

# MATTEO DELLEPIANE

## CURRICULUM VITAE

### PERSONAL DATA

Nationality: italian

Birth date: 3rd January 1979

Birth Place: Genova

Address: Via Volturmo 7/18, 16129 Genova (GE)

Telephone: Mobile: 328-0150308, Fax 050-3152604, Office 050-3152925

Mail: [matteo.dellepiane@isti.cnr.it](mailto:matteo.dellepiane@isti.cnr.it)

Personal webpage: <http://vcg.isti.cnr.it/~dellepiane>

Current position: Ricercatore III livello I fascia (Tenured Researcher) at ISTI-CNR, Pisa.

### QUALIFICATIONS

- *Maturità Scientifica* in 1997 at Liceo Scientifico Leonardo da Vinci, grade 50/60
- Degree in Telecommunications Engineering, 19th December 2002 at Facoltà di Genova, grade 108/110
- PhD in Information Engineering (XXI ciclo), 29th May 2009, a Facoltà di Ingegneria di Pisa.
- TOEFL certification, 16th January 2010, grade 106/120

### THESES

Master Thesis: “Estrazione di descrittori di tessitura nell’ambito del content-based retrieval da database di immagini”, developed at Dipartimento di Ingegneria Biofisica ed Elettronica at Università di Genova (Responsible: Prof. Dellepiane)

PhD Thesis: “Uses of uncalibrated images to enrich 3D models information”, developed at Visual Computing Lab, ISTI-CNR, Pisa (Tutors: Prof. Luca Simoncini and Dott. Roberto Scopigno ),  
<http://etd.adm.unipi.it/theses/available/etd-04082009-144203>

### FOREIGN LANGUAGES

English: high

French: basic

### INFORMATIC BACKGROUND

Operative Systems: Microsoft Windows, Linux

Tools: Microsoft Office, Photoshop 7.0, LaTeX, Qt.

Programming Languages: Visual C++, XML.

## WORKING EXPERIENCES

From **May 2012**, head of “3D Graphics for Cultural Heritage” branch of Visual Computing Lab, ISTI-CNR.

From **March 2012**, tenured researcher at Visual Computing Lab, ISTI-CNR of Pisa (<http://vcg.isti.cnr.it>).

**November 2006 - February 2012** temporary researcher at Visual Computing Lab, ISTI-CNR of Pisa (<http://vcg.isti.cnr.it>).

**December 2004 - November 2006** research fellow at Visual Computing Lab, ISTI-CNR of Pisa

**February 2003 – July 2004** research fellow at Laboratorio Elios of Dipartimento di Ingegneria Biofisica ed Elettronica of Università di Genova ([www.eliosmultimedia.com](http://www.eliosmultimedia.com), [www.elios.dibe.unige.it](http://www.elios.dibe.unige.it)) .

### Awards

- “**Artifacts removal for color projection on 3D models using flash light**” selezionato come **best paper** of VAST 2009, The 10th International Symposium on Virtual Reality, Archaeology and Cultural Heritage
- **Premio “Giovani Ricercatori”** ISTI-CNR, anno 2011.
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### Editor in international journals

- Associate Editor for the "Interacting with the Past" Special Issue of ACM Journal on Computing and Cultural Heritage (JOCCH), 2013

### Organizing Chair of workshop and international conferences

- VAST, 12th Symposium on Virtual reality Archaeology and Cultural Heritage, October 2011, Prato
- 2nd Workshop on eHeritage and Digital Preservation, Firenze, October 2010

### Recent participation to Program Committee:

- 2013: Digital Heritage, 3DV, Archeofoss, VISAPP, ICIAP, MM4CH
- 2012: CGIM, VISAPP, Eurographics Italian Chapter, VAST, VISART
- 2011: CGIM, Eurographics Italian Chapter, IPIN, 3DIMPVT
- 2010: 3DIM, AfriGraph, VAST

### Reviewing activity:

International Journals: Computer Graphics Forum, Computer & Graphics, ACM Journal on Computing and Cultural Heritage, Journal of Cultural Heritage, Journal on Multimedia.

Main International Conferences: Siggraph, Eurographics.

### Teaching activity:

- Course of “Grafica 3D per i beni culturali” (3D Graphics for Cultural Heritage, <http://vcg.isti.cnr.it/~dellepiane/Corso.html>) for Informatica Umanistica degree, Università di Pisa, a.a. 2010/2011, 2011/2012, 2012/2013, 6 CFU
- Teaching activity in “Virtual Archeology school” <http://www.v-must.net/schools/italian-virtual-heritage-school/program>, year 2009-2010-2011-2012-2013.
- Collaboration with the Master of Digital Archeology at University of Lund, Sweden, year 2011-2012-2013
- PhD Course "3D Graphics for Cultural Heritage" at IMT Lucca, year 2012-2013
- Seminar "Rappresentazione 3D di oggetti reali usando immagini non calibrate: stato dell'arte, usi e potenzialità", at ISIA Urbino, year 2011-2012-2013
- 3D-COFORM “Workshop on 3D acquisition and post-processing”, 2nd-6th November 2009, Ciprus

## PUBLICATIONS

### Book Chapters

- M. Dellepiane, M. Callieri, M. Corsini, R. Scopigno “**Using digital 3D models in the restoration of Cultural Heritage artifacts**”, in **Digital Imaging for Cultural Heritage Preservation: Analysis, Restoration and Reconstruction of Ancient Artworks** - Eds. F. Stanco, S. Battiato, G. Gallo – *CRC Press/Taylor & Francis - Digital Imaging and Computer Vision Book series*, 2010 (in press)
- M. Callieri, M. Dellepiane, P. Cignoni, R. Scopigno “**Processing Sampled 3D data: reconstruction and visualization technologies**”, in **Digital Imaging for Cultural Heritage Preservation: Analysis, Restoration and Reconstruction of Ancient Artworks** - Eds. F. Stanco, S. Battiato, G. Gallo – *CRC Press/Taylor & Francis - Digital Imaging and Computer Vision Book series*, 2010 (in press)

### International Journals

- F. Banterle, M. Callieri, M. Dellepiane, M. Corsini, F. Pellacini, R. Scopigno, **EnvyDepth: An Interface for Recovering Local Natural Illumination from Environment Maps**, *Computer Graphics Forum*, Volume 32 - 2013
- G. Palma, M. Callieri, M. Dellepiane, R. Scopigno, **A Statistical Method for SVBRDF Approximation from Video Sequences in General Lighting Conditions**. *Computer Graphics Forum*, vol. 31, p. 1491-1500, ISSN: 0167-7055, doi: 10.1111/j.1467-8659.2012.03145.x
- M. Dellepiane, N. Dell'Unto, M. Callieri, S. Lindgren, R. Scopigno, **Archeological excavation monitoring using dense stereo matching techniques**, *Journal Of Cultural Heritage*, Volume 14, Number 3, page 201-210, ISSN: 1296-2074, doi: 10.1016/j.culher.2012.01.011
- C. Brognara, M. Corsini, M. Dellepiane, A. Giachetti, **Edge Detection on Polynomial Texture Maps**, *Lecture Notes in Computer Science*, Volume 8156, page 482-491 - June 2013
- M. Dellepiane, R. Marroquim, M. Callieri, P. Cignoni, R. Scopigno, **Flow-Based Local Optimization for Image-to-Geometry Projection**, *IEEE Transactions On Visualization and Computer Graphics*, vol. 18, p. 463-474, ISSN: 1077-2626, doi: 10.1109/TVCG.2011.75
- F. Larue, M. Di Benedetto, M. Dellepiane, R. Scopigno, **From the digitization of cultural artifacts to the web publishing of digital 3D collections: An automatic pipeline for knowledge sharing** . *Journal Of Multimedia*, vol. 7, p. 132-144, ISSN: 1796-2048, doi: 10.4304/jmm.7.2.132-144
- F. Larue, M. Dellepiane, H. Hamer, R. Scopigno, **Automatic texturing without illumination artifacts from in-hand scanning data flow**, *Communications In Computer And Information Science*, vol. 247, p. 14-26, ISBN: 9783642279775, ISSN: 1865-0929, doi: 10.1007/978-3-642-27978-2\_2
- M. Corsini, M. Dellepiane, F. Ganovelli, R. Gherardi, A. Fusiello, R. Scopigno, **Fully Automatic Registration of Image Sets on Approximate Geometry**. *International Journal Of Computer Vision*, Volume 102, Number 1-3, page 91-111 ISSN: 0920-5691, doi: 10.1007/s11263-012-0552-5
- L. Arbace, E. Sonnino, M. Callieri, M. Dellepiane, M. Fabbri, A. Iaccarino Idelson, R. Scopigno, **Innovative uses of 3D digital technologies to assist the restoration of a fragmented terracotta statue** . *Journal Of Cultural Heritage*, Volume 14, Number 4, page 332-345 ISSN: 1296-2074, doi: 10.1016/j.culher.2012.06.008
- R. Scopigno, M. Callieri, P. Cignoni, M. Corsini, M. Dellepiane, F. Ponchio, G. Ranzuglia, **3D Models for Cultural Heritage: Beyond Plain Visualization**. *IEEE Computer*, vol. 44, p. 48-55, ISSN: 0018-9162
- M. Callieri, A. Chica, M. Dellepiane, I. Besora, M. Corsini, J. Moyes, G. Ranzuglia, R. Scopigno, P. Brunet, **Multiscale acquisition and presentation of very large artifacts: the case of Portalada**, *Journal on Computing and Cultural Heritage (JOCCH)*, vol. 3 (4) article n. 14. ACM, 2011.
- M. Dellepiane, A. Venturi and R. Scopigno, **Image guided reconstruction of Un-sampled data: a filling technique for Cultural Heritage models**, *International Journal of Computer Vision* Volume 94, Issue 1, pp 2-11
- M. Dellepiane, M. Callieri, M. Corsini, P. Cignoni, R. Scopigno, **Improved color acquisition and mapping on 3D models via flash-based photography** , *ACM Journal on Computing and Cultural Heritage*, Volume 2, Number 4, page 1-20, 2010

- M. Corsini, M. Dellepiane, F. Ponchio, R. Scopigno, **Image-to-Geometry Registration: a Mutual Information Method exploiting Illumination-related Geometric Properties**, *Computer Graphics Forum*, vol. 28 (7), 2009
- M. Corsini, M. Dellepiane, U. Dercks, F. Ponchio, M. Callieri, D. Keultjes, A. Marinello, R. Sigismondi, R. Scopigno, G. Wolf, **CENOBIUM – Putting together the Romanesque Cloister capitals of the Mediterranean Region**, *British Archeological Reports*, Volume 2118, page 189-194, 2010
- M. Dellepiane, M. Callieri, M. Corsini, P. Cignoni, R. Scopigno, **Flash Lighting Space Sampling**, *Lecture Notes in Computer Science*, Volume 5496, page 217-229 - may 2009
- M. Dellepiane, N. Pietroni, N. Tsingos, M. Asselot, R. Scopigno, **Reconstructing head models from photographs for individualized 3D-audio processing**, *Computer Graphics Forum*, Volume 27, Number 7, page 1719-1727 - 2008
- M. Dellepiane, M. Callieri, F. Ponchio, R. Scopigno, **Mapping highly detailed color information on extremely dense 3D models: the case of David's restoration**, *Computer Graphics Forum*, Volume 27, Number 8, pp. 2178-2187 - 2008
- M. Corsini, M. Dellepiane, M. Callieri, R. Scopigno, **Reflection Transformation Imaging on larger objects: an alternative method for virtual representations**, *British Archeological Reports - 2nd International Conference on Remote Sensing Archaeology*, Volume 1568, Dec. 2006
- T. Franken, M. Dellepiane, F. Ganovelli, P. Cignoni, C. Montani, R. Scopigno, **Minimizing user intervention in registering 2D images to 3D models**, *The Visual Computer*, Springer Verlag, vol. 21(8-10), 2005, pp.619-628

#### International Conferences

- C. Leoni, M. Callieri, M. Dellepiane, R. Rosselli Del Turco, D. O'Donnel and R. Scopigno, **The Dream and the Cross: a 3D-referenced, web-based digital edition**, *Digital Heritage 2013*, Marseille, October 2013
- M. Dellepiane and R. Scopigno, **Global refinement of image-to-geometry registration for color projection on 3D models**, *Digital Heritage 2013*, Marseille, October 2013
- N. Dell'Unto, D. Ferdani, A. M. Leander, M. Dellepiane, M. Callieri and S. Lindgren, **Digital reconstruction and visualization in archaeology. Case-study drawn from the work of the Swedish Pompeii Project**, *Digital Heritage 2013*, Marseille, October 2013
- M. Callieri, C. Leoni, M. Dellepiane, R. Scopigno, **Artworks narrating a story: a modular framework for the integrated presentation of three-dimensional and textual contents**, *ACM WEB3D - 18th International Conference on 3D Web Technology*, page 167-175 - June 2013
- M. Dellepiane, E. Cavarretta, P. Cignoni, R. Scopigno, **Assisted Multi-view Stereo reconstruction**, *3DTV-Conference, 2013 International Conference on*, page 318 - 325 - July 2013
- L. Benedetti, M. Corsini, M. Dellepiane, P. Cignoni, R. Scopigno, **GAIL: Geometry-aware Automatic Image Localization**, *VISAPP 2013 - International Conference on Computer Vision Theory and Applications*, page 31-40 - 2013
- E. Siotto, M. Callieri, M. Dellepiane, R. Scopigno, **3D model of the sarcophagus of Ulpia Domnina: rendering of stored ancient color and virtual revival of original polychromy** *ASMOSIA X - International Conference*, Rome, page In Press - May 2012
- G. Ranzuglia, M. Callieri, M. Dellepiane, P. Cignoni, R. Scopigno, **MeshLab as a complete tool for the integration of photos and color with high resolution 3D geometry data**, *CAA 2012 Conference Proceedings 2012*
- N. Dell Unto, M. Dellepiane, M. Callieri, A.-M. Leander, S. Lindgren, C. Larsson, **Pompei revived: Scanning Mission - Insula V 1**, *CAA 2012 Conference Proceeding - 2012*
- M. Dellepiane, R. Scopigno, **Teaching 3D Acquisition for Cultural Heritage: a Theory and Practice Approach**, *Proceedings of Eurographics Conference 2012 - Education Papers*, page 25-32 - 2012
- D. Bernabei, F. Ganovelli, M. Di Benedetto, M. Dellepiane, R. Scopigno, **A Low-Cost Time-Critical Obstacle Avoidance System for the Visually Impaired**, *2011 International Conference On Indoor Positioning And Indoor Navigation (IPIN)*, 21-23 Guimaraes, Portugal - 2011
- M. Callieri, N. Dell Unto, M. Dellepiane, R. Scopigno, B. Soderberg, L. Larsson, **Documentation and Interpretation of an Archeological Excavation: an Experience with Dense Stereo Reconstruction Tools**, *VAST: The 11th International Symposium on Virtual Reality, Archaeology and Cultural Heritage*, page 33-40 - October

2011

- F. Banterle, M. Dellepiane, R. Scopigno, **Enhancement of Low Dynamic Range Videos using High Dynamic Range Backgrounds**, *Annex to the Conference Proceedings: Areas Papers on HDR*, page 57-62 - April 2011
- F. Larue, M. Dellepiane, R. Scopigno, **Improving High-Speed Scanning Systems by Photometric Stereo**, *VAST (Short papers): The 11th International Symposium on Virtual Reality, Archaeology and Cultural Heritage*, page 25-28 - 2011
- M. Callieri, P. Cignoni, M. Dellepiane, G. Ranzuglia, R. Scopigno, **Processing a Complex Architectural Sampling with MeshLab: the case of Piazza Della Signoria**, Proc. of 3D-ARCH 2011 - *4th Int. Workshop on 3D Virtual Reconstruction and Visualization of Complex Architectures* (Trento, 2-5 March 2011), Volume vol. XXXVIII-5/W16, page art. 29 - 2011
- M. Sottile, M. Dellepiane, P. Cignoni and R. Scopigno, **Mutual Correspondences: an hybrid method for image-to-geometry registration**, *Eurographics Italian Chapter*, Genova, November 2010
- G. Palma, M. Dellepiane, M. Corsini and R. Scopigno, **Improving 2D-3D registration by mutual information using gradient information**, *Eurographics Italian Chapter*, Genova, November 2010
- M. Dellepiane, L. Benedetti, R. Scopigno, **Removing shadows for color projection using sun position estimation**, *The 10th International Symposium on VAST International Symposium on Virtual Reality, Archaeology and Cultural Heritage*, page 55-62 - Sep 2010
- L. Baronti, M. Dellepiane, R. Scopigno, **Using Lego pieces for camera calibration: a preliminary study**, *Eurographics short papers*, Norrkoping, Sweden, 3-7 May 2010
- C. Bathow, B. Breuckmann, M. Callieri, M. Corsini, M. Dellepiane, U. Dercks, R. Scopigno, R. Sigismondi, **Documenting and Monitoring Small Fractures on Michelangelo's David**, *CAA Conference Proceedings (in press)*, Granada, April 2010
- N. Dell'Unto, M. Wallegard, M. Dellepiane, S. Lindgren, J. Eriksson, B. Petersson, R. Paardekooper, **Documenting An experiment on integrated technologies in Digital Archaeology: creation of new pipelines to increase the perception of archaeological data**, *CAA Conference Proceedings (in press)*, Granada, April 2010
- D. Portelli, F. Ganovelli, M. Tarini, P. Cignoni, M. Dellepiane, R. Scopigno, **A framework for sketch based ser assisted fitting of geometric primitives**, *18th International Conference on Computer Graphics, Visualization and Computer Vision*, 1-4 Feb 2010
- M. Dellepiane, A. Venturi, R. Scopigno, **Image guided reconstruction of un-sampled data: a coherent filling for uncomplete Cultural Heritage models**, *IEEE Workshop on eHeritage and Digital Art Preservation*, Oct. 2009
- M. Callieri, P. Cignoni, M. Dellepiane, R. Scopigno, **Pushing Time-of-Flight scanners to the limits**, *The 10th International Symposium on Virtual Reality, Archaeology and Cultural Heritage*, Sept 2009
- M. Dellepiane, M. Callieri, M. Corsini, P. Cignoni, R. Scopigno, **Artifacts removal for color projection on 3D models using flash light**, *The 10th International Symposium on Virtual Reality, Archaeology and Cultural Heritage*, Sept 2009
- M. Callieri, M. Dellepiane, F. Ganovelli, R. Scopigno, **Multi-scale geometry acquisition and visualization: issues and techniques**, *Advances in Remote Sensing for Archaeology and Cultural Heritage management*, Rome 30 September - 4 October, 2008
- M. Dellepiane, M. Callieri, E. Paribeni, E. Sorge, N. Sulfaro, V. Marianelli, R. Scopigno, **Multiple uses of 3D scanning for the valorization of an artistic site: the case of Luni**, *Eurographics Italian Chapter Conference*, July 2008, Salerno
- P. Cignoni, M. Callieri, M. Corsini, M. Dellepiane, F. Ganovelli, G. Ranzuglia, **MeshLab: an Open-Source Mesh Processing Tool**, *Eurographics Italian Chapter Conference*, July 2008, Salerno
- I. Besora, P. Brunet, M. Callieri, A. Chica, M. Corsini, M. Dellepiane, D. Morales, J. Moyés, G. Ranzuglia, R. Scopigno, **Portalada: A Virtual Reconstruction of the Entrance of the Ripoll Monastery**, *3DPVT08: Fourth International Symposium on 3D Data Processing, Visualization and Transmission*, June 2008, Atlanta
- M. Dellepiane, M. Callieri, M. Fondersmith, P. Cignoni, R. Scopigno, **Using 3D scanning to analyze a proposal for the attribution of a bronze horse to Leonardo da Vinci**, *The 8th International Symposium on VAST International Symposium on Virtual Reality, Archaeology and Cultural Heritage*, page 117-124 - Nov 2007, Brighton

- M. Dellepiane, M. Callieri, F. Ponchio, R. Scopigno, **Mapping highly detailed color information on extremely dense 3D models: the case of David's restoration**, *Proceedings of Eurographics Conference - Cultural Heritage Papers* – Sep 2007, Prague
- N. Tsingos, C. Dachsbacher, S. Lefebvre, M. Dellepiane, **Instant sound scattering** , *Proceedings of Eurographics Symposium on Rendering* – Jul 2007, Grenoble
- N. Tsingos, C. Dachsbacher, S. Lefebvre, M. Dellepiane, **Extending geometrical acoustics to highly detailed architectural environments**, *19th International Congress on Acoustics*, June 2007, Madrid
- Khoa-Van Nguyen, M. Dellepiane, I. Viaud-Delmon, O. Warusfel, **Investigation of auditory-visual integration in VR Environments** ,*8th International Multisensory Research Forum, Poster Presentation*, June 2007, Sydney.
- C. Baracchini, M. Callieri, M. Corsini, M. Dellepiane, U. Dercks, D. Keultjes, C. Montani, M. Scognamiglio, R. Scopigno, R. Sigismondi, G. Wolf, **CENOBIUM Cultural Electronic Network Online: Binding Up Interoperably Usable Multimedia** , *Proceedings of Electronic imaging & the visual arts, EVA 2007*, March 2007, Florence
- M. Dellepiane, M. Corsini, M. Callieri, R. Scopigno, **High quality PTM acquisition: Reflection Transformation Imaging for larger objects**, *VAST 2006*, 4-7 Dec 2006, Cyprus
- C. Baracchini, M. Callieri, M. Corsini, M. Dellepiane, U. Dercks, D. Keultjes, C. Montani, M. Scognamiglio, R. Scopigno, R. Sigismondi, **Starting the CENOBIUM project: the cloister of Monreale (Sicily) revealed**, *VAST 2006*, 4-7 Dec 2006, Cyprus
- T. Franken, P. Cignoni, F. Ganovelli, M. Dellepiane, C. Montani, R. Scopigno, **Assisting the user in image to geometry alignment**, *Workshop Italy-Canada 2005, Conference Proceedings*, , 17-18 May 2005, Padova
- R.Borgo, M.Dellepiane, P.Cignoni, **Extracting Meta-Information From 3-Dimensional Shapes With Protégé**, *8th International Protégé Conference*, Conference Proceedings, 18-21 July 2005, Madrid
- M. Balzani, M. Callieri, G. Caputo, P. Cignoni, M. Dellepiane, C. Montani, P. Pingi, F. Ponchio, R. Scopigno, A. Tomasi, F. Uccelli, **Using Multiple Scanning Technologies for the 3D Acquisition**, *3D Arch 2005*, Conference Proceedings, 22-24 Aug 2005, Mestre-Venice
- F. Bellotti, R. Berta, M. Dellepiane, A. De Gloria, E. Ferretti, M. Margarone, A. Poggi, **Implementing 3D Videos on digitally reconstructed artistic sites**, *presented at EVA 2004 London, Eleventh International Conference on Electronic Imaging & the Visual Arts*, England, Conference Proceedings, pp. 18.1-18.8, 26-30 July 2004, London

## MAIN RESEARCH ACTIVITIES

**Application of 3D technologies in the field of Cultural Heritage :** the research activity in this field takes focuses on the creation of tools for processing and visualization of 3D models, and support to the work of experts in the restoration, monitoring and study of works of art. Some recent work has focused on: the reconstruction of the original color of the marble works ( the Sarcophagus of Ulpia Domnina ), the restoration of statues through reassembling from fragments (Madonna of Pietranico ), the use of methods of 3D reconstruction from images to support the work in archaeological excavations (in collaboration with Lund University ), monitoring the fractures on Michelangelo's David.

**Application of color information of 3D models :** the goal of this line of research is the development of new methodologies for mapping color information ( coming from digital photo sets ) on three-dimensional models. In particular, in the context of applications for Cultural Heritage, I addressed issues related to the need to manage highly complex three-dimensional models ( models from 3D scan, consisting of tens or hundreds of millions of triangular faces ) and very dense photographic surveys (tens to hundreds of high-resolution images). Major recent works focused on the preservation of the color details in the transfer from the images to the 3D surface, and on the use of video sequences for the estimation of color and material properties for complex objects.

**Remote presentation of complex 3D content :** the growth of the availability of three-dimensional data has led to the issue of how to remotely represent complex models. This is usually obtained through the new framework WebGL (eg collaboration with the Visionary Cross Project ). Also integration with mobile devices to support tourism ( project VISITO Tuscany ) was explored .

**Development and dissemination of MeshLab :** MeshLab , an open source mesh processing tool developed by the Visual Computing Lab, is one of the tools used by operators in CH for the treatment and presentation of 3D data. The work in this field was mainly devoted to the development of new components ( in particular those regarding the mapping of color information ) and dissemination , through numerous tutorials , courses and workshops.

**3D capture via scanning or multi-view stereo matching :** as part of the basic research, and in collaboration with European and Italian projects, numerous campaigns scanning in sites of great interest were carried out. These include: Michelangelo's David, Portalada de Ripoll, Pompeii Insula VI , Sarcophagus of the Spouses , Piazza della Signoria, Florence, Ruthwell Cross , Pisa Cathedral, the Cloisters of Monreale and Cefalu, Museum of Delos.

## MAIN NATIONAL AND INTERNATIONAL PROJECTS

**Epoch NoE** IST-2002-507382, 2004-2008, development of tools for the 3D processing of CH objects

**Crossmod** FET-FP6, 2005-2008, study of cross-modal effects and their use in the context of Computer Graphics applications

**3D-COFORM** IST-FP7-231809, 2008-2012, acquisition and processing of 3D data, development of a common repository

**INDIGO** IST-FP7, 2009-2012, reconstruction from images and navigation of real environments

**VISITO** Tuscany Regional Project, 2009-2011, acquisition of 3D data, methods for analysis and retrieval for the support of tourism

**V-Must** NoE 270404 (<http://www.v-must.net/>), virtual museums, remote visualization of complex

geometries, integration with additional data

**Ariadne EU-INFRA** (<http://www.ariadne-infrastructure.eu>), development and testing of services for the integration of complex archeological datasets

Pisa, 17th October 2013