

# NICOLA CAPUANO

## CURRICULUM VITAE ET STUDIORUM

### Personal Information

- Name: Nicola Capuano
- Place and date of birth: Salerno, Italy, 25 October 1974
- Nationality: Italian
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### Current Position

- **Associate Professor** at the University of Basilicata, School of Engineering.  
Teaching and research activity in Computer Engineering, teaching of Fundamentals of Computer Science for the degree courses in Mechanical and Civil Engineering, Complements of Software Engineering for the degree course in Information Engineering and Information Processing Systems for the degree course in Medicine and Surgery, research activity on Artificial Intelligence in Education, Natural Language Processing, Knowledge Representation and Deep Learning.

### Past Positions

- Dec 2019 – Oct 2022: Tenure track Assistant Professor at the University of Basilicata.
- Oct 2017 – Sep 2021: Adjunct Lecturer at the University of Salerno.
- Dec 2003 – Dec 2019: Technical Officer at the University of Salerno.
- Mar 2004 – May 2014: Research Consultant at MOMA S.p.A.
- May 1998 – Dec 2010: Researcher at the Research Centre in Pure and Applied Mathematics (CRMPA).
- Dec 1999 – Nov 2003: Research Assistant at the University of Salerno.

### Education and Qualifications

- **Master's degree with Honors in Computer Science** achieved in 1998 from the University of Salerno, with a dissertation on the Classification of Stars and Galaxies using Neural Networks.
- **Ph.D. in Computer Science and Computer Engineering** achieved in 2018 from the University of Salerno with a dissertation on Fuzzy Models for Group Decision Making and Applications to e-Learning and Recommender Systems.
- **National Scientific Qualification** as Academic Full Professor in Information Processing Systems obtained in 2021 from the Italian Ministry of Education.
- **National Scientific Qualification** as Academic Associate Professor in Computer Science (obtained in 2015) and Information Processing Systems (obtained in 2019) from the Italian Ministry of Education.
- **Project Management Professional Credential** obtained in 2005 from the Project Management Institute demonstrating competence and experience in project management processes and knowledge areas.

## Research Highlights

- **120 publications** cited 2,028 times in **Google Scholar** with h-index 24 and i10-index 51; **84 publications** cited 1,082 times in **Scopus** with h-index 18; **67 publications** cited 644 times in **ISI-WoS** with h-index 12.

## Selected Journal Papers

- N. Capuano, G. Fenza, V. Loia, C. Stanzone. Explainable Artificial Intelligence in Cybersecurity: A Survey. *IEEE Access (Q1)*, vol. 10, pp. 93575-93600, 2022.
- N. Capuano, P. Foggia, L. Greco, P. Ritrovato. A linked data application for harmonizing heterogeneous biomedical information. *Applied Sciences (Q2)*, vol. 12, n. 18, art. 9317, 2022.
- N. Capuano, S. Caballé, J. Conesa, A. Greco. Attention-based Hierarchical Recurrent Neural Networks for MOOC Forum Posts Analysis. *Journal of Ambient Intelligence and Humanized Computing (Q1)*, vol. 12, n. 11, pp. 9977-9989, 2021.
- N. Capuano, L. Greco, P. Ritrovato, M. Vento. Sentiment Analysis for Customer Relationship Management: An Incremental Learning Approach. *Applied Intelligence (Q2)*, vol. 51, n. 6, pp. 3339-3352, 2021.
- N. Capuano, S. Caballe, G. Percannella, P. Ritrovato. FOPA-MC: fuzzy multi-criteria group decision making for peer assessment. *Soft Computing (Q2)*, vol. 24, n. 23, pp. 17679-17692, 2020.
- N. Capuano, S. Caballé. Adaptive learning technologies. *AI Magazine (Q2)*, vol. 41, n. 2, pp. 96-98, 2020.
- N. Capuano, F. Chiclana, H. Fujita, E. Herrera-Viedma, V. Loia. Fuzzy Group Decision Making for Influence-Aware Recommendations. *Computers in Human Behavior (Q1)*, Elsevier, vol. 101, pp. 371-379, 2019.
- N. Capuano, D. Toti. Experimentation of a Smart Learning System for Law Based on Knowledge Discovery and Cognitive Computing. *Computers in Human Behavior (Q1)*, Elsevier, vol. 92, pp. 459-467, 2019.
- N. Capuano, F. Chiclana, H. Fujita, E. Herrera-Viedma, V. Loia. Fuzzy Rankings for Preferences Modeling in Group Decision Making. *International Journal of Intelligent Systems (Q1)*, vol. 33, n. 7, pp. 1555-1750, 2018.
- N. Capuano, F. Chiclana, H. Fujita, E. Herrera-Viedma, V. Loia. Fuzzy Group Decision Making with Incomplete Information Guided by Social Influence. *IEEE Transactions of Fuzzy Systems (Q1)*, vol. 26, n. 3, pp. 1704-1718, 2018.
- M. AL-Smadi, N. Capuano, C. Guetl. Decoupling Assessment and Serious Games to Support Guided Exploratory Learning in Smart Education, *Journal of Ambient Intelligence and Humanized Computing (Q2)*, vol. 9, n. 3, pp. 497-511, 2018.
- N. Capuano, V. Loia, F. Orciuoli. A Fuzzy Group Decision Making Model for Ordinal Peer Assessment. *IEEE Transactions on Learning Technology (Q1)*, vol. 10, n. 2, pp. 247-259, 2017.
- Capuano, A. Gaeta, G. Guarino, S. Miranda, S. Tomasiello. Enhancing Augmented Reality with Cognitive and Knowledge Perspectives: a Case Study in Museum Exhibitions. *Behaviour & Information Technology (Q1)*, vol. 35, n. 11, pp. 968-979, 2016.
- N. Capuano, G. D'Aniello, A. Gaeta, S. Miranda. A personality based adaptive approach for information systems. *Computers in Human Behavior, Elsevier (Q1)*, vol. 44, pp. 156-165, 2015.
- N. Capuano, M. Gaeta, P. Ritrovato, S. Salerno. Elicitation of Latent Learning Needs Through Learning Goals Recommendation. *Computers in Human Behavior (Q1)*, Elsevier, vol. 30, pp. 663-673, 2014.
- N. Capuano, G.R. Mangione, A. Pierri, S. Salerno. Learning Goals Recommendation for Self-Regulated Learning. *International Journal of Engineering Education (Q1)*, vol. 28, n. 6, pp. 1373-1379, 2012.
- N. Capuano, M. Gaeta, A. Marengo, S. Miranda, F. Orciuoli, P. Ritrovato. LIA: An Intelligent Advisor for e-Learning. *Interactive Learning Environments (Q2)*, Taylor & Francis, vol. 17, n. 3, pp. 221-239, 2009.
- N. Capuano, A. Gaeta, F. Orciuoli, M. Gaeta, S. Miranda, P. Ritrovato. Grid Technologies to Support B2B Collaboration. *International Journal of Knowledge and Learning (Q2)*, Inderscience Publishers, vol. 5, no. 2, pp. 107-121, 2009.

- N. Capuano, M. Gaeta, P. Ritrovato, S. Salerno. How to Integrate Technology Enhanced Learning with Business Process Management. *Journal of Knowledge Management (Q1)*, Emerald Group Publisher, vol. 12 no. 6, pp. 56-71, 2008.
- E. Sangineto, N. Capuano, M. Gaeta, A. Micarelli. Adaptive Course Generation through Learning Styles Representation (Q2). *Universal Access in the Information Society International Journal*, Springer, vol. 7, no. 1/2, pp. 1-23, 2008.
- S. Andreon, G. Gargiulo, G. Longo, R. Tagliaferri, N. Capuano. Wide Field Imaging, Application of Neural Networks to Object Detection and Star/Galaxy Classification. *Monthly Notices of the Royal Astronomical Society (Q1)*, Wiley, vol. 319, no. 3, pp. 700-716, 2000.
- R. Tagliaferri, N. Capuano, G. Gargiulo. Automated Labeling for Unsupervised Neural Networks: a Hierarchical Approach. *IEEE transaction on Neural Networks (Q1)*, IEEE, vol. 10, no. 1, pp. 199-203, 1999.

### **Selected Editorial Activities**

- **Associate Editor** of the *Journal of Ambient Intelligence and Humanized Computing*, Springer Nature.
- **Associate Editor** of the journal: *Frontiers in Artificial Intelligence*, Frontiers Media.
- **Editorial Advisory Board Member** of the journal: *Advances in Computational Intelligence*, Springer Nature.
- **Executive Committee Member** of the Learning Ideas Conference: *Innovations in Learning and Technology for the Workplace and Higher Education*.
- **Editorial Board Member** of the *Journal of Universal Computer Science*, JUCS Consortium.
- **Guest Editor** of the Article Collection “Technology Enhanced Learning or Learning driven by Technology?” for the *International Journal of Educational Technology in Higher Education*, Springer Nature, 2019
- **Guest Editor** of vol. 10, n. 7 (2015) and vol. 11, n. 7 (2016) for the *International Journal of Emerging Technologies in Learning*, International Association of Online Engineering.
- **Editor** of the *Learning Grid Handbook: Concepts, Technologies, and Applications*, IOS Press, 2008.
- **Program Chair** of the *International Workshop on Adaptive Learning via Interactive, Collaborative and Emotional approaches* (10 editions, from 2011 to 2021).
- **Program Committee Member** and **Track Program Chair** of several international conferences.

### **Selected Research Projects**

- Coordinator of the Research Project “Diogene: A Training Web Broker for ICT Professionals” co-financed by the European Commission on the IST priority of FP5 (IST-2001-3.2.1, ref. 33358).
- Coordinator of the Research Project “InTraServ: Intelligent Training Service for Management Training in SMEs” co-financed by the European Commission on the IST priority of FP5 (IST-2000-3.2.3, ref. 29377).
- Responsible of the Research Line “Intelligent Functionality for Learning” of the Centre of Excellence “Methods and Systems for Learning and Knowledge” funded by the Italian Ministry of Education and Research.
- Coordinator of the Special Interest Group on “Learning Grid” of the Network of Excellence “Kaleidoscope: Concepts and Methods for Exploring the Future of e- Learning with Digital Technologies” co-financed by the European Commission on the IST priority of FP6 (IST-2002-3.1.12, ref. 507838).
- Scientific Supervisor for the Research Centre in Pure and Applied Mathematics (CRMPA) of the research project “GeCoSan: Knowledge Management in Healthcare” funded by the Italian Ministry of Education and Research.
- Scientific Responsible for the CRMPA of the research project “m-Learning: Mobile Communications Technologies for Young Adults Learning and Skills Development” co-financed by the European Commission on the priority IST of FP5 (IST-2000-3.2.2, ref. 25270).

- Project Manager for the CRMPA of the research project “M&S-SW: Methods and Tools for Software Development, Training and Applications” co-financed by the Italian Ministry of Education and Research.
- Responsible for Research and Technology for the research project ALICE “Adaptive Learning via Intuitive, Interactive, Collaborative and Emotional systems”, co-financed by the European Commission on the ICT priority of FP7 (ICT-04.02.2009, ref. 257639).

### **Selected Teaching Activities**

- Since 2021: member of the teaching board of the PhD course in Innovation Sciences for Defense and Security of the Higher University School of Defense, Italy
- Since 2021: teacher of Complements of Software Engineering for the degree course in Information Engineering at the University of Basilicata, Italy.
- Since 2021: teacher of Information Processing Systems for the degree course in Medicine and Surgery at the University of Basilicata, Italy.
- Since 2020: teacher of Fundamentals of Computer Science for the degree courses in Mechanical and Civil Engineering at the University of Basilicata, Italy.
- From 2020 to 2021: teacher of Laboratory of Computer Science for the degree course in Techniques for Building and Land Management at the University of Basilicata, Italy.
- From 2018 to 2021: teacher of Algorithms and Data Structures for the degree course in Computer Engineering at the University of Salerno, Italy.
- From 2017 to 2018: teacher of Laboratory of Computer Science for the degree course in Political and Social Science at the University of Salerno.
- From 2017 to 2018: teacher of Fundamentals of Computer Science for the degree course in Economics and Management at the University of Salerno.
- From 2013 to 2014: coordinator of the postgraduate training course “Modern” for the training of experts on methodologies and technologies for Enterprise 2.0 organized by the Centre of Excellence in Methods and Systems for Competitive Enterprises at the University of Salerno.
- In 2009: teacher of e-Learning Environments and Methods in the postgraduate training course “e-Learning Project Manager” organized by University of Salerno.
- Supervisor of degree theses in computer science and computer engineering.

### **Awards and Invited Talks**

- Best Workshop Paper Award at the 12<sup>th</sup> International Conference on P2P, Parallel, GRID, Cloud and Internet Computing, Barcelona, Spain, 2017.
- Second Best Paper Award at the World Summit on the Knowledge Society, Athens, Greece, 2008.
- Keynote Speaker at the 6<sup>th</sup> International Conference on Complex, Intelligent and Software Intensive, Systems, Palermo, Italy, 2012

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