

PERSONAL INFORMATION

Name **Curzio Basso**
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Homepage <http://www.disi.unige.it/person/BassoC>
Nationality Italian
Date of birth 10.06.1975
Current Roles Research Fellow at the Computer Science Department of the University of Genova
Cofounder of CAMELOT Biomedical Systems Srl (<http://www.camelotbio.com>)

EDUCATION

PHD 2000-2005
Univ. of Freiburg, Germany (2000–2003) and Univ. of Basel, Switzerland (2003-2005)
PhD degree in Computer Science
Title of the thesis: “*Separation of identity and expressions informations in 3D scans of human faces*”
Supervisor: T. Vetter

UNIVERSITY 1994–1999
University of Genova, Italy
Master degree in Physics (mark: 110/110 *cum laude*), 10/2/1999
Title of the thesis: “*Support Vector Machines applied to regression problems*”
Supervisor: A. Verri

SCHOOL 1989–1994
Scientific High School in Albenga (Sv), Italy
Italian diploma (mark: 60/60)

RESEARCH AND TEACHING EXPERIENCE

RESEARCH PROJECTS

2010-2012
Project: **MRI-based evaluation of the early articular cartilage damage in patients affected by juvenile idiopathic arthritis**
Project funded by: Regione Liguria, Assessorato alla Salute
Role: Researcher

2006-2010
Project: **Health-e-Child** (<http://www.health-e-child.org>)
Project funded by: European research project (IST-2004-027749)
Role: Researcher

2007-2008
Project: **3-dimensional SHape Indexing and Retrieval Techniques (3SHIRT)**
Project funded by: Ministero dell'Università e della Ricerca (MIUR), Italy
Role: Researcher

2005
Project: **Advanced Processing of Facial Soft and Hard Tissue**

Project funded by: National Centre of Competence in Research (NCCR) CO-ME, Switzerland
Role: Researcher

2003-2004

Project: **A Morphable Expression Model for Face Recognition Applications**

Project funded by: Honda Research Institute USA, Boston (MA)

Role: Researcher

2000-2003

Project: **Modelling Expressions and Shapes of Human heads (MESH)**

Project funded by: European research project (IST-1999-10443)

Role: Researcher

TEACHING ACTIVITIES

Since 2008

Supervision of master thesis projects and co-supervision of PhD students

2006-2009

Course for the Computer Science students, University of Genova

Title of the course: **Computational Vision II**

Role: Lecturer

2004 and 2005

Course for the Computer Science students, University of Basel

Title of the course: **Programming II**

Role: Assistant

PUBLICATIONS

C. Basso, M. Santoro, C. Malattia, M. B. Damasio, G. Chiusano, P. Tomà, A. Martini, and A. Verri.
Quantitative synovitis assessment via automatic 3D MRI annotation.
IEEE Trans Medical Imaging (submitted), 2010

C. Basso, M. Santoro, M. B. Damasio, C. Malattia, A. Verri, P. Tomà, and A. Martini.
Automatic estimation of inflamed synovial membrane volume in 3D MR images.
Poster at ECR 2010 Scientific Exhibit, 4-8 March 2010, Vienna, Austria

C. Malattia, M. B. Damasio, C. Basso, A. Verri, F. Magnaguagno, S. Viola, M. Gattorno, A. Ravelli,
P. Tomà, and A. Martini.
Dynamic contrast-enhanced magnetic resonance imaging in the assessment of disease activity
in patients with juvenile idiopathic arthritis.
Rheumatology, 49(1):178–185, 2010

A. Garlaschi, L.E. Bacigalupo, E. Biscaldi, G. Chiusano, C. Basso, and G. A. et al Rollandi.
Multi-modal non-rigid image registration of MR and PET-CT for staging and therapy of rectal
adenocarcinoma.
Scientific Poster at RSNA 2009, 29 November - 4 December 2009, Chicago, IL, USA

C. Basso, M. Ferrante, M. Santoro, and A. Verri.
Automatic annotation of 3D multi-modal MR images on a desktop grid.
In *Proceedings of the MICCAI-Grid 2009 Workshop*, pages 54–63, 2009

C. Basso, M. Santoro, A. Verri, and M. Esposito.
Segmentation of inflamed synovia in multi-modal MRI.
In *Proceedings of IEEE ISBI*, 2009

E. Delponte, C. Basso, F. Odone, and E. Puppo.
Improving 3D shape retrieval with SVM.
In *Proceedings of GRAPP 2009*, pages 46–51, 2009

- C. Malattia, M.B. Damasio, C. Basso, A. Verri, F. Magnaguagno, A. Parodi, S. Viola, A. Ravelli, P. Tomà, and A. Martini.
Quantitative assessment of synovitis in juvenile idiopathic arthritis using dynamic contrast-enhanced magnetic resonance imaging.
Pediatric Rheumatology, 6(Suppl 1):94, 2008
- C. Basso and A. Verri.
Fitting 3D morphable models using implicit representations.
Journal of Virtual Reality and Broadcasting, 4(18), Feb 2007.
urn:nbn:de:0009-6-12799,, ISSN 1860-2037
- C. Basso and A. Verri.
Fitting 3D morphable models using implicit representations.
In J. Braz, P.-P. Vázquez, and J. Madeiras Pereira, editors, *Proc. 2nd Int. Conf. on Computer Graphics Theory and Applications (GRAPP 2007)*, pages 45–52, Barcelona, Spain, March 8–11 2007. INSTICC
- C. Basso and T. Vetter.
Registration of expressions data using a 3D morphable model.
Journal of Multimedia, 1(4):37–45, July 2006.
ISSN 1796-2048
- C. Basso, P. Paysan, and T. Vetter.
Registration of expressions data using a 3D morphable model.
In *Proceedings of Automatic Face and Gesture Recognition*, pages 205–210, Southampton, UK, 10–12 April 2006. IEEE Computer Society
- C. Basso and T. Vetter.
Statistically motivated 3D faces reconstruction.
In *Proceedings of 2nd International Conference on Reconstruction of Soft Facial Parts (RSFP 2005)*, Remagen, Germany, 17–18 March 2005
- S. Romdhani, V. Blanz, C. Basso, and T. Vetter.
Handbook of Face Recognition, chapter 10. Morphable Models of Faces.
Springer-Verlag, 2004
- C. Basso, T. Vetter, and V. Blanz.
Regularized 3D morphable models.
In *Proceedings of the 1st IEEE International Workshop on Higher-Level Knowledge in 3D Modeling and Motion Analysis (HLK 2003)*, pages 3–11, Nice, France, 17 October 2003. IEEE Computer Society Press
- V. Blanz, C. Basso, T. Poggio, and T. Vetter.
Reanimating faces in images and video.
Computer Graphics Forum, 22(3):641–641, 2003.
Best Paper Award
- M. Pittore, C. Basso, and A. Verri.
Representing and recognizing visual dynamic events with support vector machines.
In *Proceedings of the 10th International Conference on Image Analysis and Processing (ICIAP 1999)*, pages 18–25, Venice, Italy, 27–29 September 1999. IEEE Computer Society Press

TECHNICAL SKILLS

SOFTWARE DEVELOPMENT

Python. I have 6 years of experience writing scientific software (Machine Learning and Statistical Analysis of Data, Computer Vision and Computer Graphics) with heavy use of Numpy, Scipy and Matplotlib packages. I wrote some front-end GUI applications (developed mostly with PyQt), also with complex visualization functionalities (e.g. of volumetric medical images). I have also written several C extensions, both to wrap functionalities of other libraries and to optimize some parts of the code.

C/C++. I started programming in C during my master thesis 10 years ago, and developing software in C++ since 8 years. I have an extensive experience of templates constructs and use, and, since some months, I am developing together with colleagues a templated library for numerical computations. I have a good working knowledge of STL and Boost libraries, as well as of the Qt and wxWindows libraries.

Java. I also have a basic knowledge of Java, having taught a Programming course based on it, with laboratory exercises focused on the development of small projects.

OTHER

SW development under all main platforms (Linux/Mac/Win)

Decade-long experience with version control systems (Subversion, Mercurial, CVS) and team development

6 years experience with unit testing (using CppUnit in C++ and unittest in Python)

Experience with distributed computing using different Grid infrastructures

10+ years experience with Linux system administration (Ubuntu, Gentoo, Fedora and SLC)

2 years experience with automatic backup systems (Bacula)

Working knowledge of HTML and CSS

OpenGL and Maya plugin development

Matlab

REFERENCES

Prof. **Alessandro Verri**, Ph.D.

Dipartimento di Informatica e Scienze dell'Informazione, Università di Genova

Via Dodecaneso, 35

16146 Genova, Italy

Prof. Dr. **Alberto Martini**

IRCCS Istituto G. Gaslini, Università di Genova

Largo Gaslini, 5

16147 Genova, Italy

Prof. **Thomas Vetter**, Ph.D.

Departement Informatik, Universität Basel

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4056 Basel, Switzerland