

CURRICULUM VITÆ ET STUDIORUM
ELEONORA IOTTI

Last update on May 13, 2022

Current Position

Junior Researcher (SSD: INF/01) from 31-12-2021,
on a project entitled “*Machine learning to substitute LLDPE plastic film with Kraft paper in automatic pallet wrapping,*” led by the Department of Mathematical, Physical and Computer Sciences of the University of Parma and ACMI Spa.

Previous Positions

Post-doctoral Researcher (SSD: INF/01) from 01-03-2021 to 30-12-2021,
on a project entitled “*Ideation, analysis, design and implementation of software components for educational videogames to support scholastic learning processes,*” led by the Future Technology Lab of the University of Parma.

Post-doctoral Researcher (SSD: INF/01) from 01-02-2020 to 31-01-2021,
on a project entitled “*Making use of archives: technologies to support narrations of images, projects, and of their diverse comprehension and experience modalities,*” led by the Department of Humanities, Social Science and Cultural Industries of the University of Parma.

Post-doctoral Researcher (SSD: ING-INF/05), from 16-01-2018 to 15-01-2020,
on a project entitled “*Development of system for the automatic recognition of image features of dresses,*” led by the Department of Engineering and Architecture of the University of Parma.

Education

PhD in Information Technologies bestowed on 02-03-2018,
by the Department of Engineering and Architecture of the University of Parma.
Thesis: “*An Agent-Oriented Programming Language for JADE Multi-Agent Systems.*”

Master Degree in Mathematics bestowed on 26-09-2014,
by the University of Parma, with final grade 110/110 cum laude.

Bachelor Degree in Mathematics and Computer Science bestowed on 13-12-2011,
by the University of Parma, with final grade 101/110.

Attended PhD Schools

International Computer Vision Summer School (ICVSS), July 2018, Ragusa. One week summer school (30 hours).

European Agent Systems Summer School (EASSS), July 2016, Catania. One week summer school (23 hours).

Mini-school of the Workshop “From Objects to Agents” (WOA). Editions: June 2015 (Napoli), July 2016 (Catania), June 2017 (Scilla, Reggio Calabria), June 2019 (Parma), September 2021 (Bologna). Each mini-school lasted 4 hours.

Teaching Activities

Lecturer of “Elements of Logic and Discrete Structures” A.Y. 2022–2023 (6 CFU, 48 hours), taking place during the I year of the Computer Science degree, under the Department of Mathematical, Physical and Computer Sciences of the University of Parma.

Lecturer of “Foundations of Artificial Intelligence” A.Y. 2021–2022 and 2022–2023 (6 CFU, 48 hours), taking place during the I year of the Master Degree in Computer Science, under the Department of Mathematical, Physical and Computer Sciences of the University of Parma.

Lecturer of “Foundations of Computer Science” A.Y. 2020–2021 (6 CFU, 30 hours), taking place during the I year of the Communication and Contemporary Media for the Creative Industries degree, under the Department of Humanities, Social Science and Cultural Industries of the University of Parma.

Member of the Examination Board during A.Y. 2019–2020 and 2020–2021, for the class *Foundations of Computer Science* of the Communication and Contemporary Media for the Creative Industries degree of the University of Parma.

Lecturer of “Mathematics Remedial Course” A.Y. 2015–2016 and 2016–2017 (25 hours each), for Computer Science degree students with additional learning requirements, under the Department of Mathematical, Physical and Computer Sciences of the University of Parma.

Teacher of the Orientation Course “Ragazze Digitali”, from 20-06-2022 to 08-07-2022 (30 hours), under the Department of Mathematical, Physical and Computer Sciences of the University of Parma.

Teaching Assistant as *practice tests lecturer* for the following classes:

- Calculus I, A.Y. 2011–2012, 2012–2013 and 2013–2014 (25 hours each), taking place during the I year of the Mathematics degree and Physics degree under the Department of Mathematical, Physical and Computer Sciences of the University of Parma,
- Algebra and Geometry, A.Y. 2013–2014 (25 hours each), taking place during the I year of Architecture degree under the Department of Engineering and Architecture of the University of Parma.

Teaching Assistant as *laboratory assistant* for the following classes:

- Foundations of Computer Programming, A.Y. 2016–2017 (25 hours each), taking place during the I year of the Computer Science degree under the Department of Mathematical, Physical and Computer Sciences of the University of Parma,

– Foundations of Computer Science, A.Y. 2015–2016 and 2016–2017 (55 hours each), taking place during the I year of the Computer, Electronic and Communication Engineering degree under the Department of Engineering and Architecture of the University of Parma.

Laboratory Assistant of the Computer Programming Stage, A.Y. 2016–2017, for secondary school students, under the Department of Engineering and Architecture of the University of Parma.

Teacher of the Orientation Course “*Meet the University of Parma*”, from 10-10-2016 to 19-10-2016 (8 hours), consisting in two Machine Learning lessons and taking place at the Istituto di Istruzione Superiore (IIS) Blaise Pascal of Reggio Emilia, organized by the Department of Engineering and Architecture of the University of Parma.

Teacher of the Scientific Degrees Plan (PLS) Laboratories

– “*How Google Works*”, from February to May, 2017 (20 hours), taking place at the Istituto Tecnico Industriale Statale (ITIS) Leonardo da Vinci of Parma,
– “*Mathematics and Elections*”, from January to June, 2014 (20 hours), taking place at the Istituto di Istruzione Superiore (IIS) Blaise Pascal of Reggio Emilia,
both organized by the Department of Mathematical, Physical and Computer Sciences of the University of Parma.

Teacher of the Business Training Course “Specialistic programming languages to support technological innovation in Aria-net: HTML 5”, from 15-06-2015 to 16-06-2015 (16 hours), taking place at Aria-net Srl, Via Gilino 9, Milano.

Other Academic Responsibilities

Assistant Thesis Supervisor of the following students:

- S. Martorana, Bachelor Degree in Computer, Electronic and Communication Engineering, under the Department of Engineering and Architecture of the University of Parma, A.Y. 2018–2019,
- L. Corvacchiola, Master Degree in Mathematics, under the Department of Mathematical, Physical and Computer Sciences of the University of Parma, A.Y. 2015–2016,
- A. Segalini, Bachelor Degree in Computer Science, under the Department of Mathematical, Physical and Computer Sciences of the University of Parma, A.Y. 2014–2015,
- M. Braglia, Bachelor Degree in Computer Science, under the Department of Mathematical, Physical and Computer Sciences of the University of Parma, A.Y. 2013–2014.

Assistant Internship Supervisor

- from 2022, under the Department of Mathematical, Physical and Computer Sciences of the University of Parma,
- from 2020 to 2021, under the Department of Humanities, Social Science and Cultural Industries of the University of Parma,
- from 2014 to 2019, under the Department of Engineering and Architecture.

Research Activities

Participation in Funded Academic Projects

Project “*Machine learning to substitute LLDPE plastic film with Kraft paper in automatic pallet wrapping,*” funded with DM 10.08.2021 n.1062 by Ministero dell’Università e della Ricerca (MUR) under the program Programma Operativo Nazionale (PON) “Ricerca e Innovazione” 2014-2020–Azione Green, with referee Prof. Alessandro Dal Palù.

Project “*BIOCHAIN-AI: a platform for securely sharing and analysing microbiological data,*” funded by University of Parma, Bando di Ateneo 2021 per la Ricerca, Azione B, with referee Dr. Vincenzo Bonnici.

European Project “*MED4Youth*” funded by European Union under the program PRIMA, with referee Prof. Federico Bergenti. Project partners: Agency for Business Competitiveness (ACCIÓ, Catalonia), Centro para el Desarrollo Tecnológico Industrial (CDTI, Spain), Israel Innovation Agency, Ministero dell’istruzione, dell’Università e della Ricerca (MIUR, Italy), Scientific Research Support Fund (SRSF, Jordan), and Foundation for Science and Technology (FCT, Portugal).

Project “*Ideation, analysis, design and implementation of software components for educational videogames to support scholastic learning processes,*” POR-FESR 2014-2020 – COMPRENDO “*Componenti tecnologiche PeR l’inclusioneE Nella Didattica e nella fOrmazione*” funded with DGR 986/2018 by Regione Emilia-Romagna, with referee Prof. Federico Bergenti.

Project “*Making use of archives: technologies to support narrations of images, projects, and of their diverse comprehension and experience modalities,*” POR FSE 2014/2020 – Obiettivo Tematico 10 funded with DGR 589/2019 by Regione Emilia-Romagna under the program Alte Competenze, with referees Prof. Francesca Zanella and Dr. Stefania Monica.

Project “*Development of system for the automatic recognition of image features of dresses,*” funded by Adidas AG™, with referee Prof. Andrea Prati.

Participation in Research Groups

AHEAD Lab: Computer Science Lab @ UniPR (www.ahead-lab.unipr.it) of the Department of Mathematical, Physical and Computer Sciences of the University of Parma from 31-12-2021.

AI Lab: Artificial Intelligence Laboratory (www.aialab.unipr.it) of the Department of Mathematical, Physical and Computer Sciences of the University of Parma during the PhD and from 01-02-2020 to 30-12-2021.

IMP Lab: Image Processing, Mobile vision and Pattern recognition Laboratory (implab.ce.unipr.it) of the Department of Engineering and Architecture of the University of Parma, from 16-01-2018 to 15-01-2020.

SoWIDE: Social Web, Intelligent and Distributed systems Engineering (sowide.unipr.it) of the Department of Engineering and Architecture of the University of Parma, during the PhD.

National and International Associations Memberships

Member of the Gruppo Nazionale per il Calcolo Scientifico (GNCS).

Member of the Gruppo Utenti e ricercatori di Logic Programming (GULP).

Member of the Institute for Systems and Technologies of Information, Control and Communication (INSTICC).

National and International Conferences Participation

Participation as Lecturer:

- I-1) *First Workshop on Agents and Robots for reliable Engineered Autonomy* (AREA), September 2020, DigitalECAI. Presenting the work [I3].
- I-2) *International Conference on Agents and Artificial Intelligence* (ICAART), January 2018, Santa Cruz, Portugal. Presenting the work [I5].
- I-3) *Workshop on Knowledge Discovery on the Web* (KDWeb), September 2017, Cagliari. Presenting the work [I6].
- I-4) *International Conference on Agents and Artificial Intelligence* (ICAART), February 2017, Porto, Portugal. Presenting the work [I8].
- I-5) *International Conference on Circuits, Systems, Communications and Computers* (CSCC), July 2016, Corfu Island, Greece. Presenting the work [I12].
- I-6) *Conference on Practical Applications of Agents and Multi-Agent Systems* (PAAMS), June 2016, Sevilla, Spain. Presenting the work [I11].
- N-1) *Workshop from Objects to Agents* (WOA), September 2021, Bologna. Presenting the work [N1].
- N-2) *Workshop from Objects to Agents* (WOA), June 2017, Scilla (Reggio Calabria). Presenting the work [N2].
- N-3) *Workshop from Objects to Agents* (WOA), July 2016, Catania. Presenting the work [N3].
- N-4) *Workshop from Objects to Agents* (WOA), June 2015, Napoli. Presenting the work [N5].

Participation without talks:

- *Convegno Italiano di Logica Computazionale* (CILC), September 2021, Parma.
- *Convegno Italiano di Logica Computazionale* (CILC), October 2020, Cosenza (virtual event).
- *Workshop from Objects to Agents* (WOA), September 2020, Bologna (virtual event).
- *Workshop from Objects to Agents* (WOA), June 2019, Parma.
- *Workshop on Mathematics for Computer Vision*, February 2018, Trento.

Scientific Awards

Award of Scientific Excellence for the paper “*Core Features of an Agent-Oriented Domain-Specific Language for JADE Agents*” conferred by the 14th International Conference on Practical Applications of Agents and Multi-Agent Systems (PAAMS 2016).

Other Activities

Member of the Program Committee: *CILC 2021* (Convegno Italiano di Logica Computazionale), *WETICE 2021* (IEEE International Conference on Enabling Technologies: Infrastructure for Collaborative Enterprises).

Reviewer for International Journals: *The Visual Computer Journal* (Springer Verlag), *Computer Journal* (Oxford University Press), *ISPRS International Journal of Geo-Information*, *MDPI Computers*, *MDPI Electronics*, *MDPI Applied Sciences*.

Collaboration in the organization of the local (Parma) and national (Cesenatico) *Mathematical Olympics*, from 2013.

Publications

Journal Articles

- [J1] L. Donati, E. Iotti, A. Prati (2021). A Real-Time Approach for Automatic Food Quality Assessment Based on Shape Analysis. *International Journal of Computational Intelligence and Applications*, 2150019, ISSN: 1469-0268, doi: 10.1142/S146902682150019X
- [J2] T. Fontanini, E. Iotti, L. Donati, A. Prati (2020). MetalGAN: Multi-Domain Label-Less Image Synthesis Using cGANs and Meta-Learning. *Neural Networks*, vol. 131, pp. 185–200, doi: 10.1016/j.neunet.2020.07.031
- [J3] L. Donati, E. Iotti, G. Mordonini, A. Prati (2019). Fashion Product Classification through Deep Learning and Computer Vision. *Applied Sciences*, vol. 9, pp. 1385–1406, ISSN: 2076-3417, doi: 10.3390/app9071385
- [J4] F. Bergenti, E. Iotti, S. Monica, A. Poggi (2017). Agent-oriented model-driven development for JADE with the JADEL programming language. *Computer Languages, Systems and Structures*, vol. 50, pp. 142–158, ISSN: 1477-8424, doi: 10.1016/j.cl.2017.06.001
- [J5] F. Bergenti, E. Iotti, A. Poggi (2015). An outline of the use of transition systems to formalize JADE agents and multi-agent systems. *Intelligenza Artificiale*, vol. 9, pp. 149–161, ISSN: 1724-8035, doi: 10.3233/IA-150085

International Conferences Articles

- [I1] G. Petrosino, E. Iotti, S. Monica, F. Bergenti (2022). A Description of the Jadescript Type System. In: Proceedings of the 3rd International Conference on Distributed Artificial Intelligence (DAI 2021). Lecture Notes in Computer Science, pp. 206–220, Springer, Cham, ISBN: 978-3-030-94662-3, doi: 10.1007/978-3-030-94662-3_13, Shanghai, China, 2022
- [I2] E. Iotti, G. Petrosino, S. Monica, F. Bergenti (2020). Two Agent-Oriented Programming Approaches Checked Against a Coordination Problem. In: Proceedings of the 17th International Symposium on Distributed Computing and Artificial Intelligence (DCAI 2020). Advances in Intelligent Systems and Computing, vol. 1237, pp. 60–70, Springer, Cham, ISBN: 978-3-030-53035-8, doi: 10.1007/978-3-030-53036-5_7, L’Aquila, Italy, 2020
- [I3] E. Iotti, G. Petrosino, S. Monica, F. Bergenti (2020). Exploratory Experiments on Programming Autonomous Robots in Jadescript. In: Proceedings of the 1st Workshop on Agents and Robots

for reliable Engineered Autonomy (AREA 2020). *Electronic Proceedings in Theoretical Computer Science (EPTCS)*, vol. 319, pp. 55–67, ISSN: 2075-2180, doi: 10.4204/EPTCS.319, Virtual event, 2020

- [I4] T. Fontanini, E. Iotti, A. Prati (2019). MetalGAN: a Cluster-based Adaptive Training for Few-Shot Adversarial Colorization. In: *Proceedings of the 20th International Conference on Image Analysis and Processing (ICIAP 2019)*. *Lecture Notes in Computer Science*, pp. 280–291, Springer, Cham, ISBN: 978-3-030-30642-7, ISSN: 1611-3349, Trento, Italy, 2019
- [I5] E. Iotti, F. Bergenti, A. Poggi (2018). An illustrative example of the JADEL programming language. In: *Proceedings of the 10th International Conference on Agents and Artificial Intelligence (ICAART 2018)*, vol. 1, pp. 282–289, Setúbal:Scitepress, ISBN: 9789897582752, doi: 10.5220/0006659402820289, Madeira, Portugal, 2018
- [I6] L. Corvacchiola, E. Iotti, M. Tomaiuolo (2017). Estimating the spreading of viral threads on twitter. In: *Proceedings of the 3rd International Workshop on Knowledge Discovery on the Web (KDWeb 2017)*. *CEUR WORKSHOP PROCEEDINGS*, vol. 1959, ISSN: 1613-0073, Cagliari, Italy, 2017
- [I7] F. Bergenti, E. Iotti, S. Monica, A. Poggi (2018). A Quantitative Assessment of the JADEL Programming Language. In: *ICAART Revised Selected Papers, Lecture Notes in Artificial Intelligence*, vol. 10839, pp. 157–178, Cham:Springer Verlag, ISBN: 978-331993580-5, ISSN: 0302-9743, doi: 10.1007/978-3-319-93581-2_9
- [I8] F. Bergenti, E. Iotti, S. Monica, A. Poggi (2017). A Comparison Between Asynchronous Backtracking Pseudocode and its JADEL Implementation. In: *Proceedings of the 9th International Conference on Agents and Artificial Intelligence, (ICAART 2017)*, pp. 250–258, SciTePress, ISBN: 9789897582202, doi: 10.5220/0006205902500258, Porto, Portugal, 2017
- [I9] G. Angiani, L. Ferrari, T. Fontanini, P. Fornacciarì, E. Iotti, F. Magliani, S. Manicardi (2016). A comparison between preprocessing techniques for sentiment analysis in Twitter. In: *Proceedings of the 2nd International Workshop on Knowledge Discovery on the Web (KDWeb 2016)*. *CEUR WORKSHOP PROCEEDINGS*, vol. 1748, CEUR-WS, ISSN: 1613-0073, Cagliari, Italy, 2016
- [I10] F. Bergenti, E. Iotti, S. Monica, A. Poggi (2016). Interaction protocols in the JADEL programming language. In: *Proceedings of the 6th International Workshop on Programming Based on Actors, Agents, and Decentralized Control (AGERE!) at ACM SIGPLAN Conference on Systems, Programming, Languages and Applications: Software for Humanity (SPLASH)*. pp. 11–20, New York, NY, USA:ACM, ISBN: 9781450346399, doi: 10.1145/3001886.3001888, Amsterdam, Netherlands, 2016
- [I11] F. Bergenti, E. Iotti, A. Poggi (2016). Core features of an agent-oriented domain-specific language for JADE agents. In: *Trends in Practical Applications of Scalable Multi-Agent Systems, the PAAMS Collection. Advances in Intelligent Systems and Computing*, vol. 473, pp. 213–224, Springer Verlag, ISBN: 9783319401584, ISSN: 2194-5357, doi: 10.1007/978-3-319-40159-1_18, Sevilla, Spain, 2016
- [I12] F. Bergenti, E. Iotti, A. Poggi, M. Tomaiuolo (2016). Concurrent and Distributed Applications with ActoDeS. *MATEC WEB OF CONFERENCES*, vol. 76, ISSN: 2261-236X, doi: 10.1051/matecconf/20167604043, Corfu Island, Greece, 2016

National Conferences Articles

- [N1] G. Petrosino, E. Iotti, S. Monica, F. Bergenti (2021). Prototypes of Productivity Tools for the Jadescript Programming Language. In: *Proceedings of the 22nd Workshop “From Objects to Agents” (WOA 2021)*. *CEUR WORKSHOP PROCEEDINGS*, vol. 2963, pp. 14–28, Aachen:RWTH Aachen University, ISSN: 1613-0073, Bologna, 2021

- [N2] F. Bergenti, E. Iotti, S. Monica, A. Poggi (2017). Overview of a formal semantics for the JADEL programming language. In: Proceedings of the 18th Workshop “From Objects to Agents” (WOA 2017). CEUR WORKSHOP PROCEEDINGS, vol. 1867, pp. 55–60, Aachen:RWTH Aachen University, ISSN: 1613-0073, Scilla, 2017
- [N3] F. Bergenti, E. Iotti, S. Monica, A. Poggi (2016). A case study of the JADEL programming language. In: Proceedings of the 17th Workshop “From Objects to Agents” (WOA 2016). CEUR WORKSHOP PROCEEDINGS, vol. 1664, pp. 85–90, AACHEN:RWTH Aachen University, ISSN: 1613-0073, Catania, 2016
- [N4] E. Iotti, A. Poggi, M. Tomaiuolo (2016). Agent based P2P Social Networks Modeling. In: Proceedings of the 17th Workshop “From Objects to Agents” (WOA 2016). CEUR WORKSHOP PROCEEDINGS, vol. 1664, pp. 74–78, CEUR, ISSN: 1613-0073, Catania, 2016
- [N5] F. Bergenti, E. Iotti, A. Poggi (2015). Outline of a Formalization of JADE Multi-Agent Systems. In: Proceedings of the 16th Workshop “From Objects to Agents” (WOA 2015). CEUR WORKSHOP PROCEEDINGS, vol. 1382, pp. 123–128, AACHEN:RWTH Aachen University, ISSN: 1613-0073, Napoli, 2015

Book Chapters

- [B1] L. Donati, E. Iotti, A. Prati (2019). Computer Vision for Supporting Fashion Creative Processes. In: Recent Advances in Computer Vision: Theories and Applications. Studies in Computational Intelligence, pp. 1–31, Springer, ISSN: 1860-9503, doi: 10.1007/978-3-030-03000-1_1
- [B2] G. Angiani, P. Fornacciari, M. Mordonini, M. Tomaiuolo, E. Iotti (2016). Models of participation in social networks. In: Social Media Performance Evaluation and Success Measurements. pp. 196–224, IGI Global, ISBN: 9781522519645, doi: 10.4018/978-1-5225-1963-8.ch010