

PERSONAL INFORMATION

Claudia Diamantini

Sex | Date of birth | Nationality Italian

WORK EXPERIENCE

-
- | | |
|------------------|--|
| (2021 - present) | Full Professor, SSD ING-INF/05 – Sistemi di Elaborazione delle Informazioni
Department of Information Engineering, Università Politecnica delle Marche |
| (2018 - present) | Vice-Dean
Faculty of Engineering, Università Politecnica delle Marche |
| (2018 - present) | Chair of the Faculty Committee for Academic Advising
Faculty of Engineering, Università Politecnica delle Marche |
| (2018 – present) | Responsible of the academic co-working laboratory Daisy
Department of Information Engineering, Università Politecnica delle Marche |
| (2015 - 2019) | Coordinator of the curriculum in Computer, Management and Automation Engineering of the PhD program in Information Engineering
Department of Information Engineering, Università Politecnica delle Marche |
| (2012 - 2018) | Chair of the Unified Council of the Bachelor's and Master's Degrees in Computer and Automation Engineering
Department of Information Engineering, Università Politecnica delle Marche |
| (2005 – present) | Coordinator of the Knowledge Discovery & Management Research Group
Department of Information Engineering, Università Politecnica delle Marche |
| (2004 - 2021) | Associate Professor, SSD ING-INF/05 – Sistemi di Elaborazione delle Informazioni
Department of Information Engineering, Università Politecnica delle Marche |
| (2004 - 2004) | IT Expert of the “Organismo di Studio, Pianificazione, Organizzazione in Tema di Privacy e Materie Correlate” (Body for Studies, Planning, Organization of Privacy and Related Subjects)
ASUR, Marche Region |
| (1999 - 2004) | Contract Professor
Università degli Studi di Ancona, and Università Politecnica delle Marche |
| (1998 - 2001) | Contract Professor
Università degli Studi di Macerata |
| (1997 - 1999) | Contract Professor
Università degli Studi di Camerino |

EDUCATION AND TRAINING

- (1996 - 1998) **Postdoctoral Research Fellow**
Istituto di Informatica, Università degli studi di Ancona
- (1991 - 1995) **PhD in Artificial Intelligent Systems**
Istituto di Informatica, Università degli studi di Ancona
- (1985 - 1990) **MSc in Computer Science. Final grade 110 cum laude**
Università degli Studi di Milano

PERSONAL SKILLS

Mother tongue Italian

Foreign language(s)

English

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Interaction	Production	
C1	C1	C1	C1	C2

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills

Excellent communication skills acquired as author of scientific articles, speaker at national and international conferences, teacher, coordinator of research and innovation projects.

Organisational / managerial skills

Excellent organisational and managerial skills acquired as coordinator of research groups (coordinator of the Knowledge Discovery & Management group responsible of the Daisy laboratory) and manager at faculty level (Vice-Dean of the Faculty of Engineering, Chair of the Faculty Committee) and department level (Chair of the Unified Council of the Bachelor's and Master's Degrees in Computer and Automation Engineering, Coordinator of the PhD curriculum in Computer, Management and Automation Engineering)

Excellent project management skills acquired as head of research units and project responsible (see project list below).

Digital skills

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Proficient user	Proficient user	Proficient user	Proficient user	Proficient user

Levels: Basic user - Independent user - Proficient user
[Digital competences - Self-assessment grid](#)

- research level experience of database management systems, business intelligence tools, advanced data analytics and data mining software, computer and network architectures, programming languages

Other skills

Project evaluation. MIUR reviewer since 2001. She has evaluated 4 projects submitted to national calls (FIR 2013, PRIN 2012, POR Calabria 2011, FIRB 2010) and has monitored the scientific and economic development of 3 projects funded by "Piano di potenziamento della rete scientifica e tecnologica nelle aree depresse - Cluster C16 Multimedialità" from 2001-2005. She signed the

Framework Cooperation Agreement with the National Science Centre, Poland as Expert Reviewer for the evaluation of a project submitted under the funding scheme NSC-SONATA BIS 2010

Technology transfer. She is co-inventor of the national patent No. 102018000009636 "Apparato di monitoraggio di operazioni di assemblaggio e programmazione", 07/10/2020.

Founding member and member of the Board of Directors of the "Club per le Tecnologie dell'Informazione e dell'Innovazione" (Club for Information and Innovation Technologies) from 2003 to 2020, promoting joint initiatives between companies and university and collaborating to the organization of over 70 events, conferences, workshops, and training courses focused on new trends, experiences and case studies in the field of information and innovation technologies.

She collaborates with public and private subjects for the development of projects and training initiatives.

ADDITIONAL INFORMATION

Publications

She has authored about 180 publications in peer-reviewed scientific journals and conferences, of which 151 are indexed by Scopus, with 804 citations and h-index 17 in the last 15 years (2007-2022).

In the following a selection of most relevant papers is reported. The complete list can be retrieved from the Institutional Research Information System (IRIS) Repository <https://iris.univpm.it/>

1. Diamantini, C., Potena, D., Storti, E. (2022) A Knowledge-Based Approach to Support Analytic Query Answering in Semantic Data Lakes. Lecture Notes in Computer Science, 13389 LNCS, pp. 179-192
2. Chiorrini, A., Diamantini, C., Mircoli, A., Potena, D. (2022) Exploiting Instance Graphs and Graph Neural Networks for Next Activity Prediction. Lecture Notes in Business Information Processing, 433 LNBIP, pp. 115-126
3. Diamantini, C., Nocera, A., Potena, D., Storti, E., Ursino, D. (2021) Querying the IoT using multiresolution contexts. IEEE Internet of Things Journal, 8 (7), pp. 6127-6139.
4. Diamantini, C., Lo Giudice, P., Potena, D., Storti, E., Ursino, D. (2021) An Approach to Extracting Topic-guided Views from the Sources of a Data Lake. Information Systems Frontiers, 23 (1), pp. 243-262
5. Chiorrini, A., Diamantini, C., Mircoli, A., Potena, D. (2022) A Preliminary Study on the Application of Reinforcement Learning for Predictive Process Monitoring. Lecture Notes in Business Information Processing, 406 LNBIP, pp. 124-135
6. Cameranesi, M., Diamantini, C., Mircoli, A., Potena, D., Storti, E. (2020). Extraction of User Daily Behavior from Home Sensors through Process Discovery. IEEE Internet of Things Journal, 7(9), pp. 8440-8450
7. Mancini, M., Mircoli, A., Potena, D., Diamantini, C., Duca, D., Toscano, G. (2020) Prediction of pellet quality through machine learning techniques and near-infrared spectroscopy. Computers and Industrial Engineering, 147
8. Antomarioni, S., Pisacane, O., Potena, D., Bevilacqua, M., Ciarapica, F.E., Diamantini, C. (2019) A Predictive Association Rule-Based Maintenance Policy to Minimize the Probability of Breakages: Application to an Oil Refinery. Springer International Journal of Advanced Manufacturing Technology, 105, pp. 3661-3675
9. Diamantini, C., Potena, D., Storti, E. (2018). Multidimensional query reformulation with measure decomposition. Elsevier Information Systems, 78, pp. 23-39
10. Genga, L., Alizadeh, M., Potena, D., Diamantini, C., Zannone, N. (2018). Discovering Anomalous Frequent Patterns from Partially Ordered Event Logs. Springer Journal of Intelligent Information Systems, 51(2), pp. 257-300
11. Diamantini, C., Freddi, A., Longhi, S., Potena, D., Storti, E. (2016). A Goal-Oriented, Ontology-Based Methodology to Support the Design of AAL Environments. Elsevier Expert Systems with Applications 64, pp. 117-131
12. Diamantini, C., Genga, L., Potena, D., Van Der Aalst, W. (2016). Building Instance Graphs for Highly Variable Processes. Elsevier Expert Systems with Applications, 59, pp. 101-118
13. Diamantini, C., Genga, L., Potena, D. (2016). Behavioral Process Mining for Unstructured Processes. Springer Journal of Intelligent Information Systems, 47(1), pp. 5-32
14. Diamantini, C., Potena, D., Storti, E. (2016). Extended Drill-Down Operator: Digging Into the Structure of Performance Indicators. Wiley Concurrency Computation, 28(15), pp. 3948-3968
15. Diamantini, C., Potena, D., Storti, E. (2016). SemPI: A Semantic Framework for the Collaborative Construction and Maintenance of a Shared Dictionary of Performance Indicators. Elsevier Future Generation Computer Systems, 54, pp. 352-365
16. C. Diamantini, D. Potena, E. Storti (2014). Collaborative Management of a Repository of KDD Processes. Inderscience International Journal of Metadata, Semantics and Ontologies, 9(4),

pp. 299-311

17. C. Diamantini, D. Potena, E. Storti (2013). A Virtual Mart for Knowledge Discovery in Databases. Springer Information Systems Frontiers, 15(3), pp. 447-463
18. C. Diamantini, L. Genga, D. Potena, E. Storti, (2013) Pattern Discovery from Innovation Processes. Proceedings of the 2013 International Conference on Collaboration Technologies and Systems, San Diego, CA, USA, May 20-24, 2013
19. C. Diamantini, D. Potena, E. Storti (2012). Mining Usage Patterns from a Repository of Scientific Workflows. Proceedings of the 27th ACM Symposium on Applied Computing, Riva del Garda, Italy, March 26-30, 2012
20. C. Diamantini, D. Potena and E. Storti (2009). Ontology-driven KDD Process Composition. Lecture Notes in Computer Science N. 5772, pp. 285-296, Springer-Verlag

Projects She has been involved in several projects, also with coordination responsibilities:

- Intelligence 5.0: dai sistemi cyber-fisici per la creazione di macchine utensili "self-aware" ad innovativi modelli industriali evoluti", MISE PON (2022-2023), *Coordinator of research unit*
- INGEGNERIA.POT, MIUR (2019-2020). *Local coordinator (with M. D'Orazio)*
- Paperless Project, YKK Mediterraneo s.p.a. (2018-2020). *Scientific responsible*
- REACT - Metodi e strumenti innovativi per il REACTIVE Product Design and Manufacturing (*Novel methods and tools for the reactive product design and manufacturing*). MIUR PON (2018-2020).
- Studio e applicazione di tecniche avanzate di analisi dei dati di traffico e di movimento pattuglie (*Study and application of advanced analysis techniques for traffic data*). Dipartimento della Pubblica Sicurezza Direzione Centrale per la Polizia Stradale, Ferroviaria, delle Comunicazioni e per i Reparti Speciali della Polizia di Stato (2017-present). *Scientific responsible*
- "AdriHealthMob", EU-IPA Adriatic Cross-Border Cooperation Programme (2014-2015)
- HICMO - "HIC Manebimus Optime", Regione Marche (2013-2015). *Coordinator of research unit*
- Marche Cloud, Regione Marche (2012-2014). *Member of the technical board*
- E-INCLUSION, POR FESR Molise 2007-2013 (2012-2015). *Scientific responsible*
- BIVEE - Business Innovation and Virtual Enterprise Environment, EU-FP7 (2011-2014). *Coordinator of research unit, responsible of the scientific advisory task*
- EASY-LIFE: Soluzione per il supporto alla fascia debole della popolazione: portatori di handicap ed anziani con disabilità (*Solutions to support the fragile segment of the population*), POR FESR Marche 2007-2013 (2011-2013). *Scientific responsible*
- IBPM: Integrated Business Process Management for SMEs, POR FESR Marche, (2008-2009). *Scientific responsible*
- Studio sulla dinamica di prezzi e tariffe (*Study on the dynamics of prices and tariffs*), Regione Marche (2006-2008). *Coordinator of research unit*
- Trattamento di serie temporali e uso di tecniche neurali per il riconoscimento di perdite di gas lungo linee di trasporto a lunga distanza (*Time series processing and use of neural network techniques for the recognition of gas leaks along long distance pipelines*), SnamProgetti (2004-2006). *Scientific responsible*
- INTEROP: Interoperability Research for Networked Enterprises Application and Software, EU-FP6 (2003-2006).
- Capabilities Dinamiche tra Organizzazione d'Impresa e Sistemi Locali di Produzione (*Dynamic capabilities between business organization and local production systems*), MIUR-PRIN (2003-2005).
- Tecniche neurali per la stima della corrosione da CO2 in linee di trasporto gas (*Neural network techniques for estimating CO2 corrosion in gas pipelines*), SnamProgetti (2002-2003). *Scientific responsible*
- INTERDATA: Metodologie e Tecnologie per la Gestione di Dati e Processi su Reti Internet e Intranet (*Methodologies and technologies for the management of data and processes over internet and intranet networks*), MURST-60% (1998-2000).

Conferences and Seminars

She has been involved in the organization of several scientific international and national conferences. In particular, she served as Program Committee Chair at the International Conference on Collaboration Technologies and Systems in two editions and as Tutorial Chair in seven editions. She was the Chair of workshops and special sessions co-located with international conferences (among

which, the Special Session on Process-aware Intelligent Environments, co-located with the 14th International Conference on Intelligent Environments). She serves as a program committee member for several international conferences.

She gave the tutorial (with. D. Potena e E. Storti) "Semantic Modelling of Performance Indicators and Metrics" to the 31st International Conference on Advanced Information Systems Engineering (CAISE 2019), Rome, Italy, June 3-7, 2019

She gave the invited tutorial (con D. Potena) "Collaborative Business Intelligence for Open Innovation Governance" to the 2015 International Conference on Collaboration Technologies and Systems (CTS 2015, Atlanta, Georgia, USA, June 1-5, 2015

She was invited speaker at the 2015 International Conference on High Performance Computing and Simulation (HPCS 2015), Amsterdam, The Netherlands, July 20-24, 2015, with the paper "ESub: Mining and Exploring Substructures in Knowledge-Intensive Processes"

Honours and awards

National Habilitation for the position of Full Professor, sector 09/H1 - Sistemi di Elaborazione delle Informazioni (2018)

Outstanding Paper Award Candidate at CTS 2016. 8 candidates over 90 papers

Outstanding Paper Award Candidate CTS 2014. 10 candidates over 98 papers

Memberships

Member of the board of directors of CNI - Consorzio Interuniversitario Nazionale per l'Informatica (2016-2018)

Co-founder and member of the board of directors of the Italian Pole of Scientific and Technological Research on Interoperability "Interop-Vlab.IT" (2008-2014)

Co-founder and member of the board of directors of ClubTI - Club per le Tecnologie dell'Informazione e dell'Innovazione (2003-2020)

ACM, senior member

IEEE, member

Courses and other teaching activities

Member of the coordinating committee of the Specialization Course in Big Data Engineering, Università Politecnica delle Marche A.A. 2017/18

She has been responsible of more than 60 courses in PhD's, master's and bachelor's degrees, at Università Politecnica delle Marche, Università di Camerino and Università di Macerata, mainly in the areas of Data Bases, Data Mining and Machine Learning, Technologies for Information Systems, Data Science, Big Data.

She has been invited lecturer at the EAPS and IPPSI Masters, Production Systems Specialty, University of Bordeaux (academic years 2015/16 and 2016/17)

Scientific Supervisor

- Tutor of 9 PhD students, 4 of which have been co-funded by private companies.
- Scientific responsible of 4 post-doctoral students
- Thesis advisor of about 100 thesis at PhD, master and bachelor level

Personal Data

Autorizzo il trattamento dei miei dati personali ai sensi del Decreto Legislativo 30 giugno 2003, n. 196 "Codice in materia di protezione dei dati personali".