techne: A Cyber Metadiscipline between Science-Art-Design
Gianluca Mura

[F] New Opportunities for Artistic Practice in Virtual Worlds
Denise Doyle

[F] Creative Approaches to Exploring the Interstice between the Virtual and the Real
Dew Harrison

[F] How to Obtain Passwords of Online Scammers by Using Social Engineering Methods
Andreas Zingerle

[S] (Re) Building Proun #5A in the Metaverse
Elif Ayiter

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October 6, 2014 (Monday), 14:20-16:00
Parallel Session II

Session 3: Multisensory (F5)
Riancho Room

Chair: *Nobuhiko Mukai*

[F] Haptic-Based Serious Games
Xiyuan Hou, Olga Sourina, Igor Kirillov, and Stanislav Klimenko

[F] Multisensory Experience with Images
Kan Chen, Xingzi Zhang, Shahzad Rasool, Henry Johan, and Alexei Sourin

[F] Stability of Features in Real-Time EEG-based Emotion Recognition Algorithm
Zirui Lan, Olga Sourina, Lipo Wang, and Yisi Liu

[F] Weight and Size Discrimination with Vibrotactile Feedback
Jonatan Martínez, Arturo S. García, Miguel Oliver, José P. Molina, and Pascual González

[S] Neurofeedback Games to Improve Cognitive Abilities
Yisi Liu, Olga Sourina, and Xiyuan Hou

Session 4: BioSec I (F5)
Bringas Room

Chair: *Marina Gavrilova*

[F] A Concept of Social Behavioral Biometrics: Motivation, Current Developments, and Future Trends
Madeena Sultana, Padma Polash Paul, and Marina Gavrilova

[F] Multimodal Biometrics Using Cancelable Feature Fusion
Padma Polash Paul and Marina Gavrilova

[F] Human Identification Using Sensors Data Based on 3D Gait Area
Sajid Ali, Zhongke Wu, Mingquan Zhou, Guoguang Du, Xulong Li, and Fan Pengcheng

[F] Mining Social Behavioral Biometrics in Twitter
Madeena Sultana, Padma Polash Paul, and Marina Gavrilova

[F] The Effects of Gameplay on Leadership Behaviors: An Empirical Study on Leadership Behaviors and Roles in Multiplayer Online Battle Arena Games
Tinnawat Nuangjumnong

October 6, 2014 (Monday), 16:30-17:40

Parallel Session III

Session 5: Arts II (F2+S2)
Riancho Room

Chair: *Gianluca Mura*

[F] Exploring the Use of a 3D Virtual Environment in Chinese Cultural Transmission
Yungang Wei, Xiaoye Tan, Xiaoran Qin, Xiaohang Yu, Bo Sun, and Xiaoming Zhu

[F] Liberated Formatization
Ulrich Gehmann, Marco Zampella, and Matthias Wölfel

[S] Wanderlost
Michael Johansson

[S] Folding Pattern: A Study about Perception
Cristina Ghetti and Emanuelle Mazza

Session 6a: BioSec II (F2)
Bringas Room

Chair: *Marina Gavrilova*

[F] A Novel Pose Tolerant Face Recognition Approach
Refik Samet, Ghulam Sakhi Shokouh, and Jianjun Li

[F] Biometrics-Based Secret Key Agreement by Public Discussion with RFID System
Marcus V.C. Rodrigues, Felipe M. Masculo, Francisco M. de Assis, and Bruno B. Albert

Session 6b: CyberHumans I (F1)
Bringas Room

Chair: *Marina Gavrilova*

[F] Motivation System for Virtual Creatures: Actions Driven by Needs
Selene Zamarripa, Daniel Madrigal, and Felix Ramos

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October 7, 2014 (Tuesday), 9:00-10:40
Parallel Session IV

Session 7: Shapes & Curves (F5)
Riancho Room

Chair: *Yoshihiro Kanamori*

[F] Procedural Playable Cave Systems Based on Voronoi Diagram and Delaunay Triangulation
Aitor Santamaría-Ibirika, Xabier Cantero, Sergio Huerta, Igor Santos, and Pablo G. Bringas

[F] Scale-Invariant Heat Kernel Mapping
Kang Wang, Zhongke Wu, Pengfei Xu, Junli Zhao, Taorui Jia, Wuyang Shui, Sajid Ali, and Mingquan Zhou

[F] Isometric Shape Matching Based on the Geodesic Structure and Minimum Cost Flow
Taorui Jia, Kang Wang, Zhongke Wu, Junli Zhao, Pengfei Xu, Cuiting Liu, and Mingquan Zhou

[F] Simulated Annealing Algorithm for Bezier Curve Approximation
Carlos Loucera, Akemi Gálvez, and Andrés Iglesias

[F] Applying Clonal Selection Theory to Data Fitting with Rational Bézier Curves
Akemi Gálvez, Andrés Iglesias, and Andreina Avila

Session 8: Cyberhumans II (F5)
Bringas Room

Chair: *Alexei Sourin*

[F] Safe Navigation of Pedestrians in Social Groups in a Virtual Urban Environment
Francisco Arturo Rojas, Hyun Seung Yang, and Fernando M. Tarnogol

[F] User Avatar Association in Virtual Worlds
Aslan Kanamgotov, Lyzgeo Koshy, Marc Conrad, and Simant Prakoonwit

[F] A Study on Perceived Similarity between Photograph and Shape Exaggerated Caricature
Jiayi Xu, Wei Yang, Xiaoyang Mao, Masahiro Toyoura, and Xiaogang Jin

[F] Automatic Generation of Skeleton Animation from 3D Human Mesh Model
Abdul Razzaq, Zhongke Wu, Mingquan Zhou, Sajid Ali, and Khalid Iqbal

[F] Example-Based Automatic Caricature Generation
Wei Yang, Kouki Tajima, Jiayi Xu, Masahiro Toyoura, and Xiaoyang Mao

October 7, 2014 (Tuesday), 12:10-13:30

Parallel Session V

Session 9: Visualization (F4)
Riancho Room

Chair: *Masaki Hayashi*

[F] Multilevel Focus+Context Visualization Using Balanced Multiresolution
Mahmudul Hasan, Faramarz F. Samavati, and Christian Jacob

[F] Optimizing and Visualizing Fire Dispatcher Activity
Sergey Mescherin, Igor Kirillov, and Stanislav Klimenko

[F] Real-Time Animated Visualization of Massive Air-Traffic Trajectories
Stefan Buschmann, Matthias Trapp, and Jürgen Döllner

[F] Interactive Visualization of Energy System
Haleh Alemasoom, Faramarz F. Samavati, John Brosz, and David Layzell

Session 10: Geomety & Maths (F4)
Bringas Room

Chair: *Olga Sourina*

[F] Constructive Roof Geometry
Johannes Edelsbrunner, Ulrich Krispel, Sven Havemann, Alexei Sourin, and Dieter W. Fellner

[F] Functorial Classification of Political Groups in the Meiji Restoration
Kenji Ohmori and Toshiyasu L. Kunii

[F] Clay Flower Creation Based on Homotopy Type Theory
Kenji Ohmori and Toshiyasu L. Kunii

[F] Molecular Geometry and BULL!
Youngsong Cho, Jae-Kwan Kim, Joonghyun Ryu, Mokwon Lee, Jehyun Cha, Chanyoung Song, and Deok-Soo Kim

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Session 11: Simulation & Space (F5)
Riancho Room

Chair: *Mikio Shinya*

[F] Waterfall Simulation by Using a Particle and Grid-Based Hybrid Approach
Nobuhiko Mukai, Yasuomi Sakai, and Youngha Chang

[F] Image-Based Virtual Fitting System with Garment Image Reshaping
Hiroki Yamada, Masaki Hirose, Yoshihiro Kanamori, Jun Mitani, and Yukio Fukui

[F] Minimizing Collision among Social Groups in Wide-Open Spaces
Francisco Arturo Rojas and Hyun Seung Yang

[F] Interacting with Ads in Hybrid Urban Space
Matthias Wölfel

[F] Comparative Survey of Indoor Positioning Technologies, Techniques, and Algorithms
Mai A. Al-Ammar, Suheer Alhadhrami, Abdulmalik Al-Salman, Abdulrahman Alarifi, Hend S. Al-Khalifa, Ahmad Alnafessah, and Mansour Alsaleh

Session 12: Cultural Heritage (F3)
Bringas Room

Chair: *Masayuki Nakajima*

[F] Crowd-Sourced Digitisation of Cultural Heritage Assets
Helen C. Miles, Andrew T. Wilson, Frederic Labrosse, Bernard Tiddeman, Seren Griffiths, Ben Edwards, Katharina Moller, Raimund Karl, and Jonathan C. Roberts

[F] Hybridization of Convergent Photogrammetry, Computer Vision, and Artificial Intelligence for Digital Documentation of Cultural Heritage - A Case Study: The Magdalena Palace
Oscar Cosido, Andrés Iglesias, Akemi Gálvez, Raffaele Catuogno, Massimiliano Campi, Leticia Terán, and Esteban Sainz

[F] A New Virtual Museum Equipped with Automatic Video Content Generator
Masaki Hayashi, Steven Bachelder, Masayuki Nakajima, and Akihiko Iguchi

October 8, 2014 (Wednesday), 12:10-14:15

Poster Session

Poster Session
(Salón de Baile)

Chair: *Andrés Iglesias*

Virtual Human Behavioural Profile Extraction Using Kinect Based Motion Tracking
Dimitar Stanev and Konstantinos Moustakas

Examples of Topological Modeling of Matrix-Structured Data and Use of the Applied Attachment
Function of the Cellular Data System
Toshio Kodama, Toshiyasu L. Kunii, and Yoichi Seki

ARecycle NOID ARt Game: The Augmented Reality Game in Public Space
Alena Mesarosova and Manuel Ferrer Hernandez