

3D-ARCH 2009
Preliminary Program (Feb 17th, 2009)

WEDNESDAY FEB 25th 2009

8:30	Registration
9.00-9:30	Welcome - Fabio Remondino, Sabry El-Hakim
9:30-10:15 ROOM A	Keynote: Jan-Michael Frahm, UNC Chapel Hill, USA - The status and future of (semi-)automatic image-based reconstruction
10:15-11:00 ROOM A	Technical Session 1 – 3D modeling of complex objects and sites Chairman: Ioannis Stamos <ul style="list-style-type: none"> ➤ 3D reconstruction of the Small Buddha of Bamiyan, Afghanistan A. Gruen, T. Hanusch ➤ 3D Virtual reconstruction and visualization of complex architectures – The 3D-ARCH project F. Remondino, S. El-Hakim, S. Girardi, A. Rizzi, S. Benedetti, L. Gonzo
11:00-11:30	Coffee break
11:30-13:00 ROOM A	Technical Session 2A – Image-based 3D modeling Chairman: Sabry El-Hakim <ul style="list-style-type: none"> ➤ 3D Modelling and visualization of Cultural Heritage using mobile phone cameras Y. Takahashi, H. Chikatsu ➤ SAMATS - Texture extraction explained J.D. Carswell ➤ Knowledge-based topological reconstruction for building façade surface patches Y. Tian, Q. Zhu, M. Gerke, G. Vosselman ➤ Long focal length panoramic imaging for photogrammetric reconstruction H. Kauhanen, N. Heiska, M. Kurkela
11:30-13:00 ROOM B	Technical Session 2B – Range-based 3D modeling Chairman: Lorenzo Gonzo <ul style="list-style-type: none"> ➤ Calibration and registration framework for 3D reconstruction of the „Kirche Seefeld“ T. Abmayr, F. Härtl, A. Wagner, D. Burschka, G. Hirzinger, C. Fröhlich ➤ Adaptive meshing and detail-reduction of 3D-point clouds from laser scans C. Hoppe, S. Krömker ➤ Definition of a transition surface with the purpose of integration between a laser scanner 3D model and a low resolution DTM G. Agugiaro, T. Kolbe ➤ Optical applications in the investigation of a bronze hand appeared in roman forum of Lucentum L. Granero, F. Díaz, R. Domínguez, J. Hervás, S. Simon, E. Perez, M. Olcina
13:00-14:30	Lunch
14:30-16:00 ROOM A	Technical Session 3A – 3D documentation of Cultural Heritage Chairman: Jan-Michael Frahm <ul style="list-style-type: none"> ➤ A method for the 3D modelling of historic monuments: the case of a Gothic abbey church C. Chevrier, Y. Maillard, J.P. Perrin ➤ Optimal methods for 3d modeling of devastated architectural objects V. Stojakovic ➤ Advanced techniques for the studies of stones and paintings on walls: state of the art and open problems G. Maino ➤ Space throughout time - Application of 3D virtual reconstruction and light projection techniques in the analysis and reconstruction of cultural heritage

	I. Koroso Arriaga, O. Muñoz Lozano
14:30-16:00 ROOM B	Technical Session 3B – Visualization Chairman: Hiro Chikatsu <ul style="list-style-type: none"> ➤ 3D real time visualization for the support of archaeological analysis M. Sauerbier ➤ An Open source application for interactive exploration of Cultural Heritage 3D models on the web A. Guarnieri, F. Pirotti, A. Vettore ➤ Improved textures for 3D virtual reconstruction and visualization by a modified texture synthesis approach A. Hast, M. Ericsson, T. Reiner ➤ Spatial data integration in real-time cooperative systems S. Pescarin
16:00-16:30	Coffee break & Poster session
16:30-17:30 ROOM A	Technical Session 4 – 3D Point-cloud processing (1) Chairman: Jan Boehm <ul style="list-style-type: none"> ➤ Automatic modeling of laser point clouds by statistical analysis of surface curvature values F. Crosilla, D. Visintini, F. Sepic ➤ Registering point clouds of polyhedral buildings to 2D maps K. Khoshelham, B. Gorte ➤ Acquisition and automatic extraction of facade elements on large sites from a low cost laser mobile mapping system M. Alshawa, H. Boulaassal, T. Landes, P. Grussenmeyer
18:00	Welcome party in the underground Roman city (Tridentum)

THURSDAY FEB 26th 2009

9:00-9:45 ROOM A	Keynote: Ioannis Stamos, City University of New York, USA – Challenges in automated 3D modeling of urban environments
9:45-11:00 ROOM A	Technical Session 5 – Automation in 3D modeling Chairman: Armin Gruen <ul style="list-style-type: none"> ➤ Automatic structure recovery and visualization M. Farenzena, A. Fusiello, R. Gherardi, R. Toldo ➤ Automatic Orientation of Image Sequences for 3-D Object Reconstruction: First Results of a Method Integrating Photogrammetric and Computer Vision Algorithms L. Barazzetti, M. Scaioni ➤ 3D Reconstruction of architectural scenes from uncalibrated video sequences J.-M. Frahm, M. Pollefeys, B. Clipp, D. Gallup, R. Raguram, C. Wu, C. Zach
11:00-11:30	Coffee break & Poster session
11:30-13:00 ROOM A	Technical Session 6A – Semantic and procedural 3D modeling Chairman: Domenico Visintini <ul style="list-style-type: none"> ➤ Semantic approach to 3D historical reconstruction M. Lorenzini ➤ CityFit - High-Quality Urban Reconstructions by Fitting Shape Grammars to Images and derived Textured Point Clouds B. Hohmann, U. Krispel, S. Havemann, D. Fellner ➤ Modular Modeling of Temples Basements of the Angkor Period P. Nguonphan, M.J. Winckler, S. Kromker ➤ Urban procedural modeling for real-time rendering M. Carrozzino, F. Tecchia, M. Bergamasco
11:30-13:00 ROOM B	Technical Session 6B – Survey and digital reconstruction Chairman: Andrea Fusiello

	<ul style="list-style-type: none"> ➤ Lynx survey of the Appian way in Rome F. Zampa ➤ Survey applications using the Optech ILRIS 3D laser scanner and photogrammetry for a complete detailed CAD reconstruction of the objects D. Conforti, G. Garnero, D. Godone, M. Bacciocchi, A. Skripkin ➤ Interactive modeling by projection of oriented spherical panoramas. The case of Ad Deir – Petra E. D’Annibale, G. Fangi ➤ Photogrammetric reconstruction of the My Son G1 temple in Vietnam L. Barazzetti, L. Binda, M. Cucchi, M. Scaioni, P. Taranto
13:00-14:00	Lunch
14:00-15:30	Guided tour of the city center
15:30-16:15	Coffee break & Poster session
16:15-17:45 ROOM A	Technical Session 7 – 3D Point-cloud processing (2) Chairman: Fabio Crosilla <ul style="list-style-type: none"> ➤ Toward automatic reconstruction of interiors from laser data Budroni, J. Boehm ➤ Combining genetic algorithms with imperfect and subdivided features for the automatic registration of point clouds (GAReg-ISF) S. Schenk, K. Hanke ➤ Out-Of-Core topologically constrained simplification for city modeling from Digital Surface Models S. Möser, R. Wahl, R. Klein ➤ Storage, manipulation and visualization of LiDAR data B. Schön, D. Laefer, M. Bertolotto, S. Morrish

FRIDAY FEB 27th 2009

8:45-9:30 ROOM A	Invited speaker: Davide Borra, No Real, Italy - 3D Everywhere: the business point of view of the 3D world
9:30-11:00 ROOM A	Technical Session 8A – 3D models, GIS and databases Chairman: Gabriele Fangi <ul style="list-style-type: none"> ➤ Going to Shawbak (Jordan) and getting the data back: toward a 3D GIS dedicated to medieval archaeology P. Drap, J. Seinturier, J.C. Chambelland, G. Gaillard, H. Pires, E. Pruno ➤ An information system for the integration, management and visualization of 3D reality based archaeological models from different operators S. Baldissini, A.M. Manferdini, M.E. Masci ➤ Olerdola’s cave, Catalonia: a virtual reality reconstruction from terrestrial laser scanner and GIS data B. Pucci, A. Marambio ➤ Information and knowledge systems for integrated models in Cultural Heritage J.I. San José-Alonso, J. Finat, J.D. Pérez-Moneo, M. García, J.J. Fernández-Martín, J. Martínez-Rubio
9:30-11:00 ROOM B	Technical Session 8B – 3D Modeling and VR Chairman: Marco Scaioni <ul style="list-style-type: none"> ➤ Embodied virtual Communities: a new opportunity for the research in the field of Cultural Heritage E. Pietroni, M. Forte, C. Rufa ➤ The immersive time-machine: a virtual exploration of the history of Livorno M. Carrozzino, C. Evangelista, M. Bergamasco ➤ Localisation and augmented reality for mobile applications in cultural heritage S. Bres, B. Tellez ➤ The virtual musealization of archaeological sites: between documentation and

	communication M. Cultraro, F. Gabellone, G. Scardozzi
11:00-11:30	Coffee break & Poster session
11:30-13:00 ROOM A	Technical Session 9 – Data integration Chairman: Pierre Drap <ul style="list-style-type: none"> ➤ Data integration from different sources to create 3D virtual model A. Erving ➤ Integration of photogrammetric and 3D laser scanning data as a flexible and effective approach for heritage documentation B. Mitka, A. Rzonca ➤ The 3D modeling of the St. Anthony abbot church in San Daniele del Friuli: from laser scanning and photogrammetry to vrml/x3d model D. Visintini, E. Siotto, E. Menean ➤ Experiences about fusing 3D digitalization techniques for Cultural heritage documentation in Cáceres wall (Spain) P. Ortiz, M. Matas
13:00	Closing
13:15	Lunch
15:00	Departure for the excursion

POSTERS

- Laser Scanning in Ostia
Hanghai, Y. Hori
- 3D model for the documentation of cultural heritage: the wooden domes of st.mark's basilica in venice
L. Fregonese, L. Taffurelli
- Comparison between Photogrammetry and Laser scanning for 3D modelling and metric description in Architectural heritage
M. Caprioli, A. Scognamiglio
- Virtual reconstruction of roman military Apulum camp
O. Domsa
- Methodologies capture three-dimensional high-definition of sixteenth wooden frames. The case of works by Correggio
Vernizzi, A. Ghiretti
- Close range photogrammetry for measurement of the paintings surface deformations
S. D'Amelio, M. Lo Brutto
- The funeral area in "ponte della lama-canosa" (iii-vi century): an hypothesis of 3d historical-monumental reconstruction
D. Lentini
- Modelling of virtual compressed structures through physical simulation
P. Brivio, G. Femia, M. Macchi, M. Lo Prete, M. Tarini
- A systemic approach for 3D Recognition of simple primitives in discrete models
J. Finat, A. Hurtado, J.J. Fernández-Martín, J.I. SanJosé-Alonso, J. Martínez-Rubio, L. Fuentes
- Use of 3D modeling for archeological archiving in a sensible area
T. Bellone, N. Di Nino, F. Fiermonte, L. Mussio
- A Collaborative Visualization Environment for Natural Interaction with Architectural Content
S. Seipel, A.K. Forsberg
- RC-Heli and Structure & Motion techniques for the 3-D reconstruction of a Milan Dome Spire
M. Scaioni, L. Barazzetti, R. Brumana, B. Cuca, F. Fassi, F. Prandi
- 3D Modeling a Romanesque church in Tuscany: geomatics techniques and archaeological aims
S. Campana, M. Sordini, A. Rizzi