Dr. Daniela Cabiddu

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Current Position

2020 – on **Researcher**
National Research Council of Italy (CNR)
Institute of Applied Mathematics and Information Technologies (IMATI), Genova, Italy

Daniela Cabiddu is researcher at IMATI-CNR Genova. Her current research focus is on **Computer Graphics** and **Geometry Modeling** applied to *geoscience*, *fabrication* and *engineering*. She is also interested in parallel/distributed computing infrastructures and graphical interfaces. She has worked in several national and EU founded research projects dealing with digital representations of 3D domains, providing solutions to efficiently generate, encode and reuse high-resolution (huge) 3D models and possible embedded heterogeneous information. She gained expertise in spatial analysis, geographical information systems, and environmental (specifically water) monitoring methods. Her current research activities include 3D modeling, representation and analysis of both underground structures and urban/harbour areas. She is also investigating on virtual/augmented reality and holographic technologies for geoscience applications.

Previous Positions

2018 – 2020 **PostDoc Research Fellowship**. IMATI, CNR, Genova, Italy.
Topic: *The interplay of analysis and geometry in the context of PDE solvers*.
Supervisor: Giuseppe Patanè.

February 2018 **Short Term Mobility**. University of British Columbia (UBC), Vancouver, Canada.
Topic: *3D modeling for 3D printing: volumetric partitioning conforming surface segmentation*.
Supervisor: Alla Sheffer.

2016 – 2018 **PostDoc Research Fellowship**. IMATI, CNR, Genova, Italy.
Topic: *Distributed processing of large 3D polygonal meshes coming from different application fields (biomedicine, geoscience, digital fabrication)*.
Supervisor: Marco Attene.

2015 – 2016 **Research Fellowship**. IMATI, CNR, Genova, Italy.
Topic: *Study, design and implementation of a software library for mesh repairing applications*.
Supervisor: Marco Attene.

2013 – 2014 **Research Fellowship**. IMATI, CNR, Genova, Italy
Topic: *Sharing and Processing 3D biomedical data for use within advanced visualization facilities*.
Supervisor: Marco Attene.

Education

2013 – 2016 **PhD in Computer Science**, University of Cagliari, Italy. [Cab16]
Supervisors: Prof. Riccardo Scateni, Dr. Marco Attene

2012 – 2010 **MSc in Computer Science**, University of Cagliari, Italy. Grade: 105/110
Thesis: Detecting Shape Features from Meshes using JMAPT.
Supervisor: Prof. Riccardo Scateni

2007 – 2010 **BSc in Computer Science**, University of Cagliari, Italy. Grade: 110/110
Thesis: Study and implementation of an interactive multi-touch system.
Supervisor: Prof. Riccardo Scateni

Awards & Honors

2019 Winner of CNR **Research Technician Permanent Position** (national public selection)
refused due to another offer
2017 Winner of CNR **Short Term Mobility** spent visiting Prof. Alla Sheffer at the University of British Columbia (UBC), Vancouver, Canada from Jan 28, 2018 to Feb 18, 2018

Professional Activities

Editor for International Scientific Journals

2023 Co-Guest Editor, **Computers & Graphics - VSI: STAG 2022.**
2023 Co-Guest Editor, **Graphical Models - VSI: STAG 2022.**
2022 Conference Proceedings Editor, **Smart Tools and Applications for Graphics (STAG) 2022.**

Chair

2023 Poster Co-Chair, **International Geometry Summit (IGS2023)**.
2022 Program Co-Chair, **Smart Tools and Applications for Graphics (STAG)**.
2019 Co-Chair of the “Project and Lab” track, **Eurographics International Conference**.
2016 Session Chair, **Smart Tools and Applications for Graphics (STAG)**.

Committees

2019 – 2023 Program Committee, **Fabrication and Sculpting Event (SCULPT-FASE)**.
2016 – 2021, 2023 Program Committee, **Smart Tools and Applications for Graphics (STAG)**.
2019 – 2023 Best Thesis Award Committee, **Smart Tools and Applications for Graphics (STAG)**.
2019 – 2022 Technical Manager, **Graphics Replicability Stamp Initiative (GRSI)**.

Reviewer

2023 Geo-spatial Information Science, Taylor&Francis Online
2022 Tema. Journal of Land Use, Mobility and Environment
2021, 2023 WSCG International Conference
2019 Annual International CAD Conference
2019 Shape Modeling International (SMI) Conference
2019, 2021, 2023 Computers & Graphics, Elsevier Journal
2018 Computer Science and Application Engineering (CSAE) International Conference
2018 The Visual Computer, Springer Journal
2016 Geometric Modeling and Processing (GMP), International Conference

2015 Computer Graphics International (CGI), International Conference

Evaluator for Competitive Selections/Funding

2023 **Technical evaluator for the Italian Ministry of Economic Growth** (MISE, FCS projects)

2023 **Scientific evaluator for Selection Procedures for Short-Term Collaborations** (“collaborazione occasionale”) , IMATI, CNR.
Selection procedures: 2023/600 , 2023/622

2023 **Scientific evaluator for Selection Procedures for Researchers (fixed-term)**, IMATI, CNR.
Selection procedures: IMATI-400.002.IMATI.GE.PNRR , IMATI-400.003.IMATI.GE.PNRR , IMATI-400.007.IMATI.GE.PNRR

2023 **Scientific evaluator for Selection Procedures for Research Fellowships**, IMATI, CNR.
Selection procedures: IMATI-016-2022-GE , IMATI-017-2022-GE

2022 **Scientific evaluator for Selection Procedures for a Research Fellowship**, IMATI, CNR.
Selection procedures: IMATI-008-2021-GE , IMATI-010-2021-GE , IMATI-015-2021-GE

2021 **Scientific evaluator for Selection Procedures for Research Fellowships**, IMATI, CNR.
Selection procedures: IMATI-002-2021-GE , IMATI-004-2021-GE

2021 **Technical evaluator for a Public Tender** for Laser Scanner Acquisition of the harbour of La Spezia, START 4.0 - Competence Center
Notice “ATTO DEL PRESIDENTE” No. 12_2021

Organization of Scientific Events

2022 **Smart Tools and Applications in Graphics (STAG) International Conference**, Cagliari, Italy
Program Chair

2022 **Land-City-Sea Scape Intelligence**, organized by CNR at Expo 2020, Dubai, UAE
Technical support, Scientific networking

2019 **Eurographics International Conference**, Genova, Italy
Chair of the “Project and Lab” track, Technical Support

2016 **Smart Tools and Apps for Graphics (STAG) International Conference**, Genova, Italy
Technical Support

2016 **EUROGRAPHICS Workshop on Graphics and Cultural Heritage (CGH)**, Genova, Italy
Technical Support

2014 **Eurographics International Conference**, Strasbourg, France
Student Volunteer

2013 **Symposium of Geometry Processing**, Genova, Italy
Student Volunteer

Professional Assignments

2022 – on **Review, re-design and maintenance of the GECA RDC system**, the CNR Colletive Catalog of the Library System.

2020 – on **Implementation and deploy of the IMATI Website** including the integration of the automatic harvesting of CNR People platform.

2018 – on **Design and development of an automatic tool** for harvesting CNR People platform (to be included into the IMATI Website).

2016 – on **Design, development and update of the IQlib library** for representing and processing geospatial datasets through distributed architectures.

2016 – on **Maintenance, review and update of the LHMTOOLS services and computational infrastructure** for indexing/modeling LAS files and monitoring idro-meteorological events.

Founded Projects

Leaderships and Responsibilities

2021 – on **UIP: URBAN INTELLIGENCE OVER PORTS**
Subproject of CNR project “Industrial Transition and Resilience of Post-Covid19 Societies”, CUP: B55F20002150001
Scientific supervision

2021 – 2022 **DIGITbrain PROMed: Production Optimization for Additive Manufacturing of Medical Devices**
EU H2020 Research and Innovation Programme under GA No 952071
Task Leader

Participation and Co-Investigation

2022 – on **RAISE: Robotics and AI for Socio-economic Empowerment**
Spoke 3 (Sustainable and Environmental Caring and Protection Technologies)
Piano Nazionale di Ripresa e Resilienza (PNRR), Code ECS00000035
Co-investigator

2022 – on **National Centre for HPC, Big Data and Quantum Computing HPC.**
Spoke 4 (Earth and Climate), Spoke 5 (Environment and Natural Disasters)
Piano Nazionale di Ripresa e Resilienza (PNRR), Code CN0000013, CUP B93C22000620006
Co-investigator

2022 – on **Portale delle fonti per la storia della Repubblica italiana**
CUP B89J19000790005
Co-investigator, Technical Support

2022 – on **UISH: Urban Intelligence Science Hub for City Network - Catania**
Founded by Programma Operativo Complementare ”Città Metropolitane” 2014-2020. CUP B51B21000430001.
Co-investigator

2021 – on **Casa Tecnologie Emergenti Matera**
CUP I14E20000020001 - Asse I ”CASA DELLE TECNOLOGIE EMERGENTI” Programma di Supporto Tecnologie Emergenti FSC2014-2020
Co-investigator

2021 – on **I-CHANGE: Individual Change of HAbits Needed for Green European transition**
EU H2020 GA No. 101037193
Co-investigator

2019 – 2021 **GEO3D: Modellazione, manipolazione e visualizzazione 3D di dati geologici e geotecnici**
“Modeling, manipulating and visualizing 3D geological and geotechnical data” founded by POR FSE Liguria 2014-2020 - Asse 3 ”Istruzione e Formazione” Programma Operativo Regione Liguria Fondo Sociale Europeo 2014-2020.
Co-investigator

2018 – 2021 **MATRAC-ACP: Monitoraggio Adattivo in Tempo reale con Automatizzazione del Campionamento - Aree Costiere Portuali**
“Real-Time Adaptive Monitoring with Automation of Sampling - Port Coastal Areas - MATRAC-ACP”, funded by the Interreg Italy-France Maritime 2014-2020 Program - Axis priority 2, Specific objective 6C2 ”To increase protection of marine waters in ports”
Co-investigator

2016 – 2022 **CHANGE: New CHallenges for PDE solvers: the interplay of ANalysis and GEometry**
ERC Advanced Grant
Co-investigator

2015 – 2018 **CaxMan: Computer Aided Technologies for Additive Manufacturing**
Horizon 2020 - Research and Innovation action - GA No. 680448
Co-investigator

2015 – 2016 **IQmulus: A High-volume Fusion and Analysis Platform for Geospatial Point Clouds, Coverages and Volumetric Data Sets**
FP7 ICT, 2012-2016 - GA No. 318787
Co-investigator

2013 – 2014 **Tecniche di visualizzazione avanzata di immagini e dati 3D in ambito biomedicale**
"Advanced visualization of 3D biomedical images and 3D data" founded by PO CRO Fondo Sociale Europeo Regionale Liguria 2007-2013
Co-investigator

Teaching

Undergraduate

May 2023 **Training Course (Open Badge) organized by University of Basilicata. [30 hours]**
3D Urban Models: data acquisition, modeling, and prospects of urban planning and monitoring.

PhD

May 2023 **Training Course (Open Badge) organized by University of Basilicata. [30 hours]**
3D Urban Models: data acquisition, modeling, and prospects of urban planning and monitoring.

Talks and Presentations

Invited Talks

Dec 2020 **Graphical Frameworks for Geometry Processing**
Invited talk at CNR-IMATI, Genova, Italy.

Feb 2018 **Geometry Processing for Geology and 3D Printing**
Invited talk at University of British Columbia (UBC), Vancouver, Canada.
Host: Alla Sheffer

Conferences

Nov 2022 **A graphical framework to study the correlation between geometric design and simulation**
Paper [CPS22] at Smart Tools and Applications in Graphics (STAG), Cagliari, Italy

Jun 2017 **ϵ-maps: characterizing, detecting and thickening thin features in geometric models**
Paper [CA17a] at Shape Modeling International (SMI), Berkeley, California

Jul 2015 **Large mesh simplification for distributed environments**
Paper [CA15b] at Shape Modeling International (SMI) 2015, Lille, Francia

Jul 2014 **A Web-based distributed system to process large geometric models**
Paper [CA14c] at Large Geospatial Data Workshop, Cardiff, Galles

Jun 2014 **Distributed Triangle Mesh Processing**
Paper [CA14b] at International Conference in Central Europe on Computer Graphics, Visualization and Computer Vision (WSCG) , Plzen, Repubblica Ceca

Scientific supervision

PhD Students (co-tutor)

2022 – on **Marianna Miola**
Department of Earth, Environment and Life Sciences (DISTAV), University of Genova, Italy.
"MUSE: Modeling Uncertainty as a Support for Environment"
[MCPVZ22]

Research Fellows

Feb 2022 – Feb 2023 **Cristina Malatesta**, IMATI, CNR, Genova, Italy
"Acquisition and processing of 3D data and time-varying environmental data for the development and operation of digital twins of strategic infrastructures"

Nov 2021 – Feb 2022 **Serena Berretta**, IMATI, CNR, Genova, Italy
"3D Volumetric Modeling for air quality monitoring in harbour environments"
[BCP+21a] [BCP+21b]

Dec 2019 – Dec 2021 **Marianna Miola**, IMATI, CNR, Genova, Italy
"Modeling, manipulating and visualizing 3D geological and geotechnical data"
[MCP+21a] [MCP+22]

Short Term Research Collaborations ("Collaborazione occasionale")

May 2023 – on **Cristina Malatesta**, IMATI, CNR, Genova, Italy
"Simulation of intraoceanic subdution processes through mathematical 2D modeling."

Technical Expertise

Operating Systems: Linux, MacOS, Windows
Programming Languages: C, C++, Java
Scripting Languages: Bash, Python
Web Technologies: HTML 5, PHP, JSP, Javascript
Database: SQL, MySQL
Text Editing: LaTeX, Word (Office e LibreOffice)

Geometry Modeling Libraries: cinolib, ImatiSTL, LibIGL, PCL
Geometry Modeling Tools: MeshLab, Paraview
2D/3D Data Visualization: VTK, X3D, X3DOM, OpenGL
Numerical Solvers: Matlab, Eigen, Gurobi

Publications

Peer-reviewed Journal Papers

[VCP24] Marino Vetuschi Zuccolini, Daniela Cabiddu, and Simone Pittaluga. PHREESQL: A toolkit to efficiently compute and store geochemical speciation calculation. *Computers & Geosciences*, 190:105640, 2024

[MGPC24] Cristina Malatesta, Taras Gerya, Simone Pittaluga, and Daniela Cabiddu. Intermediate-depth seismicity and intraslab stress changes due to outer-rise faulting. *Communications Earth & Environment*, 5(1):253, 2024

[SCMS22] Andreas Scalas, Daniela Cabiddu, Michela Mortara, and Michela Spagnuolo. Potential of the geometric layer in urban digital twins. *ISPRS International Journal of Geo-Information*, 11(6):343, 2022

[MCP+22] Marianna Miola, Daniela Cabiddu, Simone Pittaluga, Michela Mortara, Marino Vetuschi Zuccolini, and Gianmario Imitazione. A computational approach for 3d modeling and integration of heterogeneous geo-data. *Computers & Graphics*, 105:105–118, 2022 **(extended version of [MCP+21b])**

[LCGM21] Katia Lupinetti, Daniela Cabiddu, Franca Giannini, and Marina Monti. A web-based solution supporting cad assembly model exploration and analysis. *Computer science (Berl., Print)*, 3, 2021 **(extended version of [LCGM19])**

[ABB+21] Marco Attene, Silvia Biasotti, Silvia Bertoluzza, Daniela Cabiddu, Marco Livesu, Giuseppe Patanè, Micol Pennacchio, Daniele Prada, and Michela Spagnuolo. Benchmarking the geometrical robustness of a virtual element poisson solver. *Mathematics and computers in simulation (Print)*, 190:1392–1414, 2021. online first: 29/07/2021

[BCMS20] Serena Berretta, Daniela Cabiddu, Michela Mortara, and Michela Spagnuolo. Sea monitoring made simple and efficient. *ERCIM news*, pages 27–28, 2020

[LCA19] Marco Livesu, Daniela Cabiddu, and Marco Attene. slice2mesh: a meshing tool for the simulation of additive manufacturing processes. *Computers & graphics*, 80:73–84, 2019 **(extended version of [LCA18])**

[ACA+19] Chrystiano Araújo*, Daniela Cabiddu*, Marco Attene, Marco Livesu, Nicholas Vining, and Alla Sheffer. Surface2volume: Surface segmentation conforming assemblable volumetric partition. *ACM transactions on graphics*, 38:80:1–80:16, 2019. * *joint first authors*

[CA17b] Daniela Cabiddu and Marco Attene. Processing large geometric datasets in distributed environments. *Lecture notes in computer science*, 10220:97–120, 2017. Transactions on Computational Science XXIX Editors: Marina L. Gavrilova, C.J. Kenneth Tan ISBN: 978-3-662-54562-1 (Print) 978-3-662-54563-8 (Online)

[CA17a] Daniela Cabiddu and Marco Attene. epsilon-maps: Characterizing, detecting and thickening thin features in geometric models. *Computers & graphics*, 66:143–153, 2017. Special Issue on SMI 2017 (Edited by Marco Attene, Sylvain Lefebvre and Daniele Panozzo)

[ACG+16] Marco Attene, Daniela Cabiddu, Stefano Gagliardo, Franca Giannini, and Marina Monti. A web repository to describe and execute shape oriented workflows. *Computer-Aided Design and Applications*, 13:637–646, 2016. Published online: 22 Feb 2016

[CA15b] Daniela Cabiddu and Marco Attene. Large mesh simplification for distributed environments. *Computers & graphics*, 51:81–89, 2015. Special Issue: SMI 2015 (24-26 June 2015, Lille, France)

Peer-reviewed Conference Proceedings

[RCPM23] Chiara Romanengo, Daniela Cabiddu, Simone Pittaluga, and Michela Mortara. Semantic Segmentation of High-resolution Point Clouds Representing Urban Contexts. In Francesco Banterle, Giuseppe Caggianese, Nicola Capece, Ugo Erra, Katia Lupinetti, and Gilda Manfredi, editors, *Smart Tools and Applications in Graphics - Eurographics Italian Chapter Conference*. The Eurographics Association, 2023 **(shortlisted for journal extension (under review))**

[CPS22] Daniela Cabiddu, Giuseppe Patané, and Michela Spagnuolo. A graphical framework to study the correlation between geometric design and simulation. In *STAG: Smart Tools and Applications in Graphics (2022)*, pages 11–19, Goslar, 2022. The Eurographics Association

[SCM+22] Andreas Scalas, Daniela Cabiddu, Michela Mortara, Simone Pittaluga, and Michela Spagnuolo. Mobile laser scanning of challenging urban sites: a case study in matera. 2022

[MCP+21b] Marianna. Miola, Daniela Cabiddu, Simone Pittaluga, Michela Mortara, Marino Vetuschi Zuccolini, and Gianmario Imitazione. 3d modeling and integration of heterogeneous geo-data. In *STAG: Smart Tools and Applications in Graphics (2021)*, pages 39–49, Goslar, 2021. The Eurographics Association **(shortlisted for journal extension [MCP+22])**

[LCGM19] Katia Lupinetti, Daniela Cabiddu, Franca Giannini, and Marina Monti. Cad3a: a web-based application to visualize and semantically enhance cad assembly models. pages 462–469, 2019. Date Added to IEEE Xplore: 16 April 2020 **(shortlisted for journal extension [LCGM21])**

[CFO+19] Massimo Caccia, Roberta Ferretti, Angelo Odetti, Gabriele Bruzzone, Michela Spagnuolo, Michela Mortara, Serena Berretta, Daniela Cabiddu, Simone Pittaluga, Marino Vetuschi Zuccolini, et al. Robotics and adaptive sampling techniques for harbor waters monitoring: the matrac-acp project. In *OCEANS 2019-Marseille*, pages 1–8. IEEE, 2019

[BCP+18a] Serena Berretta, Daniela Cabiddu, Simone Pittaluga, Michela Mortara, Michela Spagnuolo, and Marino Vetuschi-Zuccolini. Adaptive environmental sampling: The interplay between geostatistics and geometry. In *STAG: Smart Tools and Applications in Graphics (2018)*, pages 133–140, Goslar, 2018. The Eurographics Association

[LCA18] Marco Livesu, Daniela Cabiddu, and Marco Attene. slice2mesh: meshing sliced data for the simulation of am processes. In *STAG: Smart Tools and Applications in Graphics (2018)*, pages 13–23, Goslar, 2018. The Eurographics Association **(shortlisted for journal extension [LCA19])**

[ACG+15] Marco Attene, Daniela Cabiddu, Stefano Gagliardo, Franca Giannini, and Marina Monti. A web repository to describe and execute shape processing workflows. In *Proceedings of CAD15*, pages 348–353, 2015

[CA15a] Daniela Cabiddu and Marco Attene. Distributed processing of large polygon meshes. In *STAG: Smart Tools & Apps for Graphics (2015)*, 2015 **(shortlisted for journal extension)**

[CA14b] Daniela Cabiddu and Marco Attene. Distributed triangle mesh processing. In *WSCG 2014 Communication Papers Proceedings*, pages 17–24, Plzen, 2014. Vaclav Skala - Union Agency

[CA14c] Daniela Cabiddu and Marco Attene. A web-based distributed system to process large geometric models. In *IQmulus Workshop for Big Data Processing, Cardiff, Wales*, 2014

Book Chapters

[SPC+22] Tommaso Sorgente, Daniele Prada, Daniela Cabiddu, Silvia Biasotti, Giuseppe Patanè, Micol Pennacchio, Silvia Bertoluzza, Gianmarco Manzini, and Michela Spagnuolo. *VEM and the Mesh*, volume 31 of *SEMA SIMAI Springer Series*, pages 1–57. Springer Nature Switzerland, Basel, 2022

PhD Thesis

[Cab16] Daniela Cabiddu. *Distributed Processing of Large Triangle Meshes*. 2016

Extended abstracts/Posters

[VZCPM] Marino Vetuschi Zuccolini, Daniela Cabiddu, Simone Pittaluga, and Marianna Miola. PHREESQL: a tool to process PHREEQC solubility-speciation computations as support to reaction and transport calculation on unstructured meshes. Poster presented at “The Geoscience paradigm: resources, risk and future perspectives”, Potenza, Italy. 19-21 September 2023

[BCM+23] Brigida Bonino, Daniela Cabiddu, Michela Mortara, Katia Lupinetti, and Simone Pittaluga. Towards immersive urban digital twins. In *Abstact Book of BUILT-IT Workshop, Rome, October 19, 2023 (to be published)*, 2023

[CMR+23] Daniela Cabiddu, Michela Mortara, Chiara Romanengo, Andreas Scalas, Alice Bellazzi, Lorenzo Belussi, Ludovico Danza, and Matteo Ghellere. 3d feature recognition for the assessment of buildings’ energy efficiency. In *Abstact Book of BUILT-IT Workshop, Rome, October 19, 2023 (to be published)*, 2023

[SBR+23] Andreas Scalas, Brigida Bonino, Chiara Romanengo, Tommaso Sorgente, Daniela Cabiddu, Michela Mortara, Simone Pittaluga, and Michela Spagnuolo. Semantically enriched 3d geometric modeling for urban digital twins. 2023

[ABC+22] Marco Attene, Tiziano Berti, Daniela Cabiddu, Antonio Garosi, Marco Livesu, Zsolt Pasztor, Daniel Petrovszki, and Andrea Ranieri. Promed: Production optimization for additive manufacturing of medical devices. 2022

[MCPVZ22] Marianna Miola, Daniela Cabiddu, Simone Pittaluga, and Marino Vetuschi Zuccolini. MUSE: Modeling uncertainty as a support for environment. In *Smart tools and apps for graphics-Eurographics italian chapter conference, The Eurographics Association*, 2022

[BCM+21] Serena Berretta, Daniela Cabiddu, Michela Mortara, Simone Pittaluga, and Marino Vetuschi Zuccolini. A change of support model optimization for environmental monitoring. In *Proceedings of geoENV2020*, pages 52–60, 2021. Extended Abstract

[BCP+21b] Serena Berretta, Daniela Cabiddu, Simone Pittaluga, Michela Mortara, Michela Spagnuolo, and Marino Vetuschi Zuccolini. Smart and efficient marine water monitoring. *Abtract presented at MARINE 2021 - The 9th Conference on Computational Methods in Marine Engineering*, 2021

[BCP+21a] Serena Berretta, Daniela Cabiddu, Simone Pittaluga, Michela Mortara, Michela Spagnuolo, and Marino Vetuschi Zuccolini. An innovative sampling strategy for the monitoring of pollutants in harbours. *Abtract presented at Minisymposium "Characterization of reactive transport processes under uncertainty", which will be part of the SIAM conference on Mathematical and Computational Issues in Geosciences (GS21)*, 2021

[BCP+18c] Serena Berretta, Daniela Cabiddu, Simone Pittaluga, Michela Mortara, Michela Spagnuolo, and Marino Vetuschi Zuccolini. Real-time volumetric modelling based on adaptive sampling of environmental scalar fields derived by uncertainty maps. *Poster at Shape Modeling International (SMI) 2018, Lisbona, Portogallo*, 2018

[BFVZ+18] Rosangela Barcaro, Roberta Ferretti, Marino Vetuschi Zuccolini, Daniela Cabiddu, and Michela Mortara. Analisi dei protocolli esistenti e linee guida per procedure di monitoraggio innovative delle acque portuali. Technical report, 2018

[BCR+18] Rosangela Barcaro, Massimo Caccia, Ferretti Roberta, Marino Vetuschi Zuccolini, Daniela Cabiddu, Michela Mortara, and Michela Spagnuolo. Piano della comunicazione del progetto monitoraggio adattivo in tempo reale con automatizzazione del campionamento - aree costiere portuali - matrac acp. Technical report, 2018

[CMSS] Daniela Cabiddu, Giorgio Marcias, Alessandro Soro, and Riccardo Scateni. Multi-touch and tangible interface: Two different interaction modes in the same system. *Adjunct Proceedings, (poster session) presented at the 9th ACM SIGCHI Italian Chapter International Conference on Computer-Human Interaction: Facing Complexity (CHITALY) 2011, Alghero, Italia*

Technical Reports

[BCP+18b] Serena Berretta, Daniela Cabiddu, Simone Pittaluga, Michela Mortara, Michela Spagnuolo, and Marino Vetuschi Zuccolini. Adaptive sampling of environmental variables (ASEV), 2018. *Report Tecnico n. 06/2018, CNR-IMATI Genova, Italia*

[CMA+18] M. Chiumenti, J. C. Morel, M. Attene, D. Cabiddu, M. Livesu, F. Giannini, and A. Clematis. Final implementation of process planning workflow, 2018. *CAxMan Deliverable 3.5, Agosto 2018*

[ABC+16] M. Attene, O. Barrowclough, D. Cabiddu, J. Cauchois, S. Ellero, J. Haenisch, M. Livesu, J. C. Morel, T. Ventura, and M. Chiumenti. AM process planning workflows, 2016. *CAxMan Deliverable 3.2, Maggio 2016*

[GHA+16] V. Gezer, H. H. Holm, C. Altenhofen, M. Livesu, D. Cabiddu, M. Martinelli, E. Neiva, J. Cauchois, M. North, and R. Gil. Cloud infrastructure version 2, 2016. *CAxMan Deliverable 1.3, Luglio 2016*

[CA15c] Daniela Cabiddu and Marco Attene. Large mesh simplification for distributed environments, 2015. *Report Tecnico n. 05/2015, CNR-IMATI Genova, Italia*

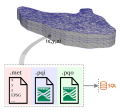
[CA14a] D. Cabiddu and M. Attene. Distributed triangle mesh processing, 2014. Report Tecnico n. 01/2014, CNR-IMATI Genova, Italia

[CA13] Daniela Cabiddu and Marco Attene. Geometry processing for biomedical imaging: 3d model representations and multi-modality. Technical report, 2013. Rapporto Tecnico IMATI-GE n. 09/2013

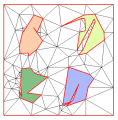
Open Science

Open source

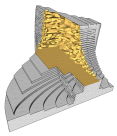
OOCTriTile: an out-of-core (OOC) method to split trimeshes into smaller tiles
D. Cabiddu, M.Attene.
https://github.com/DanielaCabiddu/OOCTriTile
Role: co-designer, developer. *First Release 2023*



PHREESQL: a toolkit to efficiently compute and store geochemical speciation calculation
D. Cabiddu, M. Vetuschi Zuccolini, S. Pittaluga.
https://github.com/DanielaCabiddu/PHREESQL
Role: co-designer, developer. *First Release 2023*



PEMesh: A Graphical Framework to Study the Correlation between Geometric Design and Simulation
D. Cabiddu, G. Patanè, M. Spagnuolo.
https://github.com/DanielaCabiddu/PEMesh
Role: co-designer, developer. *First Release 2022*

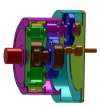


Slice2Mesh: a direct mesher of sliced data for the simulation of am processes
M. Livesu, D. Cabiddu, and M. Attene.
https://github.com/mlivesu/slice2mesh
Role: co-designer, co-developer. *First Release 2018*

CAxLib: A process planning framework for additive manufacturing applications
M. Attene, M. Livesu, and D. Cabiddu.
https://github.com/CAxMan/CAxLib
Role: co-designer, co-developer. *First Release 2017*

CinoLib: a C++ library for processing polygonal and polyhedral meshes
Creator and lead developer: M. Livesu.
https://github.com/mlivesu/cinolib
Role: co-developer. *First Release 2015*

Web Applications



CAD3A – CAD Assembly Analysis Application
F. Giannini, K. Lupinetti, D. Cabiddu and M. Monti.
http://cad3a.ge.imati.cnr.it/webapp/
Role: co-designer, co-developer. *First Release 2019*

Digital Shape Workbench – Workflow Repository
D. Cabiddu, S. Gagliardo, and M. Pitikakis.
http://visionair.ge.imati.cnr.it/workflows/
Role: co-designer, co-developer. *First Release 2015*

Commercial Software

2017 – 2020 **SmartTomo**
S. Pittaluga, D. Cabiddu,
https://www.vs30.it/wp/it/smarttomo-2/
Role: co-designer, co-developer

Languages

Italian	Native
English	Level B2, Grade 7 Trinity College – with Merit (Dec 2005)
French	Level B1, Delf Certification, Grade 87,5/100, May 2007
German	Level B1, Zertifikat Deutsch (Goethe), Grade 34,5/300, May 2007

Glossary

These are the meanings of the symbols used throughout this document:

- Indicates that a publication is open-access
- Link to a code repository on GitHub
- Link to an open-access PDF, usually a preprint or postprint
- Link to private PDF, available upon request
- Link to a video on YouTube
- Link to a data archive
- Link to presentation slides
- Link to a poster