

# ***Curriculum Vitae of Fabio Antonio Stella***

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## Personal Data and Contact Information

Fabio Antonio Stella

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## Education

- Laurea (Master) in Computer Science. University of Milano, 1991 February 19<sup>th</sup>, discussing a dissertation with title “*Un ambiente grafico per la simulazione di reti di Petri*”.
- PhD in Computational Mathematics and Operations Research, University of Milano, 1995 December 7<sup>th</sup>, discussing a dissertation with title “*Problemi di Ottimizzazione su Reti Bayesiane*”.

## Research and Academic Positions

- From 2001 November 1<sup>st</sup>: **Associate Professor** at the University of Milano-Bicocca, Milano. Italy.
- From 1997 January 8<sup>th</sup> – 2001 October 31<sup>st</sup>: **Assistant Professor** at the University of Milano-Bicocca, Milano. Italy.
- From 1994 January 7<sup>th</sup> – 1997 January 7<sup>th</sup>: **Assistant Professor** at the University of Milano, Milano. Italy.
- From 1991 January 7<sup>th</sup> – 1994 January 6<sup>th</sup>: **Employee as Data Analyst** at Consorzio Milano Ricerche, Milano, Italy.

## Visiting Positions

- From 2015 November 8<sup>th</sup> – December 9<sup>th</sup>: **Visiting Professor** (with fellowship) at the Alpen Adria University of Klagenfurt, Klagenfurt, Austria.
- From 2014 November 10<sup>th</sup> – December 10<sup>th</sup>: **Visiting Professor** (with fellowship) at the Alpen Adria University of Klagenfurt, Klagenfurt, Austria.
- From 2013 November 18<sup>th</sup> – December 20<sup>th</sup>: **Visiting Professor** (with fellowship) at SIgN (Singapore Immunology Network).
- From 2012 November 22<sup>nd</sup> – December 20<sup>th</sup>: **Visiting Professor** (with fellowship) at SIgN (Singapore Immunology Network).
- From 1995 June 1<sup>st</sup> – July 30<sup>th</sup>: **Visiting Fellow** (with fellowship) at the Queens University of Belfast, Belfast, UK.

## Research Experience

### Short Description of the Research Activities

The research activity of Fabio Antonio Stella is structured according to four major tracks:

- **Artificial Intelligence:** main contributions concern probabilistic graphical models with specific reference to Bayesian networks, continuous time Bayesian networks and continuous time Bayesian classifiers. Theoretical contributions have been given for the structural learning problem of continuous time Bayesian networks under stationary and non-stationary frameworks. Such models have been applied to biology, immunology, medicine with specific reference to acute myocardial infarction, and post stroke rehabilitation as well as to the financial sector.
- **Machine Learning, Data and Text Mining:** the main contributions concern topic models with specific reference to Latent Dirichlet Allocation for automatically extracting knowledge from natural language text. This class of probabilistic models has been the subject of theoretical developments to validate the quality of the extracted knowledge. These models have been applied to Recommendation Systems to improve recommendation explanation. Data and text mining have been used to address and solve the following problems; automatic labeling of documents, classification of cells from microarray expressions data.
- **Optimization for Artificial Neural Networks:** numerical properties of the learning problem on feed-forward neural networks has been addressed and studied. An algorithm to select the optimal structure of feed-forward neural networks has been designed and developed. This class of computational models has been applied to address and solve the following problems: computational finance, traffic flow forecasting, functional analysis of molecular dynamics, identification and signaling of adverse drug reactions.
- **On-line Optimization Algorithms:** three new on-line computational algorithms for portfolio optimization have been designed and developed. These algorithms work under different investment settings, namely with and without transaction costs. Theoretical performance has been studied, analyzed and compared to that of state of the art algorithms.

Since 1998 he leads the Models and Algorithms for Data and Text Mining Laboratory at the Department of Informatics, Systems and Communication of the University of Milan-Bicocca. In the last 20 years the Laboratory, formerly the Computational Networks and Decision Sciences Laboratory, hosted ten Italian and one Chinese PhD students, more than 250 master students and more than 200 Bachelor students.

## **Service Activities**

### **Institutional**

- Member of the Commission for Interview of the PhD Computer Science cycle XXX at the University of Milan-Bicocca. (2022).
- Member of the Committee for Research Fellowship at the University of Milan-Bicocca. (2017-2022).
- Deputy for International Relationships for the Department of Informatics, Systems and Communication of the University of Milan-Bicocca, (*“Componente della Commissione per l’Internazionalizzazione di Ateneo in rappresentanza del Dipartimento di Informatica, Sistemistica e Comunicazione”*). (from 2021)
- Deputy for International Relationships (*“Responsabile dell’Internazionalizzazione”*) for the Master Degree in Data Science. (2018-2021)
- Member of the PhD Board (*“Collegio dei Docenti di Dottorato”*) of the PhD in Computer Science. (from 2018).
- Member of the Department Board (*“Giunta di Dipartimento”*) of the Department of Informatics, Systems and Communication, University of Milan-Bicocca (2018-2021).
- Member of the Teaching Evaluation Board for Bachelor and Master Degrees in Informatics (2010-2011)
- Member of the Timetable Formation Commission (*“Commissione Orari”*) for Bachelor and Master Degrees in Informatics (2001-2003).
- Member of Commission for incoming Students (*“Commissione trasferimento studenti”*) for Bachelor and Master Degrees in Informatics (2000-2002).

### **Professional**

- Coordinator of the AlxiA Working Group on Artificial Intelligence for Healthcare (<https://aixia.it/en/gruppi/hc/>).
- Member of the B4-Bicocca Bioinformatics Biostatistics and Bioimaging Centre.
- Member of the AIRO (*Associazione Italiana di Ricerca Operativa*) association.
- Member of the AIIA (*Associazione Italiana di Intelligenza Artificiale*) association.
- Member of the CLAIRE Initiative for Artificial Intelligence
- Member of the CINI group on Artificial Intelligence

### **Evaluation of Research**

- Expert to evaluate fund applications to the Swiss National Science Foundation (2021)
- Expert to evaluate fund applications to Fondazione Cariplo for “Programma di beneficenza BANCAINTESA” (2021)
- Expert to evaluate fund applications to Fondazione Cariplo (2021)
- Expert to evaluate fund applications to Netherlands Organization for Scientific Research (NWO) (2020)

- Expert to evaluate PRIN research applications (2013)
- Expert to evaluate fund applications to the Swiss National Science Foundation (2012)
- Expert to evaluate funding applications to Fondazione Cariplo (2007-2008)
- Expert (external examiner) of 3 PhD Committees in Universities abroad.

## **Research Projects**

### European

- Principal Investigator of the research project 2022-INTERNAZ-0089 “Countering Foreign Interference”, funded by the European Institute for Security Studies (EUISS) (2023-2025). **(350K Euro)**
- Principal Investigator of the research project “MG-Permed”, funded Joint Transnational Call for Proposals for “Prevention in Personalized Medicine” (ERAPERMED2022-258 Acronimo MG-PerMed) (2023-2026). **(350K Euro) (171 applications with 17 funded)**
- Principal Investigator of the EEC research project “WISPER”. (2002).
- Principal Investigator for the EEC research project Ecozinc (2001-2002)
- Research fellow in the EEC research project IMPROD (1992-1995)

### National

- Principal Investigator of the research fellowship “Structural causal models, static and dynamic causal networks for health and medicine”, funded by RochePharma SpA. (2021/2024) **(63K Euro)**
- Principal Investigator of the Industrial/Executive Fellowship “(HIFAD) High Flow Anomaly Detection”, funded by Xnext S.r.l. (2021/2024) **(63K Euro)**
- Principal Investigator of the research fellowship “Dynamic Influence and Probabilistic Models to balance multiple, complex trade-offs in medical decision making for CKD patients”, funded by Fresenius Medical Care Italia S.p.A. (2020/2023) **(63K Euro)**
- Principal Investigator for the research unit of the University of Milan-Bicocca of the project “*p*redicting cardiOvascular diSeAses iN adolescent and young breast caNcer pAtients (ROSANNA)” led by Dr. Annalisa Trama of the Istituto Nazionale dei Tumori of Milan. Investigator Grant - IG 2020. AIRC Grant (2021-2025).
- Principal Investigator of the Industrial/Executive Fellowship "Bayesian methods for marketing analytics", funded by BrumBrum S.p.A. (2020/2023) **(63K Euro)**
- Principal Investigator of the research project “Analysis and comparison of Logistic platforms”, funded by Lottomatica S.p.A. (2021/2024) **(20K Euro)**
- Member of the research team of the project “*Development of a decision support system for the determination of postharvest disorders and diseases of apples*”. (2018-2020).
- Member of the research team of the project “*Realizzazione e implementazione di un motore di ricerca per la ricerca personalizzata sugli archivi di open data di Regione Lombardia*”. (2016-2018).

- Principal Investigator of the applied project "*Topic models per comunità etniche*" committed by INDIT360 Connexun S.r.l. (2012-2013). **(50K Euro)**
- Principal Investigator of the Industrial/Executive Fellowship "Methods, models and algorithms for traffic control", funded by Project Automation S.p.A. (2011/2014) **(63K Euro)**
- Principal Investigator of the Industrial/Executive Fellowship "Methods, models and algorithms for text mining", funded by DocFlow S.p.A. (2008/2011) **(63K Euro)**
- Principal Investigator of the project "*Business Intelligence for modeling financial data and investment*" committed by BNOVA S.r.l. (2007) **(30K Euro)**
- Principal Investigator of the National research project "*Intelligent Light Rail Train*" with Project Automation. (2003-2004)
- Principal Investigator of the research project "*Design and development of a software architecture for pricing derivatives portfolios*", committed by GATE TI Srl. (2001-2003) **(25K Euro)**
- Principal Investigator of the National research project "*BAYES*", funder by MIUR. (2001-2002)
- Principal Investigator of the research project "Analisi Computazionale dei Segnali di Mercato" funded by Rabbit Data S.r.l. (2001) **(20K Euro)**
- Principal Investigator of the research project "*Contrast Media Signal Program*" committed by Bracco Imaging S.p.A. (2001-2002) **(30K Euro)**
- Principal Investigator of the applied research project "*Computational methods for finance*" committed by Banca Intesa SpA. (1999-2001) **(60K Euro)**
- Research fellow in the research project "*P-Vision*" between University of Milan-Bicocca and Pirelli Tyres. (1996-1997)

### **Awards, Ph.D. Fellowships and Ph.D. Students**

- Awarded 10% best reviewers at NeurIPS 2022. (<https://neurips.cc/Conferences/2022/ProgramCommittee>)
- Awarded outstanding reviewers (10% best reviewers) at ICML-2022 (<https://icml.cc/Conferences/2022/Reviewers>)
- Awarded 10% best reviewers at AISTATS-2022 (<https://virtual.aistats.org/Conferences/2022/Reviewers>)
- Advisor of the fellowship of the Ph.D. Dottorato Nazionale in Artificial Intelligence of the Politecnico di Torino. Fellowship funded by MUR under the research theme "Intelligenza Artificiale subsimbolica per l'Industria 4.0". (From 01-11-2021).
- Advisor of the fellowship of the Ph.D. Program in Informatics at the University of Milan-Bicocca. Fellowship funded by Roche SpA. under the research theme "Structural causal models, static and dynamic causal networks for health and medicine". (From 01-11-2021).
- Advisor of the fellowship of the Ph.D. Program in Informatics at the University of Milan-Bicocca. Fellowship funded by Xnext S.r.l. under the research theme "(HIFAD) High Flow Anomaly Detection". (From 01-11-2021).

- Nominated Expert Reviewer for ICML 2021.
- Awarded 10% best reviewers at NeurIPS 2020.
- Best student paper award at PGM 2020 for the following paper: Bregoli, A., Scutari, M., Stella, F. (2020). "Constraint-Based Learning for Continuous-Time Bayesian Networks". PGM 2020. (<https://www.bayesfusion.com/2020/10/02/pgm-2020-bayesfusion-best-student-paper-award-winner-announced/>)
- Co-Advisor of the Ph.D. fellowship funded under the MSCA H2020 project Transys (translational systemics) on the research theme "Development of individual-specific molecular networks". (From 01-09-2020).
- Advisor of the fellowship of the Ph.D. Program in Informatics at the University of Milan-Bicocca. Fellowship funded by Fresenius Medical Care Italia S.p.A. under the research theme "Dynamic Influence and Probabilistic Models to balance multiple, complex trade-offs in medical decision making for CKD patients". (From 01-11-2020).
- Advisor of the fellowship of the Ph.D. Program in Informatics at the University of Milan-Bicocca. Industrial/Executive Fellowship funded by BrumBrum S.p.A. under the research theme "Bayesian methods for marketing analytics". (From 01-11-2020).
- AI\*IA Incoming Mobility Grants 2017 for the PhD student Manxia Liu from Radboud University (Nijmegen, The Nederland).
- Winner of the Australian Endeavour Research Fellowship honor by Marco Rossetti, 2014. Issued by the Australian Government Department of Education.
- Advisor of the Ph.D. dissertation of Marco Rossetti with title "Advancing Recommender Systems from the Algorithm, Interface and Methodological Perspective", Ph.D. Program in Informatics at the University of Milan-Bicocca. (2012-2015).
- Advisor of the Ph.D. dissertation of Simone Villa with title "Continuous Time Bayesian Networks for Reasoning and Decision Making in Finance", Ph.D. Program in Informatics at the University of Milan-Bicocca. (2012-2015).
- Advisor of the fellowship of the Ph.D. Program in Informatics at the University of Milan-Bicocca. Fellowship funded by Project Automation S.p.A. under the research theme "Methods, models and algorithms for traffic control". PhD Program in Informatics at the University of Milan-Bicocca (2011-2014). (Daniele Codecasa)
- Telecom Italia - Working Capital - 2010 Side informer: personalized information manager, by Davide Magatti.
- Advisor of the Ph.D. dissertation of Elena Gatti with title "Graphical models for continuous time inference and decision making", Ph.D. Program in Informatics at the University of Milan-Bicocca. (2008-2011).
- Advisor of the fellowship of the Ph.D. Program in Informatics at the University of Milan-Bicocca. Fellowship funded by DocFlow S.p.A. under the research theme "Methods, models and algorithms for text mining". PhD Program in Informatics at the University of Milan-Bicocca (2008-2011). (Davide Magatti)
- Advisor of the Ph.D. dissertation of Sabina Silani with title "A Statistical Approach Toward Neural Modeling", Ph.D. Program in Computational Mathematics and Operations Research. (2000-2003).

## Invited Talks

- “Towards smarter health care: can Artificial Intelligence help?”, Data4SmartHealth 2022, 21st November 2022, University of Bolzano, Bolzano.
- “Bayesian (Causal) networks for Healthcare, Medicine and Biology”, Lake Como School of Advanced Studies, International Summer School Advances in Artificial Intelligence, 19-23 September 2022, Villa del Grumello, Como.
- “Machine Learning”, I Lincei per una nuova didattica nella scuola: una rete nazionale, SCIENZA DEI DATI e INTELLIGENZA ARTIFICIALE NELLA SCUOLA SECONDARIA, Istituto Lombardo Accademia di Scienze e Lettere, Via Borgonuovo, 25 Milano, 9 Febbraio 2021.
- “La legge di Moore”, at Casa della Cultura, Milan, Via Borgogna 3, Italy, 2021 February 18th.
- “Il Machine Learning”, I Lincei per una nuova didattica nella scuola: una rete nazionale, SCIENZA DEI DATI e INTELLIGENZA ARTIFICIALE NELLA SCUOLA SECONDARIA, Istituto Lombardo Accademia di Scienze e Lettere, Via Borgonuovo, 25 Milano, 24 Febbraio 2020.
- “L'intelligenza artificiale come risorsa civile o come furto di cittadinanza”, at Casa della Cultura, Milan, Via Borgogna 3, Italy, 2019 December 3rd and 10th.
- “Continuous time Bayesian networks to infer global regulatory networks in humans”, at the EMBO WORKSHOP: Network inference in biology and disease, TIGEM, Pozzuoli, Italy, 10-13 September 2019.
- “Artificial Intelligence and Machine Learning: searching for the master algorithm”, at the International School of Physics "Enrico Fermi": Workshop 205 - Big data analytics, Villa Monastero, Varenna, 27-29 June 2019.
- “Come lavorare sui dati: la cassetta degli attrezzi del Machine Learning”, Digital Week Milano, CARIPLO FACTORY, 15-17 Marzo 2019.
- “Il Linguaggio R”, I Lincei per una nuova didattica nella scuola: una rete nazionale, L'INNOVAZIONE DIGITALE, LA CULTURA DEI DATI DIGITALI E LA SCIENZA DEI DATI, Istituto Lombardo Accademia di Scienze e Lettere, Via Borgonuovo, 25 Milano, 18 Febbraio 2019.
- “Lavorare sui dati: i linguaggi per la machine intelligence”, Lezioni Lincee di Data Science e Scienze Informatiche, Milano, Italy, 21 December 2018.
- “Specializzazione verso Interdisciplinarietà: alla ricerca del significato”, Varenna, Italy, 10 November 2018.
- “Continuous time Bayesian networks” at the 12th International Conference on Scalable Uncertainty Management, Milan, Italy, 3-5 October 2018.
- Invited to attend the CLAIRE Symposium, Brussels, Belgium, 7 September 2018.
- Invited Talk, Journal Track, at the International Joint Conference on Artificial Intelligence (IJCAI-2018), Stockholm, Sweden, 16-19 July 2018.

- Invited Seminar “Probabilistic reasoning based on ontologies”, University of Bolzano, Bolzano, Italy, 20 February 2018.
- “Modelli ed Algoritmi per far confessare i dati”, Lezioni Lincee di Scienze Informatiche, Milano, Italy, 24 February 2017.
- “Continuous Time Bayesian Networks”, April 2017, University of Bolzano, Bozen.
- “Learning structured continuous time Bayesian networks from temporal data” at the EMBO Workshop on Complex Systems in Immunology, December 2013, Singapore.
- “Data Mining for Life Sciences” in the track on “Optimization and Data Mining” 23<sup>rd</sup> European Conference on Operational Research, Bonn 2009 July 5-8.
- “Metodi Bayesiani per Text e Web Mining”, Conference Knowledge Management: ruoli, contributi e prospettive dell’Intelligenza Artificiale, University of Milan-Bicocca. 2001
- “Data, WEB & Text Mining: Il metodo del reverendo Bayes”, TXT Summit 2001, Venezia.
- “Neural Networks Profiling”, Department of Industrial Economics and Technology Management, Norwegian University of Science and Technology (Norway), 2000.
- “Bayesian Learning in Neural Networks for Implied Volatility Surface Approximation” 26th Meeting EURO Working Group on Financial Modeling - Norwegian University of Science and Technology, Trondheim (Norway), 2000.
- “Empirical Model Building in Feedforward Neural Networks”, IASI, Roma, 2000.
- “On-Line Rebalancing Portfolios”, Dipartimento di Economia, Università di Pisa, 1999.
- “Reti Neurali e Modellazione Pneumatici”, Scuola di Ricerca Operativa – Auronzo, 1999.

### **MOOCs’ Digital Certificates**

- A Crash Course in Causality: Inferring Causal Effects from Observational Data.  
<https://www.coursera.org/account/accomplishments/records/FWXTG4M4RQ6S>.
- Deep Learning,  
<https://www.coursera.org/account/accomplishments/specialization/AYEKUSYBAEVC>.
- Sequence Models,.  
<https://www.coursera.org/account/accomplishments/records/Y7QRSUH4NTE3>.
- Convolutional Neural Networks  
<https://www.coursera.org/account/accomplishments/records/GYRYSZ2QU27P>.
- Probabilistic Graphical Models.  
<https://www.coursera.org/account/accomplishments/specialization/QYNRMPZUK5TF>.
- Probabilistic Graphical Models 2: Inference.  
<https://www.coursera.org/account/accomplishments/records/AVLNPPNCTCE9>.
- Probabilistic Graphical Models 3: Learning.  
<https://www.coursera.org/account/accomplishments/records/JRH7JJKK2SRB>.

- Improving Deep Neural Networks: Hyperparameter tuning, Regularization and Optimization  
<https://www.coursera.org/account/accomplishments/records/7ZJNZ8BDTU3K>.
- Neural Networks and Deep Learning.  
<https://www.coursera.org/account/accomplishments/records/QTQJCFEZFHSB>.
- Probabilistic Graphical Models 1: Representation.  
<https://www.coursera.org/account/accomplishments/records/4GB4J7XGJKWW>.
- Structuring Machine Learning Projects.  
<https://www.coursera.org/account/accomplishments/records/EC8LNTWAX295>.
- Machine Learning.  
<https://www.coursera.org/account/accomplishments/records/WDASKAGMVX4N>.
- Neural Networks for Machine Learning,  
<https://www.coursera.org/account/accomplishments/records/F3PTQHLKT3S8>.
- Large Classroom Teaching  
<https://best.it/award/show/4279b317adf48819df61ff02bee9b63178782d8a?ln=it>.
- An Introduction to EMI (English as a Medium of Instruction) Delivered by the British Council for the Università degli Studi di Milano – Bicocca, 11<sup>th</sup>-22<sup>nd</sup> January 2021

### **Spin-off**

Co-founder of the Poli Metis Spin-off of the University of Milan-Bicocca, 2001.

## **Teaching Experience**

### **Designed and developed digital Massive Online Open Courses**

- Machine Learning (48 hours), Federica.EU, since February 2020
- Data Mining: Classification (48 hours), EduOpen, since April 2016
- Data Mining: Clustering and Association (40 hours), EduOpen, since April 2016
- Text Mining: (35 hours), EduOpen, since April 2016

### **Teaching in Universities**

2021-2022

*University of Milan-Bicocca*

- Machine Learning (1<sup>st</sup> year MSc Degree in Data Science, 6 CFU)
- Causal Networks (2<sup>nd</sup> year MSc Degree in Informatics, 5 CFU)
- Ricerca Operativa e Pianif. delle Risorse (3<sup>rd</sup> year BCh Deg. in Informatics, 8 CFU)

2020-2021

*University of Milan-Bicocca*

- Machine Learning (1<sup>st</sup> year MSc Degree in Data Science, 6 CFU)
- Data and Text Mining (2<sup>nd</sup> year MSc Degree in Informatics, 5 CFU)
- Ricerca Operativa e Pianif. delle Risorse (3<sup>rd</sup> year BCh Deg. in Informatics, 8 CFU)

2017-2020

*University of Milan-Bicocca*

- Machine Learning (1<sup>st</sup> year MSc Degree in Data Science, 6 CFU)
- Data and Text Mining (2<sup>nd</sup> year MSc Degree in Informatics, 5 CFU)
- Probabilità e Statistica per l'Informatica (2<sup>nd</sup> year BCh Degree in Informatics, 8 CFU)

2013-2017

*University of Milan-Bicocca*

- Probabilità e Statistica per l'Informatica (2<sup>nd</sup> year BCh Degree in Informatics, 8 CFU)
- Data and Text Mining (2<sup>nd</sup> year MSc Degree in Informatics, 5 CFU)

2012-2013

*University of Milan-Bicocca*

- Business Intelligence (3<sup>rd</sup> year BCh Degree in Informatics, 4 CFU)
- Probabilità e Statistica per l'Informatica (2<sup>nd</sup> year BCh Degree in Informatics, 8 CFU)
- Data and Text Mining (2<sup>nd</sup> year MSc Degree in Informatics, 4 CFU) *University of Alpen Adria Klagenfurt (Austria)*
- Business Intelligence (2<sup>nd</sup> year MSc Degree in Information Systems, 6 CFU)

2011-2012

*University of Milan-Bicocca*

- Business Intelligence (3<sup>rd</sup> year BCh Degree in Informatics, 4 CFU)
- Text Mining (2<sup>nd</sup> year MSc Degree in Informatics, 4 CFU)
- Probabilità e Statistica per l'Informatica (2<sup>nd</sup> year BCh Degree in Informatics, 6 CFU)

2009-2011

*University of Milan-Bicocca*

- Business Intelligence (3<sup>rd</sup> year BCh Degree in Informatics, 4 CFU)
- Text Mining (2<sup>nd</sup> year MSc Degree in Informatics, 4 CFU)
- Probabilità e Statistica (2<sup>nd</sup> year BCh Degree in Informatics, 6 CFU)
- Modelli per le Decisioni (1<sup>st</sup> year MSc Degree in Informatics, 3 CFU)

2007-2009

*University of Milan-Bicocca*

- Text Mining (2<sup>nd</sup> year MSc Degree in Informatics, 4 CFU)
- Bioinformatica: tecniche di base (2<sup>nd</sup> year MSc Degree in Bioinformatics, 3 CFU)
- Laboratorio di Ricerca Operativa Probabilità e Statistica (2<sup>nd</sup> year MSc Degree in Bioinformatics, 6 CFU)
- Modelli Probabilistici per le Decisioni (1<sup>st</sup> year MSc Degree in Informatics, 3 CFU)
- Probabilità e Statistica (2<sup>nd</sup> year BCh Degree in Informatics, 6 CFU)
- Business Intelligence (3<sup>rd</sup> year BCh Degree in Informatics, 4 CFU)

2003-2007

*University of Milan-Bicocca*

- Laboratorio di Ricerca Operativa Probabilità e Statistica (2<sup>nd</sup> year MSc Degree in Informatics, 4 CFU)
- Bioinformatica: tecniche di base (2<sup>nd</sup> year MSc Degree in Bioinformatics, 3 CFU)
- Business Intelligence (3<sup>rd</sup> year BCh Degree in Informatics, 4 CFU)

1998-2003

*University of Milan-Bicocca*

- Metodi Decisionali per l'Azienda (3<sup>rd</sup> year MSc Degree in Informatics, 4 CFU)
- Ricerca Operativa (3<sup>rd</sup> year MSc Degree in Informatics, 4 CFU)
- Probabilità e Statistica (2<sup>nd</sup> year MSc Degree in Informatics, 2 CFU)

1997-1998

*University of Milan*

- Ricerca Operativa e Gestione Aziendale (3<sup>rd</sup> year MSc Degree in Informatics, 2 CFU)
- Teoria e Metodi dell'Ottimizzazione (4<sup>th</sup> year MSc Degree in Informatics, 4 CFU)

1993-1997

*University of Milan*

- Ricerca Operativa e Gestione Aziendale (3<sup>rd</sup> year MSc Degree in Informatics, 2 CFU)
- Simulazione (4<sup>th</sup> year MSc Degree in Informatics, 2 CFU)
- Teoria e Metodi dell'Ottimizzazione (4<sup>th</sup> year MSc Degree in Informatics, 2 CFU)
- Ricerca Operativa I (2<sup>nd</sup> year BCh Degree in Informatics, 6 CFU)

## PhD Courses

- 2022 - **“A gentle introduction to reinforcement learning”** for the course *“Advanced Statistics: Machine Learning”*, PhD Program in Medicina dei Sistemi, University of Milan, 12 March.  
- Director of the PhD course **“Advanced Statistics: Machine Learning”** for the PhD Program in Medicina dei Sistemi, University of Milan, 8-12 March.
- 2021 - **“Causal Networks: learning and inference”**, PhD Program in Informatics, University of Milan-Bicocca.  
- **“A gentle introduction to reinforcement learning”** for the course *“Advanced Statistics: Machine Learning”*, PhD Program in Medicina dei Sistemi, University of Milan, 12 March.  
- Director of the PhD course **“Advanced Statistics: Machine Learning”** for the PhD Program in Medicina dei Sistemi, University of Milan, 8-12 March.
- 2019 **“Causal Networks: learning and inference”**, PhD Program in Informatics, University of Milan-Bicocca.
- 2015 **“Recommender Systems”**, PhD Program in Informatics, University of Milan-Bicocca.
- 2009 **“Models, Methods and Algorithms for Semi and Unstructured Data Mining”**, PhD Program in Informatics, University of Milan-Bicocca.
- 2007 **“On-line computing and Quantitative Finance”**, PhD Program in Informatics, University of Milan-Bicocca.
- 2004 **“On-line computing and Quantitative Finance”**, PhD Program in Informatics, University of Milan-Bicocca.

## Other Courses

- 2022 **“Bayesian and causal networks”**, Master Universitario MEDAL. Università di Milano-Bicocca.
- 2020-2022 **“Data Analytics”**, Master Universitario di II Livello in Information and Communication Technology (ICT) Management. Università di Milano-Bicocca.
- 2003 **“Data Warehousing e Data Mining”**, Master Universitario di I Livello in Bioinformatica. Università di Milano-Bicocca. **“Data Mining e Business Intelligence”**, Master MISF. Università di Milano-Bicocca.
- 2002 **“Data Warehousing e Data Mining”**, Master Universitario di I Livello in Bioinformatica. Università di Milano-Bicocca. **“Data Mining e Business Intelligence”**, Master Universitario in Tecnologie Informatiche per la Nuova Economia. Università di Milano-Bicocca.
- 2001 **“Data Mining”**, Master Universitario. Istituto Dalle Molle per gli Studi sull’Intelligenza Artificiale, Lugano, Swiss. **“Data Warehousing e Data Mining”**, Master Universitario di I Livello in Bioinformatica. Università di Milano-Bicocca. **“Data Mining e Business Intelligence”**, Master Universitario in Tecnologie Informatiche per la Nuova Economia. Università di Milano-Bicocca. **“Data Mining e Bioinformatica”**, Progetto FSE Azione D4. Università di Milano-Bicocca.

1999 “**Reti Computazionali**”, Corso per Esperto di Sistemi Produttivi Innovativi, Progetto MURST SPI. Università di Milano-Bicocca. “**Reti Computazionali e Decisioni in Condizioni di Incertezza**” FSE Corso Master in Metodi Informatico-Statistici per l’Analisi dei Dati. Università di Milano-Bicocca. “**Modellazione e Simulazione di Sistemi di Produzione Innovativi**”, Corso per Esperto di Sistemi Produttivi Innovativi, Progetto MURST SPI. Università di Milano-Bicocca.

1998 “**Reti Computazionali e Decisioni in Condizioni di Incertezza**” FSE Corso Master in Metodi Informatico-Statistici per l’Analisi dei Dati. Università di Milano-Bicocca.

## **Organization Activities**

### **Participation to International Committees**

He served participated PhD defense Committees and served as external reviewer for the following PhD Thesis

- External Reviewer for the PhD dissertation of Dr. Roman Nesterov, Doctoral Programme in Management Engineering. National Research University Higher School of Economics, Myasnitskaya Ulitsa, Moscow, Russian Federation, 2022.
- External Reviewer for the PhD dissertation of Dr. Keith April Guzman Araño, Doctoral Programme in Management Engineering. Politecnico di Milano, 2021.
- President of the Thesis Committee of the 32<sup>nd</sup> cycle for the PhD in Informatics at the University of Milan-Bicocca (2020 February 18th, Milan, Italy)
- External Reviewer for the PhD dissertation of Dr. Mattia Dalsass, Doctoral School in Life and Health Sciences, PhD Program in Complex System for Life Sciences. University of Turin, 2019.
- Member of the Defense Committee of the PhD Dissertation of Manxia Liu for the Degree of the Radboud University (2018 August 30th, Nijmegen, The Nederland)
- Member of the Defense Committee of the PhD Dissertation of Mauro Scanagatta for the Degree of the Faculty of Informatics of the Università della Svizzera Italiana (2018 June 4th, Lugano, Switzerland)
- External Reviewer for the PhD dissertation of Dr. Enrico Cameron, Dottorato di Ricerca in Scienze della Terra –Ciclo XII (nuova serie) Università degli Studi di Pavia. 2015.
- Member of the Defense Committee of the PhD Dissertation of Alessandro Magrini for the Degree of Applied Statistics from the Università degli Studi di Firenze (2014 February 27th, Florence, Italy)
- Member of the Defense Committee of the PhD Dissertation of Giulia Biagi for the Degree of Applied Statistics from the Università degli Studi di Firenze (2014 February 27th, Florence, Italy)
- Member of the Defense Committee of the PhD Dissertation of Lara Antonella Charawi for the Degree of Mathematics and Statistics for Computational Sciences from the Università degli Studi di Milano (2014 July 17th, Milan, Italy)
- Member of the Defense Committee of the PhD Dissertation of Adriana Novaes for the Degree of Mathematics and Statistics for Computational Sciences from the Università degli Studi di Milano (2014 July 17th, Milan, Italy)

## **Program Committees (PC) and Reviewer (R)**

2023

- International Joint Conference on Artificial Intelligence (IJCAI 2023) (Member of PC Board)
- International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2023) (PC)
- Uncertainty in Artificial Intelligence (UAI 2023) (PC)
- International Conference on Machine Learning (ICML 2023) (R) (\*\*Expert Reviewer)

2022

- International Joint Conference on Artificial Intelligence (IJCAI 2022) (Member of PC Board)
- International Conference on Learning Representations (ICLR 2022) (R)
- International Conference on Artificial Intelligence and Statistics (AISTATS 2022) (R)  
(awarded 10% best reviewers)
- International Conference on Machine Learning (ICML 2022) (R) (\*\*Expert Reviewer)  
(awarded 10% best reviewers)
- Neural Information Processing Systems (NIPS 2022) (R)  
(awarded 10% best reviewers)
- Recommendation Systems (RecSys 2022) (PC)
- Uncertainty in Artificial Intelligence (UAI 2022) (PC)
- International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR 2022) (PC)

2021

- International Joint Conference on Artificial Intelligence (IJCAI 2021) (PC)
- International Conference on Learning Representations (ICLR 2021) (R)
- International Conference on Artificial Intelligence and Statistics (AISTATS 2021) (R)
- International Conference on Machine Learning (ICML 2021) (R) (Expert Reviewer)
- Neural Information Processing Systems (NIPS 2021) (R)
- Recommendation Systems (RecSys 2021) (PC)
- Uncertainty in Artificial Intelligence (UAI 2021) (PC)
- 8th IEEE International Conference on Data Science and Advanced Analytics (DSAA 2021) (PC)

2020

- International Joint Conference on Artificial Intelligence (IJCAI 2020) (PC)
- International Conference of the Italian Association for Artificial Intelligence (AIIA) (PC)
- Workshop on Explainable Artificial Intelligence (XAI.it), (AIIA) (PC)
- Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2020) (PC)

- Probabilistic Graphical Models (PGM2020) (PC)
- Neural Information Processing Systems (NIPS 2020) (R)  
(awarded 10% best reviewers)
- Recommendation Systems (RecSys 2020) (PC)
- Uncertainty in Artificial Intelligence (UAI 2020) (PC)
- 35th ACM Symposium On Applied Computing in 2020 (SAC 2020) (PC)

#### 2019

- International Conference on Machine Learning (ICML 2019) (R)
- Neural Information Processing Systems (NIPS 2019) (R)
- Recommendation Systems (RecSys 2019) (PC)
- Uncertainty in Artificial Intelligence (UAI 2019) (PC)
- 34th ACM Symposium On Applied Computing in 2019 (SAC 2019) (PC)
- Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2019) (PC)

#### 2018

- Uncertainty in Artificial Intelligence (UAI 2018) (PC)
- Neural Information Processing Systems (NIPS 2018) (R)
- Recommendation Systems (RecSys 2018) (PC)
- Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2018) (PC)
- IEEE International Conference on Business Informatics (PC)
- IEEE/WIC/ACM International Conferences on Web Intelligence (PC)

#### 2017-2014

- Uncertainty in Artificial Intelligence (UAI 2016, UAI 2017) (PC)
- Recommendation Systems (RecSys 2017) (PC)
- Pacific-Asia Conference on Knowledge Discovery and Data Mining (PAKDD 2017) (PC)
- SIAM International Conference on Data Mining (SDM 2014) (PC)
- IEEE/WIC/ACM Web Intelligence (WIC 2014) (PC)

#### 2013-2011

- IEEE/WIC/ACM Web Intelligence (PC)
- Probabilistic Graphical Models (PGM 2012) (PC)
- Uncertainty in Artificial Intelligence 9th Bayesian Modeling Applications Workshop (PC)
- IEEE/WIC/ACM Web Intelligence (WIC 2009, WIC 2010, WIC 2011) (PC)

## **Organization Committees**

- Session Chair of the AI AND HEALTH Session at the Lake Como School of Advanced Studies, International Summer School Advances in Artificial Intelligence, 19-23 September 2022, Villa del Grumello, Como.
- Session Chair of the Workshop on AI per la Medicina e la Salute at the Ital-IA Convegno Nazionale CINI sull'Intelligenza Artificiale, February 9-11, 2022, Turin, Italy.
- Chair of the Workshop "Towards smarter health care: can artificial intelligence help?" hosted by the 20th International Conference of the Italian Association for Artificial Intelligence (AIXIA), November 29th-30th, 2021, University of Milano-Bicocca, Milan, Italy.
- Workshop Chair at the 20th International Conference of the Italian Association for Artificial Intelligence (AIXIA), December 1st-3rd, 2021, University of Milano-Bicocca, Milan, Italy.
- Director of the PhD course "Advanced Statistics: Machine Learning" for the PhD Program in Medicina dei Sistemi, University of Milan. 8-12 March 2021, 22-25 March 2022.
- Advisory Board member of the Doctoral Consortium of BIOSTEC 2021 11th February 2021.
- Doctoral Consortium Chair of the 19th International Conference of the Italian Association for Artificial Intelligence, 24-27 November 2020, Milan.
- Organization Chair of the 16th International Conference on Modeling Decisions for Artificial Intelligence, 4-6 September 2019, Milan.
- Program Committee Member of the AIRO 2000 Conference, September 2000, University of Milan-Bicocca, Milan.

## **Editorial Activities**

### **Editorial Boards**

- Current Genomics (Associate Editor, Section: Systems Modeling) [2019-2022]
- Entropy (Topical Editor) [2019-2021]
- Editorial Board Member for IEEE Intelligent Systems [2022]

### **Reviewer for International Journals**

- Artificial Intelligence in Medicine
- ACM Reviews
- Computers and Operations Research
- Current Genomics
- Data Technologies and Applications
- Entropy
- European Journal of Operation Research
- Expert Systems with Applications
- Fronteers
- IEEE Internet Computing
- Information Processing and Management
- International Journal of Artificial Intelligence Research
- International Journal of Approximate Reasoning
- International Journal of Computational Intelligence Systems
- Mathematical Reviews
- Mathematics of Biomolecules (specialty section of Frontiers in Molecular Biosciences)
- Medical & Biological Engineering & Computing
- Journal of Biomedical Informatics
- Journal of Data Mining and Knowledge Discovery
- Journal of Intelligent Information Systems
- Journal of Machine Learning Research
- Pattern Recognition Letters
- Scientific Reports
- Tumori Journal
- Quantitative Finance
- Web Intelligence and Agent Systems

### **Edited Volumes**

- Peter Lucas, Fabio Stella: Proceedings of the Workshop on Towards Smarter Health Care: Can Artificial Intelligence Help? co-located with 20th International Conference of the Italian Association for Artificial Intelligence (AIXIA2021), Anywhere, November 29th, 2021. CEUR Workshop Proceedings 3060, CEUR-WS.org 2021
- Machine Learning Accuracy and Big Data in Research on Disease and Health (2022), Current Genomics , Volume 22 - Number 4.

## List of Publications

### International Journals

1. Zanga, A., Ozkirimli, E., Stella, F. (2022). "A Survey on Causal Discovery: Theory and Practice", *International Journal of Approximate Reasoning*, 151, pp. 101-129.
2. Sottocornola, G., Baric, S., Nocker, M., Stella, F., Zanker, M. (2022). "Picture-based and conversational decision support to diagnose post-harvest apple diseases", *Expert Systems with Applications*, 189, 1.
3. Sottocornola, G., Baric, S., Nocker, M., Stella, F., Zanker, M. (2022). "DSSApple: A Hybrid Expert System for the Diagnosis of Post-Harvest Diseases of Apple", *Smart Agricultural Technology*, 3.
4. Bregoli, A., Scutari, M., Stella, F. (2021). "A constraint-based algorithm for the structural learning of continuous-time Bayesian networks", *International Journal of Approximate Reasoning*, 138, pp. 105-22.
5. Cavenaghi, E., Sottocornola, G., Stella, F., Zanker, M. (2021). "Non Stationary Multi-Armed Bandit: Empirical Evaluation of a New Concept Drift-Aware Algorithm", *Entropy*, 23(3), 380.
6. Ruggieri, A., Stranieri, F., Stella, F., Scutari, M. (2020). "Hard and Soft EM in Bayesian Network Learning from Incomplete Data", *Algorithms*, 13(12), 329.
7. Acerbi, E., Hortova-Kohoutkova, M., Choera, T., Keller, N., Fric, J., Stella, F., Romani, L., Zelante, T. (2020). "Modeling Approaches Reveal New Regulatory Networks in *Aspergillus fumigatus* Metabolism", *Journal of Fungi* 6(3), 108.
8. Scanagatta, M., Salmeron, A., Stella, F. (2019). "A survey on Bayesian network structure learning from data", *Progress in Artificial Intelligence*, (8), pp. 425-439.
9. Liu, M., Stella, F., Hommersom, A., Lucas, P.J.F., Boer, L., Bischoff, E. (2019). "A comparison between discrete and continuous time Bayesian networks in learning from clinical time series data with irregularity", *Artificial Intelligence in Medicine*, (95), pp. 104-117, <https://doi.org/10.1016/j.artmed.2018.10.002>.
10. Cameron, E., Pilla, G., Stella, F. (2018). "Application of influence diagrams for well contamination risk management: a case study in the Po Plain, northern Italy". *Hydrogeology Journal* <https://doi.org/10.1007/s10040-018-1727-0>. 27(1), pp. 273-289.
11. Cameron, E., Pilla, G., Stella, F. (2018). "Application of statistical classification methods for predicting the acceptability of well-water quality". *Hydrogeology Journal* <https://doi.org/10.1007/s10040-018-1727-0>. 26(4), pp. 1099-1115.
12. Villa, S., Stella, F. (2016). "Learning Continuous Time Bayesian Networks in Non-stationary Domains". *Journal of Artificial Intelligence Research*, 57:1, pp. 1-37.
13. Acerbi, E., Viganò, E., Poidinger, M., Mortellaro, A., Zelante, T., Stella, F. (2016). "Continuous time Bayesian networks identify Prdm1 as a negative regulator of TH17 cell differentiation in humans". *Scientific Reports*, 6, 23128.
14. Rossetti, M., Stella, F., Zanker, M. (2015). "Analyzing User Reviews in Tourism with Topic Models". *Information Technology & Tourism*. 16:1, pp. 5-21, ISSN: 1943-4294.

15. Zanoni, M., Arcelli Fontana, F., Stella, F. (2015). "On Applying Machine Learning Techniques for Design Pattern Detection". *Journal of Systems and Software*. 103, pp. 102-117, ISSN: 0164-1212.
16. Acerbi, E., Zelante, T., Narang V., Stella, F. (2014). "Gene network inference using continuous time Bayesian networks: a comparative study and application to Th17 cell differentiation". *BMC Bioinformatics*. 15:(387), DOI:10.1186/s12859-014-0387-x, ISSN: 1471-2105.
17. Codecasa, D., Stella, F. (2014). "Classification and Clustering with Continuous Time Bayesian Network Models". *Journal of Intelligent Information Systems*, pp. 1-34. ISSN: 0925-9902 (Print) 1573-7675 (Online), 10.1007/s10844-014-0345-0.
18. Codecasa, D., Stella, F. (2014). "Learning Continuous Time Bayesian Network Classifiers". *International Journal of Approximate Reasoning*, 55:(8), pp. 1728-1746, DOI:http://dx.doi.org/10.1016/j.ijar.2014.05.005.
19. Rossetti, M., Pareschi, R., Stella, F., Arcelli, F. (2014). "Integrating concepts and knowledge in large content networks". *New Generation Computing*, 32:(3-4), pp. 309-330.
20. Villa, S., Stella, F. (2014). "A continuous time Bayesian network classifier for intraday FX prediction". *Quantitative Finance*, 14:(12), pp. 2079-2092, DOI:10.1080/14697688.2014.906811.
21. Stella, F., Amer, Y. (2012). "Continuous time Bayesian network classifiers". *Journal of Biomedical Informatics* 76:(1), pp. 1108-1119.
22. Ramirez, E., Brena, R., Magatti, D. and Stella, F. (2012). "Topic Model Validation". *Neurocomputing* 76:(1), pp. 125-133.
23. Gatti, E., Luciani, D. and Stella, F. (2011). "A continuous time Bayesian network model for cardiogenic heart failure". *Flexible Services and Manufacturing Journal*, 24:(4), pp. 496-515, DOI:10.1007/s10696-011-9131-2.
24. Tuana, G., Volpato, V., Ricciardi-Castagnoli, P., Zolezzi, F., Stella, F. and Foti, M. (2011). "Classification of dendritic cell phenotypes from gene expression data". *BMC Immunology*, 12:(50), ISSN: 1471-2172, doi:10.1186/1471-2172-12-50.
25. Fraccalvieri, D., Pandini, A., Stella, F. and Bonati, L. (2011). "Conformational and functional analysis of molecular dynamics trajectories by Self-Organising Maps". *BMC Bioinformatics*. 12:(158), ISSN: 1471-2105.
26. Stella, F. and Ventura, A. (2011). "Defensive On-line Portfolio Selection". *International Journal of Financial Markets and Derivatives*, 2:(1-2), pp. 88-105, ISSN: Print: 1756-7130.
27. Fagioli, E., Stella, F. and Ventura, A. (2007). "Constant Rebalanced Portfolios and Side Information". *Quantitative Finance*, 2:(7), pp. 161-173.
28. Cerutti, R., Cesana, M., De Amicis, L., Fagioli, E., Grossi, E., Luciani, D., Stabilini, M. and Stella, F. (2007). "Bayesian Data Mining Techniques: The Evidence Provided by Signals Detected in Single-Company Spontaneous Reports Databases". *Drug Information Journal*. 41, pp. 11-21.
29. Stella, F., Bogni, D., Benzoni, M. and Viganò, V. (2006). "Intelligent Light Rail Train: forecast and regularization", *Journal of Intelligent Transportation Systems: Technology, Planning, and Operations*, 10:(2), pp. 59-73.
30. Gaivoronski, A. and Stella, F. (2003). "On-line portfolio selection using stochastic programming". *Journal of Economic Dynamics and Control*, 27:(6), pp. 1013-1043.

31. Carelli, A., Silani, S. and Stella, F. (2000). "Profiling Neural Networks for Option Pricing", *International Journal of Theoretical and Applied Finance*, 3:(2), pp. 183-204.
32. Avellaneda, M., Carelli, A. and Stella, F. (2000). "A Bayesian Approach to Construct Implied Volatility Surfaces through Neural Networks", *Journal of Computational Finance*, 4:(1), pp. 83-107.
33. Silani, S. and Stella, F. (2000). "Nonlinear Regression and Neural Networks", *International Journal of Mathematical Algorithms*, 2:(3), pp. 163-200.
34. Gaivoronski, A. and Stella, F. (2000). "A Stochastic Nonstationary Optimization for finding Universal Portfolios", *Annals of Operations Research*, 100:, pp. 165-188.
35. Gaivoronski, A. and Stella, F. (1998). "Stochastic Optimization with Structured Distributions: the case of Bayesian Nets", *Annals of Operations Research*, Edited by G. Mitra, A. Sciomachen and I. Maros, Baltzer Science Publisher, 81:, pp. 189-211.
36. Archetti, F., Gaivoronski, A. and Stella, F. (1997). "Stochastic Optimization on Bayesian Nets", *European Journal of Operational Research*, 101:(2), pp. 360-373.
37. McKeown, J.J., Stella, F. and Hall, G. (1997). "Some Numerical Aspects of the Training problem for Feed-forward Neural Nets", *Neural Networks*, 10:(8), pp. 1455-1463.

### **International Books Chapters**

1. Sottocornola, G., Stella, F., Symeonidis, P., Zanker, M., Krajger, I., Faillant, R., Schwarz, E. (2019). "Identifying Innovative Idea Proposals with Topic Models—A Case Study from SPA Tourism". *Big Data and Innovation in Tourism, Travel, and Hospitality*, pp. 115-133, Springer.
2. Villa, S., and Stella, F. (2012). "Bayesian Networks for Portfolio Analysis and Optimization". *Quantitative Semantics and Soft Computing Methods for the Web Perspectives and Applications*, doi:10.4018/978-1-60960-881-1, ISBN13: 9781609608811, ISBN10: 160960881X.
3. Magatti, D., and Stella, F. (2011). "Probabilistic Topic Discovery and Automatic Document Tagging". In R. Brena, & A. Guzman, *Quantitative Semantics and Soft Computing Methods for the Web Perspectives and Applications*. Information Science Pub. pp. 25-50.
4. Fagioli, E., Stella, F. and Ventura, A. (2008). "Constant Rebalanced Portfolios and Side Information". *Introduction to Quantitative Fund Management*. Edited by M. Dempster, G. Pflug, and G. Mitra, IGI Global, pp. 85-106.
5. Fagioli, E., Omerino, S. and Stella, F. (2008). "Bayesian Belief Networks for Data Cleaning". *Mathematical Methods for Knowledge Discovery and Data Mining*. Edited by Giovanni Felici and Carlo Vercellis, IGI Global, pp. 204-219.
6. Gaivoronski, A., Morassutto, M., Silani, S. and Stella, F. (1996). "Numerical Techniques for Solving Estimation Problems on Robust Bayesian Networks", *Bayesian Robustness - IMS Lecture Notes-Monograph Series*, Edited by J.O. Berger, B. Betrò, E. Moreno, L.R. Pericchi, F. Ruggeri, G. Salinetti and L. Wasserman, Vol. 29, pp. 315-329.
7. Archetti, F., Carelli, A., Stella, F. and Pelizza, M. (1996). "Construction of Bayesian Network Model for Integrated Circuits Parametric Testing", *Progress in Industrial Mathematics at ECMI 94*, Edited by Helmut Neuzert, John Wiley & Sons and B.G. Teubner, pp. 307-316.
8. Maggio, D., Fagioli, E., Stella, F. and Pelizza, M. (1996). "Efficient Algorithms for Bayesian Network: an application to Integrated Circuit manufacturing", *Progress in Industrial Mathematics at ECMI 94*, Edited by Helmut Neuzert, John Wiley & Sons and B.G. Teubner, pp. 317-322.

## **Proceedings of Conferences**

1. Gigli, M., and Stella, F. (2022). "Parametric Bandits for Search Engine Marketing Optimisation". 26<sup>th</sup> Pacific-Asia Conference on Knowledge Discovery and Data Mining, J. Gama et al. (Eds.): PAKDD 2022, LNAI 13282, pp. 326–337, 2022. [https://doi.org/10.1007/978-3-031-05981-0\\_26](https://doi.org/10.1007/978-3-031-05981-0_26)
2. Sottocornola, G., Stella, F. Zanker, M. (2022) "Counterfactual Contextual Multi-Armed Bandit to Diagnose Post-Harvest Diseases of Apple", IEEE/WIC/ACM International Conference on Web Intelligence and Intelligent Agent Technology, pp. 241-248.
3. Sottocornola, G., Baric, S., Stella, F., Zanker, M. (2021). "Case Study on the Development of a Recommender for Apple Disease Diagnosis with a Knowledge-based Bayesian Network", KaRS2021: 3rd Workshop of Knowledge-aware and Conversational Recommender Systems.
4. Bregoli, A., Scutari, M., Stella, F. (2020). "Constraint-Based Learning for Continuous-Time Bayesian Networks". PGM2020, Proceeding of Machine Learning Research, 138
5. Craighero, F., Angaroni, F., Graudenzi, A., Stella, F., Antoniotti, M. (2020). "Investigating the Compositional Structure Of Deep Neural Networks", Proceedings of the Sixth International Conference on Machine Learning, Optimization, and Data Science.
6. Zoppis, I., Zanga, A., Stella, F., Morreale, F. Cisotto, G., Manzoni, S., Mauri, G. (2020). "An Attention-based Architecture for EEG Classification", BIOSTEC 2020–13th International Joint Conference on Biomedical Engineering.
7. Sottocornola, G., Nocker, M., Stella, F. and Zanker, M. (2020). "Contextual multi-armed bandit strategies for diagnosing post-harvest diseases of apple". In Proceedings of the 25th International Conference on Intelligent User Interfaces (IUI '20). Association for Computing Machinery, New York, NY, USA, 83–87. DOI:<https://doi.org/10.1145/3377325.3377531>
8. Bregoli, A., Canonaco, F., Magrinelli, A., Stella, F. (2019). "Anomaly Detection in Dynamic Networks: comparison and benchmarking", Proceedings of the Modeling Decisions for Artificial Intelligence – MDAI 2019, pp. 106-117.
9. Nocker, M., Sottocornola, G., Zanker, M., Baric, S., Amaral Carneiro, G., Stella, F. (2018). "Picture-based navigation for diagnosing post-harvest diseases of apple", Proceedings of the 12th ACM Conference on Recommender Systems, pp. 506-507.
10. Liu, M., Stella, F., Hommersom, A., Lucas, P. (2018). "Making Continuous Time Bayesian Networks More Flexible". Proceeding of Machine Learning Research.
11. Villa, S., Stella, F. (2018). "Learning Continuous Time Bayesian Networks in Non-stationary Domains (Extended Abstract)", Proceedings of the IJCAI-ECAI-18, Invited talk for the Journal Track.
12. Liu, M, Stella, F., Hommersom, A., Lucas, P. (2018). "Representing Hypoexponential Distributions in Continuous Time Bayesian Networks", Proceedings of the 17th International Conference on Information Processing and Management of Uncertainty in Knowledge-Based Systems.
13. Sottocornola, G., Stella, F., Zanker, M., Canonaco, F. (2017). "Towards a deep learning model for hybrid recommendation", Proceedings of the International Conference on Web Intelligence, 1260-1264.
14. Amami, M., Faiz, R., Stella, F., Pasi, G. (2017). "A graph based approach to scientific paper recommendation", Proceedings of the International Conference on Web Intelligence, 777-782.

15. Baretta, D; Sartori, F; Greco, A; Melen, R; Stella, F; Bollini, L; D'Addario, M; Steca, P (2016). "Wearable devices and AI techniques integration to promote physical activity". Proceedings of the 18th International Conference on Human-Computer Interaction with Mobile Devices and Services Adjunct.
16. Amami, M., Pasi, G., Stella, F. (2016). "An LDA-Based Approach to Scientific Paper Recommendation". Proceedings of the NLDB Conference.
17. Rossetti, M., Zanker, M., Stella, F. (2016). "Contrasting offline and online results when evaluating recommendation algorithms". Proceedings of the RecSys2016 Conference.
18. Rossetti, M., Zanker, M., Cao, L., Stella, F. (2015). "Analyzing User Reviews in Tourism with Topic Models". Proceedings of the ENTER2015 Conference.
19. Pareschi, R., Rossetti, M., Stella, F. (2014). "Tracking Hot Topics for the Monitoring of Open-world Processes". Proceedings of the SIMPDA 2014 Conference.
20. Acerbi, E., Stella, F. (2014). "Continuous Time Bayesian Networks for Gene Network Reconstruction: a Comparative Study on Time Course Data". Bioinformatics Research and Applications, Lecture Notes in Computer Science, Volume 8492, 2014, pp. 176-187.
21. Codecasa, D., Stella, F. (2013). "A classification based scoring function for continuous time Bayesian network classifiers". Post Proceedings of the International Workshop NFMCP held at ECML-PKDD 2013, September 23-27, 2013, Prague, Czech Republic.
22. Codecasa, D., Stella, F. (2013). "Conditional Log-Likelihood for Continuous Time Bayesian Network Classifiers". Proceedings of the International Workshop NFMCP held at ECML-PKDD 2013, September 23-27, 2013, Prague, Czech Republic
23. Fracalvieri, D., Bonati, L., Pandini, A., Stella, F. (2013). "Functional interpretation of protein conformational ensembles using self-organizing maps and network components". Proceedings of the 3DSIG2013: Structural Bioinformatics and Computational Biophysics, July 19-21, 2013, Berlin, Germany.
24. Fracalvieri, D., Bonati, L., Stella, F. (2013). "Self Organizing Maps to efficiently cluster and functionally interpret protein conformational ensembles". Proceedings of the Wivace 2013 - Italian Workshop on Artificial Life and Evolutionary Computation, July 1-2, 2013, Milan, Italy.
25. Rossetti, M., Stella, F., Zanker, M. (2013). "Towards Explaining Latent Factors with Topic Models in Collaborative Recommender Systems". Proceedings of the International Workshop on Recommender Systems meet Databases, August 26-29, 2013, Prague, Czech Republic.
26. Viscusi, G., Maurino, A., Cabitza, F.A.N.A., Stella, F.A. (2013). "Determining factors in ICT adoption by MSME's in agriculture clusters". Proceedings of the IEEE International Conference on Research Challenges in Information Sciences, May 29-31, 2013, Paris, France.
27. Acerbi, E., Perez Garcia, G. and Stella, F. (2010). "Hybrid Syntactic-Semantic Reranking for parsing results of ECAs interactions using CRFs". Proceedings of the 7th International Conference on Natural Language Processing, IceTAL 2010, H. Loftsson, E. R'gnvaldsson, S. Helgadóttir (Eds.): IceTAL 2010, LNAI 6233, pp. 15-26, 2010. Springer-Verlag Berlin Heidelberg 2010, August 16-18, 2010 Reykjavik, Iceland, ISSN: 0302-9743.
28. Ramirez, E., Brena, R., Magatti, D. and Stella, F. (2010). "Probabilistic Metrics for Soft-Clustering and Topic Model Validation". Proceedings of the 2010 IEEE/WIC/ACM International Conference on Web Intelligence. IEEE Computer Society, Toronto, Canada, pp. 406-412, ISBN: 978-0-7695-4191-4.

29. Barone, D., Stella, F. and Batini, C. (2010). "Dependency Discovery in Data Quality". Proceedings of the 22nd International Conference on Advanced Information Systems Engineering (CAISE'10) June 9-11th, 2010, Hammamet, Tunisia, pp. 53-67, ISBN: 978-3-642-13093-9.
30. Barone, D., Batini, C., Maurino, A. and Stella, F. (2009). "A Privacy Preserving Framework for Accuracy and Completeness Quality Assessment". Proceedings of the 7th International Workshop on Quality in Databases at VLDB 2009 August 24th, 2009, Lyon, France.
31. Magatti, D., Calegari, S., Ciucci, D. and Stella, F. (2009). "Automatic Labeling Of Topics". Proceedings of the 9th International Conference on Intelligent Systems Design and Applications, Pisa, Italy, pp. 1227-1232.
32. Magatti, D., Stella, F., and Faini, M. (2009). "A Software System for Topic Extraction and Document Classification". Proceedings of the 2009 IEEE/WIC/ACM International Conference on Web Intelligence. IEEE Computer Society, Milan, Italy, pp. 283-286, ISBN:978-0-7695-3801-3.
33. Fagioli, E., Omerino, S. and Stella, F. (2004). "Bayesian Belief Networks for Data Cleaning", Mathematical Methods for Learning: advances in Data Mining and Knowledge Discovery", Villa Geno, Como, Italy, 21-24 June, 2004.
34. Cerutti, R., Cesana, M., De Amicis, L., Fagioli, E., Grossi, E., Luciani, D., Stabilini, M. and Stella, F. (2004). "Data Mining Algorithms for Adverse Drug Reaction Signaling", Mathematical Methods for Learning: advances in Data Mining and Knowledge Discovery", Villa Geno, Como, Italy, 21-24 June 2004.
35. Archetti, F., Messina, E., Mishra, B. and Stella, F. (1998). "CATS: A Complex Adaptive Traffic Simulator", IFAC Transportation Systems, Chania Greece, pp. 1271-1275.
36. Gaivoronski, A. and Stella, F. (1995). "A Class of Stochastic Optimization Algorithms applied to some Problems in Bayesian Statistics", Operation Research Proceedings 1994, Edited by U.Derigs, A. Bachem and A. Drexl, Springer-Verlag, pp. 65-69.
37. Stella, F., Vercellis, C. and Zaffalon, M. (1995). "A GAP formulation of Production Planning problems in Reconfigurable Assembly lines", Operation Research Proceedings 1994, Edited by U.Derigs, A. Bachem and A. Drexl, Springer-Verlag, pp. 324-328.
38. Archetti, F., Sciomachen, A., De Mathia, G. and Stella, F. (1992). "Detecting critical factors in a Telecom Line", Proceedings of the 4th ISRAM International Conference, Edited by M. Jamshidi, pp. 889-894.