

PERSONAL INFORMATION Chiara Eva Catalano



<https://www.imati.cnr.it/mypage.php?idk=PG-27>



WORK EXPERIENCE

January 2023 – present

Level II Senior researcher at CNR IMATI -National Research Council, Institute of Applied Mathematics and Information Technologies- Genoa (Italy) [formalisation: ongoing]

June 2009- December 2022

Level III Researcher at CNR IMATI -National Research Council, Institute of Applied Mathematics and Information Technologies- Genoa (Italy)

EDUCATION AND TRAINING

Ph.D. in Mechanics and Machine Design, University of Genoa, Italy
Master Degree in Mathematics, University of Parma, Italy

PROJECT COORDINATION

2022-2025

“Humanities and cultural Heritage Italian Open Science Cloud” – H2IOSC”, Piano Nazionale di Ripresa e Resilienza (PNRR), MISSIONE 4, COMPONENTE 2,

2021-2023

INVESTIMENTO 3.1 “Fondo per la realizzazione di un sistema integrato di infrastrutture di ricerca e innovazione” Action 3.1.1 “Creazione di nuove IR o potenziamento di quelle esistenti che concorrono agli obiettivi di eccellenza scientifica di Horizon Europe e costituzione di reti”,–NextGenerationEU. **IMATI principal investigator** incrASTible! The incredible Astino Monastery. Augmented reality to renew the cultural and educational offer with social distancing. Funded by

2020-2022

Fondazione Cariplo, CUP: B55F21002730008. **IMATI principal investigator**

2021-2022

Pneulytics: Advances in pneumology via ICT and data analytics. Funded by Compagnia di San Paolo, CSPTO-201909880001. **IMATI principal investigator**

2013-2015 **ADDITIONAL INFORMATION**

INTER-CH: Innovative Interfaces for the Communication of Ligurian Cultural Heritage. Funded by the programme European Social Fund Liguria region 2014-2020, **Project coordinator**

Serious games for content consumption and learning of educational, cultural, and environmental themes in edutainment structures. Funded by PO CRO European Social Fund Liguria Region 2007-2013. **Project coordinator**

Participation and responsibility in projects (selection)

PNRR RAISE Spoke 2 (Project leader) (2022-2025), PNRR RAISE Spoke 1 (2022-2025), EU H2020 GRAVITATE (WP leader) (2015-2018), Cultural Heritage: Modelling the challenge to visitor flow in specific historic Buildings, Bilateral project CNR/RSE 20192020 (Scotland) (2019-2021); FAR TEDIG: Technologies for Ultrasound Diagnostics, Intervention and Patient Management” (2015-2017); PAR FAS MEDIARE: New Diagnostic Imaging Methodologies for Rheumatic Diseases (2014-2015); MultiScale Human: Multi-scale Biological Modalities for Physiological Human Articulation, EU Marie Curie Research Training Network (2011-2015); INTEROMICS: Development of an integrated platform for the application of “omics” sciences to the definition of diagnostic, predictive, and theranostic biomarkers and profiles. Flagship Project (2012-2014); EU NoE GALA: Game and Learning Alliance (2010-2014); EU CA FOCUS K3D (Task leader) (2008-2010), EU NoE AIM@SHAPE (2004-2007)

- Publications (selection) [J1] M. Carmeliti, C.E. Catalano, CRMrp: An ontology to support the digital documentation of the conservation and restoration practice, *Journal of Cultural Heritage*, Volume 73, May–June 2025, Pages 443-453
- [J2] S. Giancani, R. Albertoni, C. E. Catalano, Quality of word and concept embeddings in targetted biomedical domains, *Heliyon*, Volume 9, Issue 6, 2023

According to law 679/2016 of the Regulation of the European Parliament of 27th April 2016, I hereby express my consent to process and use my data provided in this CV
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- C.E. Catalano, V. Vassallo, S. Hermon, M. Spagnuolo (2020), Representing quantitative documentation of 3D cultural heritage artefacts with CIDOC CRMdig, *International Journal on Digital Libraries*, <https://doi.org/10.1007/s00799-020-00287-3>
- [J3] M. Mortara, C.E. Catalano (2018), 3D virtual environments as effective learning contexts for cultural heritage, *Italian Journal of Educational Technology*, Vol. 26, nr.2, 2018, DOI: <http://dx.doi.org/10.17471/2499-4324/1026>
- [J4] A. Agibetov, E. Jimenez-Ruiz, M. Ondresik, A. Solimando, I. Banerjee, G. Guerrini, C.E. Catalano, J.M. Oliveira, G. Patane, R.L Reis, and M. Spagnuolo (2018), Supporting shared hypothesis testing in the biomedical domain, *Journal of Biomedical Semantics* 2018, Vol. 9:9, pp. 1-22, DOI: 10.1186/s13326-018-0177-x
- [J5] I. Banerjee, A. Agibetov, C.E. Catalano, G. Patanè, M. Spagnuolo (2016), Semanticsdriven annotation of patient-specific 3D data: a step to assist diagnosis and treatment of rheumatoid arthritis, *The visual computer*, Vol. 32, Issue 10, 2016, pp. 1337–1349. [J6] I. Banerjee, C.E. Catalano, G. Patane', M. Spagnuolo (2016), Semantic annotation of 3D anatomical models to support diagnosis and follow-up analysis of musculoskeletal pathologies, *International journal of computer assisted radiology and surgery*, Vol. 11, Issue 5, 2016, pp. 707-720.
- [J7] M. Mortara, C.E. Catalano, F. Bellotti, G. Fiucci, M. Houry-Panchetti, P. Petridis (2014), Learning cultural heritage by serious games, *Journal of cultural heritage*, Vol. 15, Issue 3, 2014, pp. 318–325.
- [J8] C.E. Catalano, A.M. Luccini, M. Mortara (2014), Best practices for an effective design and evaluation of serious games, *International Journal of Serious Games*, Vol.1, N. 1, 2014
- [J9] S. Decherchi, J. Colmenares, C.E. Catalano, M. Spagnuolo, E. Alexov, W. Rocchia (2013), Between algorithm and model: different Molecular Surface definitions for the Poisson-Boltzmann based electrostatic characterization of biomolecules in solution, *Communications in computational physics*, Vol. 13, Issue 1, 2013, pp. 61–89.
- [J10] C.E. Catalano, M. Mortara, M. Spagnuolo, B. Falcidieno (2011), Semantics and 3D media: Current issues and perspectives, *Computers & graphics*, Vol. 35, Issue 4, 2011, pp. 869-877.
- [C1] M. Veggi, C.E. Catalano, S. Pescarin, Sketching Interactive Experiences: Can Cocreation with Artificial Generative Systems Enhance the Communication of Cultural Heritage?, *ACM/EG Expressive+Wiced 2025 symposium*, 11-12 May 2025, London, UK [C2] C.E. Catalano, E. Brunetto, M. Mortara and C. Pizzi, Challenges in the digitisation of a high-reflective artwork, *EUROGRAPHICS Workshop on Graphics and Cultural Heritage (2021)*, Bournemouth, UK, November 4-6, 2021
- [C3] C. Romanengo, E. Brunetto, S. Biasotti, C. E. Catalano, and B. Falcidieno, Recognition, modelling and interactive manipulation of motifs or symbols represented by a composition of curves, *STAG: Smart Tools and Applications in Graphics (2020)*, Online conference, DOI: 10.2312/stag20201237
- [C4] M. Mongelli, V. Orani, E. Cambiaso, I. Vaccari, A. Paglialonga, F. Braido, C.E. Catalano, Challenges and Opportunities of IoT and AI in Pneumology, *IEEE 23rd Euromicro Conference on Digital System Design (DSD)*, DSD 2020, August 26 – 28, 2020 (virtual), pp. 285 -292
- [C5] I. Banerjee, M. Paccini, E. Ferrari, C.E. Catalano, S. Biasotti, M. Spagnuolo, Featurebased Characterisation of Patient-specific 3D Anatomical Models, *Smart Tools and Applications in Graphics (STAG) 2019*, Cagliari, 14-15 Novembre 2019

[C6] C.E. Catalano, A. Repetto, M. Spagnuolo (2017), A dashboard for the analysis of tangible heritage artefacts: a case study in archaeology, EUROGRAPHICS Workshop on Graphics and Cultural Heritage, Graz, Austria, 27-29, 2017.

[C7] Repetto and C.E. Catalano (2015), A Semantic Layer for Knowledge-Based Game Design in Edutainment Applications, EAI Endorsed Transactions on Future Intelligent

Educational Environments, Vol. 15, n. 5, Proceedings of INTETAIN 2015, Torino, June 10-12, 2015.

[C8] J. Earp, C.E. Catalano, M. Mortara (2015), Investigating the Deployment of Serious Games in Secondary Education: A Pilot Study Inspired by Design-Based Research, Lecture notes in computer science, Volume 9221, International Conference on Games and Learning Alliance GALA 2014, Bucharest (Romania), 2-4 July 2014, pp. 5-15