Marco Brambilla

Politecnico di Milano, Italy

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Marco Brambilla is full professor at Politecnico di Milano.

His research interests include **explainability and transparency of AI and ML models and methods, and application of generative AI techniques on text, images, and multimodal sources. The focus of this research topics is towards improving user experience and the stability and robustness of AI solutions, through automatic generation of explanations and integration of Large Language Models with knowledge-based and graph-based techniques. In particular, current activities cover foundational models generation and interpretation, both for textual and multimodal content.** He studies deep learning models for text and image analysis of a variety of domain-specific applications, spannig legal data sources, scientific datasets, and geographical data, enterprise social networks, fashion industry, and socio-economic phenomena. He also covered model-driven software engineering, data science, crowdsourcing, social media monitoring, behaviour analytics, knowledge extraction and engineering, and big data methods.

He has been visiting scholar at CISCO, San José, USA, and University of California, San Diego, USA. He has been visiting professor at Dauphine University, Paris.

He is author of 4 international books, 35+ articles in journals, and over 300+ conference and workshop papers (250+ registered in Scopus), leading to a current **h-index = 42** (27 on Scopus) and **more than 9200 citations** according to Google Scholar (2700+ on Scopus).

He is the leading author of the **international OMG standard IFML** (Interaction Flow Modeling Language).

He was awarded various best paper prizes and gave keynotes and invited speeches at many conferences, workshops and organisations. He participated in several European and international research projects. He has been reviewer of EU projects and evaluator of EU proposals, as well as reviewer/evaluator of national and local government funding programmes throughout Europe.

He is founder of the startup Fluxedo, focusing on IoT and social media analytics. He is also partner of WebRatio, a company devoted to software modeling tools for Web, Mobile and Business Process based software applications.

He currently teaches *Web Science, Big Data and Unstructured Databases*, and *Enterprise Information Systems* at Politecnico. He is the director of the B.Sc. and M.Sc. programs in Computer Science and Engineering at Politecnico.

Marco Brambilla - CV Summary

Publication record:

- more than **300+ research papers**, including 35+ journal articles (5 ACM transactions).

- **4 international research books**: on Model-driven Engineering (Morgan Claypool USA 2012/2017, 2000+ citations, adopted by 140+ universities worldwide), on WebML (Morgan Kauffman USA 2002, 840+ citations), on Web Information Retrieval (Springer 2013), and on IFML (Morgan Kauffman USA 2014).

- main venues: ACM TOIT , TOSEM , TWEB, Big Data Research, VLDB Journal, The Web Conf., ICWE

- **overall 9200 citations and H-index = 42** (source: Google Scholar). **around 230 different co-authors**.

- in Scopus: 250+ registered papers, h-index = 27 and 2700+ citations (data from Scopus).

- 2 conference best paper award, 2 workshop best paper awards; GSE-IBM Award of Excellence; 3rd prize AI challenge 2014; Microsoft Azure Research Award 2017.

International visibility and impact:

- one of the most world-renowned experts in the **Web Engineering** and **Model-Driven Development** disciplines. **His reference book in MDSE is now adopted by more than 140 universities worldwide.**

- leader of the standardization activity on **IFML (Interaction Flow Modeling Language**, evolution of WebML) at the OMG, that adopted IFML as international standard in 2014 after 3 years of work.

- more than 30 invited seminars, keynotes and speeches in academia, events and industry worldwide.

- the toolsuite WebRatio based on IFML/WebML now used by more than 17,000 students and researchers throughout the world.

Community service:

- Associate Editor of: the SIGMOD Record (until Dec 2019); Journal of Web Engineering; Advances in Human-Computer Interactions; Frontiers in AI.

- Organizer of 2 summer schools.

- Program Chair of two editions of ICWE (2012, 2021). Track chair in several conferences. Steering committee member of ISWE (International Society of Web Engineering).

- Program Chair of 9 workshops; organizers of various journal special issues, including in VLDB Journal.

- Evaluator and reviewer of research projects at EU, national (IT, NE, CH), and local level.

Funding and Project Management:

- Scientific director of the Politecnico research unit of various competitive EU research projects (H2020, EIT).

- Technical director and deputy scientific director in EU research projects (STREP, IP, SME, H2020, EIT).

- Direct management of 40+ temporary research personnel throughout the years and projects.

- Participated as research associate to 15+ EU projects.

- personally attracted funds for Politecnico from EU, local govt. and industry, for **a total amount of more than 1.5 MLN Euro**.

University service:

- Advisor of 7 Ph.D. student. Co-advisor of 3 Ph.D. students.

- Advisor of more than 100 M.Sc. students. Professor of more than 20 different courses.

- Member of M.Sc. students admission committee for Computer Science and Engineering.

- Responsible of track T2D - ICT Engineering, Business & Innovation (incl. student support and study plan).

- Instructor in many professional master programs in the context of the Politecnico educational offer, through Cefriel, MIP, and Poli.Design.

- External reviewer and member for 5 Ph.D. committees in European countries (Italy, Spain, France).

Industrial Innovation Activities:

- **Co-author of two U.S. patents (both granted)**: one on multi-domain search engines and one on crowd-sourcing methods and systems.

- **industrial consultant on big data analysis** within Italian and international companies, on project related to social media analysis, business intelligence, assessment and prediction.

- **industrial consultant, speaker and trainer on enterprise software management and development** with international companies and public bodies on projects related to software development automation, business processes and enterprise architecture.

- main author of the international standard IFML, issued by the OMG (USA) in 2014.

- responsible of the Politecnico research unit for industrial innovation projects with companies including: Acer, UniCredit, Microsoft, local govt. agencies, INAIL, Ricerca Sistema Elettrico, A2A, Aruba, Piccolo Teatro, Teatro alla Scala, FuoriSalone and Salone del Mobile, SOGEI, Alpitour, ENGIE Italia, and others.

Spinoff and entrepreneurial activities:

- co-founder of **WebRatio** (`www.webratio.com`) **Fluxedo** (`www.fluxedo.com`) and **Quantia**

- Winner of **2013 Polihub Switch2Product** challenge and ComoNext award **Idea2Impresa 2013**.

Awards and Selected Publications

- Best paper: M. Brambilla, N. D'Elia. Exception Handling within Workflow-based Web Applications, 4th International Conference on Web Engineering, ICWE 2004, Munich, Germany.

- Best paper: M. Brambilla, et al. Flexible Specification of Semantic Services using Web Engineering Methods and Tools. In Int. Workshop on Semantic Web Enabled Software Engineering (SWESE 2006), ISWC 2006, Athens, GA, USA, November 2006, pp. 1-14.

- Best paper: M. Brambilla, P. Fraternali, M. Tisi. A Metamodel Transformation Framework for the Migration of WebML Models to MDA. 4th Int. Workshop on Model-Driven Web Engineering (MDWE 2008). N. Koch, G.-J. Houben, A. Vallecillo (Eds.). CEUR-WS, volume 389, pages 91-105.

- IBM Faculty Award and Best solution at the Semantic Web Service Challenge: Swe-et approach on Web Modeling-based Approach to Automating Web Services Mediation, Choreography and Discovery, 2006-7.

- GSE and IBM Great Prize for Research Excellence Award 2013 for a M.Sc. thesis (student Ekaterina Shabunina) on correlation of social content sentiment mining and stock market fluctuations.

- 3rd prize at the AI Mashup Challenge 2014 at ESWC for the proposed solution: M. Brambilla, D. Dell'Aglio, E. Della Valle, A. Mauri, R. Volonterio. ECSTASYS: Augmented Participation to Live Events through Social Network Content Enrichment.

- Best paper 2014: A. Bozzon, M. Brambilla, S. Ceri, A. Mauri, and R. Volonterio. Pattern-based specification of crowdsourcing applications. In Intl. Conference on Web Engineering (ICWE), pages 218-235. Springer LNCS vol. 8541, 2014.

SELECTED PUBLICATIONS

Research Monographs

- S. Ceri, P. Fraternali, A. Bongio, M. Brambilla, S. Comai, M. Matera: *Designing Data-Intensive Web Applications*, Morgan-Kaufmann Publishers, San Francisco, 2001, ISBN 1-55860-843-5, M-K Series in Data Management Systems edited by Jim Gray, foreword by Adam Bosworth, 590 pages.

- M. Brambilla, J. Cabot, M. Wimmer: *Model Driven Software Engineering in Practice*. Morgan & Claypool, USA, September 2012, foreword by Richard Soley (OMG), 184 pages. ISBN 978-1608458820.

- Second edition of the same (2017), 207 pages.

- S. Ceri, A. Bozzon, M. Brambilla, E. Della Valle, P. Fraternali, S. Quarteroni: *Web Information Retrieval*. Data-centric systems and applications, Springer 2013, ISBN 978-3-642-39313-6, 300 pages.

- M. Brambilla, P. Fraternali: *Interaction Flow Modeling Language: Model-Driven UI Engineering of Web and Mobile Apps with IFML*, Morgan-Kaufmann Publishers, San Francisco, 2014, ISBN 978-0128001080, M-K Series OMG Press, foreword by Richard Soley, 422 pages.

Selected Journal Articles

- I. Manolescu, M. Brambilla, S. Ceri, S. Comai, P. Fraternali: Model-driven design and deployment of service-enabled web applications. ACM Trans. Internet Technology (TOIT). 5(3), pp. 439-479 (2005).

- M. Brambilla, S. Ceri, P. Fraternali, I. Manolescu: Process modeling in Web applications. ACM Trans. Softw. Eng. Methodol (TOSEM). 15(4), pp. 360-409 (2006).

- M. Brambilla, I. Celino, S. Ceri, D. Cerizza, E. Della Valle, F. M. Facca: Model-Driven Design and Development of Semantic Web Service Applications, ACM Trans. on Internet Technology (TOIT). 8(1), pp.3:1 - 3:31 (2007).

- B. Bislimovska, A. Bozzon, M. Brambilla, P. Fraternali: Textual and Content-Based Search in Repositories of Web Application Models. ACM Trans. on the Web (TWEB), March 2013, 8(2), pp. 11:1-19:47.

- S. Quarteroni, M. Brambilla, S. Ceri: A bottom-up, knowledge-aware approach to integrating and querying web data services. ACM Trans. on the Web (TWEB), October 2013, 7(4), pp. 19:1-19:33.

- A. Bozzon, M. Brambilla, S. Ceri, D. Mazza: Exploratory search framework for Web data sources. VLDB Journal, 2013, 22(5), pp. 641-663.

- M. Balduini, M. Brambilla, E. Della Valle, C. Marazzi, T Arabghalizi, B. Rahdari, Michele Vescovi. Models and Practices in Urban Data Science at Scale. Big Data Research, Elsevier, September 2019, Vol. 17,pp. 66-84,

- M. Brambilla, J. Cabot and S. Comai: Extending Conceptual Schemas with Business Process Information. Advances in Software Engineering, Vol. 2010, Hindawi Publishing, Article ID 525121, 22 pages.

- K. Belhajjame, M. Brambilla: Ontological Description and Similarity-Based Discovery of Business Process Models. Int.l Journal of Information System Modeling and Design (IJISMD), IGI, 2(2), 2011, pp. 47-66.

- A. Bozzon, M. Brambilla, S. Ceri, and S. Quarteroni: A Framework for Integrating, Exploring, and Searching Location-Based Web Data. IEEE Internet Computing, 15(6), 2011, pp. 24-31.

- M. Brambilla: From Requirements to Implementation of Ad-hoc Social Web Applications: an Empirical Pattern-Based Approach. IET Software, 6(2), 2012, pp.114-126.

Selected Contributions to Conferences

- M. Brambilla, S. Ceri, E. Della Valle, R. Volonterio, F. X. Acero Salazar: Extracting Emerging Knowledge from Social Media. Intl. Conference on World Wide Web (WWW 2017), ACM, pp. 795-804.

- A. Bozzon, M. Brambilla, S. Ceri: Reactive CrowdSourcing. Intl. conference on World Wide Web (WWW 2013). ACM, pp. 153-164.

- A. Bozzon, M. Brambilla, S. Ceri, M. Silvestri, G. Vesci: Choosing the Right Crowd: Expert Finding in Social Networks. 16th International Conference on Extending Database Technology (EDBT 2013).

- A. Bozzon, M. Brambilla, S. Ceri: Answering search queries with CrowdSearcher. Intl. conference on World Wide Web (WWW 2012). ACM, pp. 1009-1018.

- M. Brambilla, S. Ceppi, N. Gatti, E. Gerding: A revenue sharing mechanism for federated search and advertising. Intl. Conference on World Wide Web (WWW 2012). ACM, pp. 465-466.

- A. Bozzon, M. Brambilla, S. Ceri, P. Fraternali. Liquid query: multi-domain exploratory search on the web. Int.l Conference on World Wide Web (WWW 2010). ACM, pp. 161-170.

- M. Brambilla, S. Ceri, S. Comai, C. Tziviskou. Exception Handling in Workflow-Driven Web Applications. Int. Conference on World Wide Web (WWW 2005). ACM, pp. 170-179.

- M. Brambilla, P. Mascetti, A. Mauri: Comparison of different driving style analysis approaches based on trip segmentation over GPS information. IEEE BigData Conference 2017: 3784-3791

- C. Bernaschina, M. Brambilla, A. Mauri, E. Umuhoza: A Big Data Analysis Framework for Model-Based Web User Behavior Analytics. ICWE 2017: 98-114

- M. Brambilla, J. Cabot, J.L. Canovas Izquierdo, A. Mauri: Better call the crowd: using crowdsourcing to shape the notation of domain-specific languages. Software Language Engineering Conference (SPLASH - SLE) 2017: 129-138

- A. Bozzon, M. Brambilla, P. Fraternali. Searching Repositories of Web Application Models. 10th Int. Conf. on Web Engineering (ICWE2010), Vienna, Austria. Springer LNCS, Vol. 6189, pp.1-15.

- M. Brambilla, I. Celino, S. Ceri, D. Cerizza, E. Della Valle, F. Facca. A Software Engineering Approach to Design and Development of Semantic Web Service Applications. International Semantic Web Conference (ISWC2006), Athens, USA, November 2006, Springer LNCS 4273, pp. 172-186.

- M. Brambilla, A. Deutsch, L. Sui, V. Vianu. The Role of Visual Tools in a Web Application Design and Verification Framework: A Visual Notation for LTL Formulae. 5th International Conference on Web Engineering (ICWE2005), Springer LNCS, vol.3579, pp. 557-568.

- E. Umuhoza, M. Brambilla, D. Ripamonti, J. Cabot: An empirical study on simplification of business process modeling languages. SLE 2015: 13-24.

Marco Brambilla - Full CV

Position and Education

RECORD OF EMPLOYMENT

2021 – now

Full Professor at Politecnico di Milano, Dipartimento di Elettronica, Informazione e Bioingegneria.

2015 – 2021

Associate Professor with Tenure at Politecnico di Milano, Dipartimento di Elettronica, Informazione e Bioingegneria.

2005 – 2015

Assistant Professor with Tenure (Ricercatore a tempo indeterminato) at Politecnico di Milano, Dipartimento di Elettronica, Informazione e Bioingegneria. Member of the Web and Databases group.

2004 – 2020

Scientific advisor and shareholder at WebRatio Srl, spinoff of Politecnico di Milano whose aim is promotion and commercial exploitation of the WebML and IFML languages.

2005 – now

Professor of courses (varying along the years): Web Science, Digital Innovation Lab, Domain Specific Languages, Software Engineering, Advanced Software Engineering, Computer Engineering and Architectures, Information Systems (for Management Engineering students), Software Applications (for Design Students).

2002 – 2011

Teaching Assistant at Politecnico di Milano for courses: Databases, Advanced Databases, Computer Programming, Algorithms and Data Structures, Web Technologies, Advanced Web Technologies.

2001

Post-master temporary research position at Politecnico di Milano.

2008-2012

IT Consultant for Model Driven system and process re-engineering in UniCredit Leasing.

2008

IT Consultant for Microsoft USA on analysis of behaviour of Web browsers.

2000 – 2005

Teacher at industrial training courses for customers of WebRatio Srl.

EDUCATION

- Ph.D. in Information Technology at Politecnico di Milano. 2005. Grade: A (excellent).
  Title: *Model Driven Integration of Data-centric Web Applications with Workflows and Web Services*
  Advisor: *Prof. Piero Fraternali*
  International Reviewer: *Prof. Yannis Papakonstantinou (UCSD, USA)*

  The Ph.D. thesis extended the model-driven approach based on WebML, with new primitives for high-level modeling of Web services interactions and workflow enactment within Web applications, with particular attention to distribution, exception handling, platform independent modeling and code generation.

- M.Sc. in Computer Science Engineering at Politecnico di Milano. 2001. Grade: 110/110 cum laude.
  Thesis title: *Methodology and Advanced Applications of the WebML Language*.
  Advisor: *Prof. Piero Fraternali*

  The master thesis work focused on a framework for designing and developing data-intensive Web sites; the thesis includes also the results of an internship in Cisco Systems (CA, USA) for the design of two pilot Web sites (Cisco.com, Cisco intranet).

VISITING EXPERIENCES

- Visiting researcher at Cisco Systems, San José, CA, USA. (2000 - 2001).

- Visiting researcher at University of California, San Diego (UCSD), CA, USA (2004).

- Visiting professor at Dauphine University, Paris, France (2014).

SCHOLARSHIPS

- Three-year scholarship for Ph.D. studies of the Italian Ministry of Education, University and Research (2001-2004). Ranked second place in the Information Engineering Ph.D. school.

- Scholarship awarded by the Association of Small and Medium Enterprises (API), Italy (2000).

Research Interests Summary

Marco Brambilla's research interests include **theoretical, experimental and methodological aspects related to model driven approaches to software development and data analysis / data science**. In his research activities, he has extensively applied and validated model-driven engineering (MDE) into a variety of fields:

- modeling methodologies, design patterns, conceptual design, and requirement engineering;

- explainability, interpretability, and transparency of methods and models for data analysis and machine learning;

- data-intensive Web applications, social network applications, service oriented architectures (SOA) and service-based applications;

- mobile and Web applications and architectures for embedded and HMI systems;

- business process modeling (BPM), workflow-based Web applications, and social business process management;

- semantic Web applications;

- human computation, crowdsourcing, and gamification;

- information seeking, information retrieval, and advanced Web search interfaces;

- knowledge extraction from social content and social networks;

- big data solutions and data science methods applied to different sectors, including smart cities, social science, humanities, community analysis, human behaviour analysis, social media and social content analysis.

Teaching Vision and Goals

As shown by my teaching track record, I have a strong commitment to teaching, especially in topics related to Big Data, Model-driven Engineering, and Data-driven Innovation.
I think that effective teaching of modern computer science requires three main ingredients:

- solid theoretical background

- practical, hands-on experience and experimentation on real or realistic implementations

- clear methodological guidelines.

That's why my teaching method consists of project-oriented learning and continuous interactions. Students in my courses (even at undergraduate level) are requested to give presentations, submit personal assignments and group works. I think that effective learning in computer science entails both personal work and group work.

In my courses I always commit a lot of resources to personal interaction with students, and interactive validation of examinations and project works, as I believe that this is one of the most effective ways of transferring knowledge.

These active learning methods can take additional time, but they proved to be better suited to cater for the different theoretical, technical, and cultural background of a multi-cultural class, allowing students to feel more motivated and confident with their abilities, while encouraging them to expand their body of knowledge to complete the assigned task. In addition, creative and collaborative learning methods prepare students for working in quickly evolving ICT landscape.

Offering concrete research problems during courses can arouse students curiosity into scientific careers, motivating them to pursue thesis within the research group, and, sometimes, to join a PhD program. In several occasions I worked one-on-one with students on individual research projects that later contributed to published articles and/or decided to prepare their thesis work under my supervision.

Having observed the benefits of this teaching model, I include such methods in my classes whenever possible and I aim at transferring to the students the enthusiasm that is needed to engage them in being passionate for the field and their future professional activities.

I have extensive teaching experience in English-speaking, multi-cultural environment, thanks to courses I gave at the M.Sc. program of Politenico di Milano, as well as at other universities abroad (USA, France, Poland, Latin America, Switzerland).

Teaching Activities

2024-2025

- Course *Systems and Methods for Big and Unstructured Data* (In English, 5 Credits)

- Course *Enterprise and ICT Architectures (Joint program with Bocconi University on Cyber Security)* (In English, 6 Credits)

- Course *Fondamenti di Informatica (IOL)* (In Italian, Online 10 Credits)

2023-2024

- Course *Systems and Methods for Big and Unstructured Data* (In English, 5 Credits)

- Course *Digital Interactive Technologies for Physical Interfaces* (In Italian, 3 Credits)

- Course *Enterprise and ICT Architectures (Joint program with Bocconi University on Cyber Security)* (In English, 6 Credits)

- Course *Fondamenti di Informatica (IOL)* (In Italian, Online 10 Credits)

2022-2023

- Course *Systems and Methods for Big and Unstructured Data* (In English, 5 Credits)

- Course *Digital Interactive Technologies for Physical Interfaces* (In Italian, 3 Credits)

- Course *Enterprise and ICT Architectures (Joint program with Bocconi University on Cyber Security)* (In English, 6 Credits)

- Course *Fondamenti di Informatica (IOL)* (In Italian, Online 10 Credits)

2021-2022

- Course *Systems and Methods for Big and Unstructured Data* (In English, 5 Credits)

- Course *Digital Interactive Technologies for Physical Interfaces* (In Italian, 3 Credits)

- Course *Enterprise and ICT Architectures (Joint program with Bocconi University on Cyber Security)* (In English, 6 Credits)

- Course *Fondamenti di Informatica (IOL)* (In Italian, Online 10 Credits)

2020-2021

- Course *Domain Specific Modeling* (In English, 5 Credits)

- Course *Digital Innovation Lab* (In English, 5 Credits)

- Course *Enterprise and ICT Architectures (Joint program with Bocconi University on Cyber Security)* (6 Credits)

2019-2020

- Course *Ingegneria del software* [Software Engineering] (7 Credits)

- Course *Prova finale di laurea* [Final Examination - Graduation project] (3 Credits)

- Course *Domain Specific Modeling* (In English, 5 Credits)

- Course *Digital Innovation Lab* (In English, 5 Credits)

- Course *Enterprise and ICT Architectures (Joint program with Bocconi University on Cyber Security)* (6 Credits)

2019-2020

- Course *Ingegneria del software* [Software Engineering] (7 Credits)

- Course *Prova finale di laurea* [Final Examination - Graduation project] (3 Credits)

- Course *Domain Specific Modeling* (In English, 5 Credits)

- Course *Digital Innovation Lab* (In English, 5 Credits)

- Course *Enterprise and ICT Architectures (Joint program with Bocconi University on Cyber Security)* (6 Credits)

2018-2019

- Course *Ingegneria del software* [Software Engineering] (7 Credits)

- Course *Prova finale di laurea* [Final Examination - Graduation project] (3 Credits)

- Course *Domain Specific Modeling* (In English, 5 Credits)

- Course *Digital Innovation Lab* (In English, 5 Credits)

- Computer science applications module *(Faculty of Design)* (6 Credits)

2017-2018

- Course *Ingegneria del software* [Software Engineering] (7 Credits)

- Course *Prova finale di laurea* [Final Examination - Graduation project] (3 Credits)

- Course *Advanced software engineering* (In English, 5 Credits)

- Course *Digital Innovation Lab* (In English, 5 Credits)

- Computer science applications module *(Faculty of Design)* (3 Credits)

2016-2017

- Course *Ingegneria del software* [Software Engineering] (7 Credits)

- Course *Prova finale di laurea* [Final Examination - Graduation project] (3 Credits)

- Course *Advanced software engineering* (In English, 5 Credits)

- Course *Web Science* (In English, 5 Credits)

- Computer science applications module *(Faculty of Design)* (3 Credits)

2015-2016

- Course *Ingegneria del software* [Software Engineering] (7 Credits)

- Course *Prova finale di laurea* [Final Examination - Graduation project] (3 Credits)

- Course *Advanced software engineering* (In English, 5 Credits)

- Computer science applications module *(Faculty of Design)* (3 Credits)

2014-2015

- Course *Ingegneria del software* [Software Engineering] (7 Credits)

- Course *Prova finale di laurea* [Final Examination - Graduation project] (3 Credits)

- Course *Advanced software engineering* (In English, 5 Credits)

2013-2014

- Course *Ingegneria del software* [Software Engineering] (7 Credits)

- Course *Prova finale di laurea* [Final Examination - Graduation project] (3 Credits)

- Course *Advanced software engineering* (In English, 5 Credits)

- Interdisciplinary Course *Cross-boundary processes (Lake Poli School, Como)* (Project works with companies, 5 Credits)

2012-2013

- Course *Ingegneria del software* [Software Engineering] (7 Credits)

- Course *Prova finale di laurea* [Final Examination - Graduation project] (3 Credits)

- Course *Advanced software engineering* (In English, 5 Credits)

2011-2012

- Course *Ingegneria del software* [Software Engineering] (10 Credits)

2010-2011

- Course *Ingegneria del software* [Software Engineering] (10 Credits)

2009-2010

- Course *Ingegneria del software* [Software Engineering] (10 Credits)

2008-2009

- Course *Ingegneria del software* [Software Engineering] B (5 Credits)

- Course *Progettazione con tecniche dell'Ingegneria del software* [Software Engineering Project] (5 Credits)

2007-2008

- Course *Informatica II (architetture HW e SW)* [Computer Engineering and Architectures] (10 credits)

- Course *Tecnologie per i Sistemi Informativi* [Information Systems Technologies] (10 Credits), B.Sc. Track on Business Management.

2006-2007

- Course *Informatica II (architetture HW e SW)* [Computer Engineering and Architectures] (10 Credits)

- Course *Tecnologie per i Sistemi Informativi* [Information Systems Technologies] (10 Credits), B.Sc. Track on Business Management.

2005-2006

- Course *Tecnologie per i Sistemi Informativi* [Information Systems Technologies] (10 Credits), B.Sc. Track on Business Management.

- Course *Progetto di basi di dati* [Database Project] (2,5 Credits)

2004-2005

- Course *Progetto di basi di dati* [Database Project] (2,5 Credits)

2003-2004

- Course *Progetto di basi di dati* [Database Project] (2,5 Credits)

TEACHING ASSISTANT IN COURSES AT POLITECNICO DI MILANO

2011-2012

- Course *Advanced Databases* (in English), exercise classes

2010-2011

- Course *Advanced Databases* (in English), exercise classes

2009-2010

- Course *Advanced Databases* (in English), exercise classes

2008-2009

- Course *Advanced Databases* (in English), exercise classes

2007-2008

- Course *Advanced Databases* (in English), exercise classes

2006-2007

- Course *Advanced Databases* (in English), exercise classes

2005-2006

- Course *Advanced Databases* (in English), exercise classes

- Course Tecnologie Informatiche per il Web [Web Technologies], exercise classes

- Course Tecnologie per i Sistemi Informativi [Information Systems Technologies], B.Sc. Track on Business Management, exercise classes

2004-2005

- Course Basi di Dati [Databases], exercise classes

- Course Basi di Dati Avanzate [Advanced Databases], exercise classes

- Course Informatica 3 (algoritmi e strutture dati) [Algorithms and Data Structures], exercise classes

- Course Basi di Dati [Databases], computer laboratory

- Course Tecnologie Informatiche per il Web [Web Technologies], exercise classes

- Course Sistemi informativi avanzati [Advanced Information Systems], exercise classes

2003-2004

- Course Basi di Dati [Databases], exercise classes

- Course Basi di Dati Avanzate [Advanced Databases], exercise classes

- Course Informatica 3 (algoritmi e strutture dati) [Algorithms and Data Structures], exercise classes

- Course Basi di Dati [Databases], computer laboratory

2002-2003

- Course Basi di Dati [Databases], exercise classes

- Course Basi di Dati [Databases], computer laboratory

- Course Informatica 1 [Computer Programming], exercise classes

2001-2002

- Course Basi di Dati [Databases], exercise classes

- Course Basi di Dati [Databases], computer laboratory

- Course Informatica 1 [Computer Programming], exercise classes

OTHER ACADEMIC TEACHING ACTIVITIES

- 2019: preparation of a MOOC for Politecnico and EIT Digital on Data Science for Business Innovation, and 4 modules of a MOOC for Politecnico on Data-driven Innovation for the Fashion Industry.

- 2015-2019: Courses and Modules at post-graduation masters organized by Cefriel, MIP, and Poli.Design. Topics covering: crowdsourcing, social media analysis, big data and NoSQL databases, Data Science (see below).

- 2017-2018: Courses on Data Design & Modeling, Knowledge Management, and Information Modeling Analysis at USI-Lugano

- 2012: Classes on Search and Crowdsourcing for the post-graduation Master Course on Centralized Systems at Cefriel

- 2010-2012: 2 cycles of courses at the Politechnic University of Lublin, Poland, on Model-driven Web and Software Development.

- 2007: Classes on Building automation and Web for the post-graduation Master Course on Interior Domotics Design at Politecnico di Milano, Design Faculty

- 2005: Recording of 5 classes (in English) on *Advanced Databases* for the joint M.Sc. program between Politecnico di Milano and University of Chicago

- 2003-04: Tutoring for the course Sistemi informativi, Online Graduation Program, Politecnico di Milano

- 2003: Preparation of teaching materials and recording of online classes for courses of Information Systems (with Prof. P. Fraternali) and Advanced Databases (with prof. S. Ceri) for Online Graduation Program, Politecnico di Milano

- 2003: Classes on Web Technologies for the post-graduation Master Course on Information Technology at Cefriel

- 2002: Classes on Web Application Design and Development for the post-graduation Master Course MEB at MIP (Business School of Politecnico di Milano)

- 2001: Classes on Web Application Design and Development for the post-graduation Master Course on Technologies for the Net Economy at Politecnico di Milano, Cremona

INDUSTRIAL TEACHING ACTIVITIES

- 2018-2020: Course on Social Media Analytics and Big Data at MIP BABD Master

- 2017-2019: Course on Social Media Analytics and Big Data at Poli.Design Digital Strategy Master

- 2017: Course on Social Media Analytics and Big Data at Poli.Design SNID Master

- 2016: Course on Social Media Analytics and Big Data at MIP Master for Management of Performing Arts

- 2015: Course of Enterprise Archtiecture at INAIL, Rome

- 2012: Course on Model driven methods and SOA architectures at UniCredit Leasing SpA

- 2006: Course on Database design at IwBank

- 2005: Courses on Web application design for WebRatio S.r.l. at MIP (Milano) and at DataConsult (Pordenone)

- 2004: Courses on Web application design for college teachers, Como Province

- 2004: Student tutoring on Databases and Information Systems (EU FSE project)

- 2003: Basic computer science courses for general public (EU FSE project and Regione Lombardia)

UNIVERSITY SERVICE

Marco Brambilla is the director of the Computer Science and Engineering track, both for the B.Sc. and M.Sc. level at Politecnico di Milano, starting from 2022.

Previously, he was involved in the activities and development of the Como Campus of Politecnico di Milano. He has been active in commissions and committees within Politecnico, dealing with the following aspects:

- 2018-2022: Responsible for the track T2D - ICT Engineering, Business & Innovation, within the Computer Science and Engineering program. Task includes definition of the track rules and courses, validation of study plans together with the responsible of the curriculum, and student support and interaction

- 2017-2019: Member of the PhD School board for the joint doctoral school of Politecnico di Milano and Bologna University on Data Science and Computation

- 2017-now: M.Sc. international students admission committee in Milano

- 2015-2017: M.Sc. students admission committee in Como

- 2015-1017: commission for the study plan and teaching strategy and tracks in Como Campus

- 2013-2016: commission for the improvement of the class scheduling in Como Campus

- 2015: scientific committee for the Lake Poli School initiative, a multi-disciplinary school for postgrad students located in Como

- 2010-2017: promotion and dissemination activities about the Como Campus at colleges and other schools

- 2010-2020: relations with startup initiatives and incubators (specifically related with PoliHub and ComoNext)

SUMMER SCHOOLS

Marco Brambilla has been organizer and scientific coordinator of the following summer schools:

- Social Business Process Management (SBPM) Summer School, June 17-20, 2012.

- Summer school on Multimedia Information Retrieval, June 22-26, 2009.

Students Supervision

Marco Brambilla has been advisor of 4 Ph.D. students, and coadvisor of 3 Ph.D. students.

PhD Students Advisor:

PHD.1. *Andrea Mauri.* 2012 - 2015, "Model-driven development of Crowdsourcing and Social Web Applications"

PHD.2. *Eric Umuhoza.* 2013 - 2016, "Model-driven development of Mobile and IoT Applications"

PHD.3. *Marco Di Giovanni.* 2017 - 2020, 'Content Analysis through Data Science and Deep Learning"

PHD.4. *Emre Calisir.* 2017 - 2020, "Data science methods for social studies on the Web"

PHD.5. *Andrea Tocchetti.* 2020 - 2024, "Data science and Crowdsourcing"

Others are ongoing.

PhD Students Co-Advisor:

PHD.1. *Bojana Bislimovska.* 2011 - *2013*, "Content-Based Information Retrieval for Model Repositories"

PHD.2. *Carmen Vaca.* 2011 - *2013,* "Social Network Influence Analysis"

PHD.3. *Christina Tziviskou* 2005 - 2008, "Development Methodologies for Semantic Web Applications"

PhD Thesis Committee Member:

Marco Brambilla has been external reviewer and PhD committee member for 5 PhD thesis in European universities, in Italy, France, and Spain.

Master and Bachelor Thesis Advisor:

Marco Brambilla has been advisor of more than 150+ B.Sc. and M.Sc. students.
A partial list of the most recent M.Sc. thesis works developed under his supervision include:

1. *Effects of social media engagement on brand awareness for Italian luxury fashion brands*, by Bashiri, Yasin

2. *Analytical assessment of binary data serialization techniques in IoT context*, by Biswal, Amrit Kumar, Al Mallah, Obada

3. *Time-conditional generative adversarial networks for augmentation of irregularly sampled time series*, by Corti, Lorenzo, Oppido, Nicolò

4. *A gamification framework for co-creation, policy making and social foresight*, by Tocchetti, Andrea, Brusadelli, Stefano

5. *A text segmentation technique based on language models*, by Ranzato, Phil Lodovico Riccardo

6. *Domain expertise-agnostic feature selection for the analysis of breast cancer data*, by Pozzoli, Susanna

7. *Analyzing bot activity on social media over political discourse. The case of Brexit*, by Spagnuolo, Ivan

8. *Multivariate time series deep clustering : customer segmentation by financial transactions*, by Porciani, Alex

9. *Text-based and graph-based analysis for fake news detection on social media*, by Nasca, Ennio

10. *A general approach to value identification of large scale geospatial data*, by Bigini, Gioele

11. *Social media posts popularity prediction during long-running live events. A case study on fashion week*, by Javadian Sabet, Alireza

12. *Big data and machine learning for global evaluation of habitat suitability of European forest species*, by Beker, Teo

13. *Understanding user similarity from social media using topic analysis*, by Sanfilippo, Paola

14. *Optimization of convolutional neural networks : transfer learning for robustness to image distortion through selective filter-level fine-tuning*, by Bianchi, Alessandro; Vendra, Moreno Raimondo

15. *Advanced analysis of web generated logs in model driven development approach*, by Khajehnoori, Mohammadhossein

16. *Generation of user navigation paths in web sites using generative adversarial neural networks and recurrent neural networks*, by Pavanetto, Silvio

17. *Pattern-based and voice-based virtual assistants for the design of IFML models*, by Molinelli, Davide

18. *Modeling and profiling of users based on news-sharing behavior on social media*, by Brena, Giovanni

19. *Improving topic modeling for textual content with knowledge graph embeddings*, by Altinel, Birant

20. *State management in single page Web applications*, by Velluto, Davide

21. *A study on implementation of a platform based on extraction of useful information from human-generated content on TripAdvisor*, by Rosolia, Giuseppe Dario

22. *A user modeling pipeline for studying polarized political events in social media*, by Napoli, Roberto

23. *A data science study on the use of social media as a marketing tool. The case study of the Italian luxury fashion sector*, by Malek Mohammadi, Narges; Badrizadeh, Hoda

24. *Modelling, analysis and prediction of information diffusion with graph databases and Apache spark*, by Ramírez Carrasco, Jorge

25. *Data science approaches for city-wide power consumption analysis*, by Ristic, Sava

26. *Extraction of relations between entities from human-generated content on social networks*, by Adriani, Marco

27. *Analisi di contenuti multimediali condivisi su social network per specifici settori industriali*, by Mannucci, Marco

28. *Community analysis using graph representation learning on social networks*, by Gasparini, Mattia

29. *Network analysis on conversation graphs in online social media*, by Sulistiawati, Amin Endah

30. *A big data analysis framework for model-driven Web analytics*, by Koka, Thanas

31. *Implementation of ChatBot for business environment in Italian Telco context*, by Abdollah, Ragheed Faik Hazem

32. *Analysis and comparison of cross-platform mobile development approaches*, by Isufi, Ardian

33. *Event-based user profiling in social media using data mining approaches*, by Arabghalizi, Tahereh; Rahdari, Behnam

34. *Domain-specific modeling and code generation for cross-platform mobile and IoT-based applications*, by Umuhoza, Eric

35. *Analysis of social media response in time and space to live events during the Milano Fashion Week*, by Donetti, Gianmarco

36. *Automatic generation of Web crud applications*, by Livraghi, Marco

37. *A model driven approach to the design and implementation of smart city based application using IFML*, by Unutmaz, Burak

38. *Inter application communication in mobile environment*, by Kostovski, Ognen

39. *Analisi dei social network per l'estrazione di informazioni rilevanti per l'editoria locale*, by Silini, Paolo

40. *Unsupervised methods for driving behaviour modeling and profiling*, by Mascetti, Paolo

41. *A model driven approach to the design of Internet of Things based applications using IFML*, by Socha Sánchez, Angela Marcela

42. *User engagement analysis of live events based on social media monitoring*, by Jafari, Roksana

43. *Embedding premium video in social streams*, by Solano, Nicolo'

44. *Bluetooth low energy, iBeacon and sensors enabled communities*, by Zerbinati, Francesco

45. *Methodologies for the development of crowd and social-based applications*, by Mauri, Andrea

46. *Understanding the dynamic of social media : analysing customer engagment trend in Instagram*, by Sinaei, Sepide; Sinaei, Sara

47. *Studying the correlation between contents published on different social network platforms*, by Aktan, Deniz Ece

48. *Experience and comparison between native and hybrid development approaches for mobile devices*, by Colombo, Giona

49. *Experiencing on model driven development of mobile applications with IFML*, by Yilmaz, Aysin

50. *Model driven Web analytics*, by Kilsedar, Candan Eylül

51. *Model driven development of iOS apps with IFML*, by Acero Salazar, Felix Javier

52. *Cross-platform mobile application generation with a model-driven approach based on IFML and cross-compilation*, by Sekulovski, Emilijan

53. *Relevance, relations and topics of interest in cities based on content mining from social networks*, by Allevi, Daniele; Losa, Luca

54. *Profilazione degli utenti nei social network basata su riconoscimento di entità e categorizzazione*, by Gasbarro, Marco

55. *Analysing compatibiity of the interaction flow modeling language (IFML) on a mobile application*, by Erol, Erhan

56. *Finding experts for better crowdsourcing*, by Ugurlu, Hafize; Ipek, Osman Uygur

57. *Dynamic control design for crowdsearcher system*, by Zhou, Jiayi

58. *Social resource and asset sharing : a case of social enterprise optimization*, by Umuhoza, Eric

59. *Smart mobility through analysis of social networks and crowd generated content*, by Tsvetanov, Radostin

60. *Personal process management*, by Ripamonti, Davide Maria Filippo; Bianchi, Pierfilippo

61. *CRF to find stock price correlation with company related Twitter sentiment*, by Shabunina, Ekaterina

62. *Model driven development of social network and crowdsourcing based application for service and time exchange*, by Kieu Quang, Thien

63. *Social reputation : reputation evaluation using sentiment analysis and Web search engines*, by Vandro, Luca Adalberto

64. *A social enterprise platform exploiting socialization, gamification and idea scaling*, by Amodeo, Andrea

65. *Social mobile applications for personal location based information management*, by Murillo Zea, Paul Alexis

66. *Recommendation for navigation paths over multidomain data on the Web*, by Ghigini, Federico; Luzzara, Nicola

67. *Metodi e tecniche per la gestione di processi personali e lintegrazione con i social network*, by Straccialini, Carlo

68. *Raccomandazione di visualizzazioni e percorsi esplorativi per risultati di ricerche multidominio su Web*, by Berlusconi, Mattia; Mauri, Andrea

69. *Model driven retrieval of model repositories*, by Furrer, Lorenzo; Celentano, Stefano

70. *Development of mobile search applications over structured web data through domain specific modeling languages*, by Akin, Ilker Zafer; Aral, Atakan

71. *Editor WYSIWYG come supporto per lo sviluppo model driven*, by Rivera, Marco

72. *Automatic layout management for entity aware search engine result pages*, by Cigardi, Laura

73. *Esplorazione di risultati di query multidominio*, by Parisi, Francesco

74. *Social networks: analysis and statistics for integrated social profiles*, by Musall, Denis

75. *Association, storage and retrieval of semantically described business processes using ontology*, by Ahammad, Jalal Uddin

76. *Rappresentazione grafica di interazioni all'interno di reti sociali online*, by Giacalone, Francesco

77. *Annotazione semantica automatica per ricerca e riuso di processi di business*, by Piatti, Maurizio

More details are available at this url:

https://www.politesi.polimi.it/browse?type=advisor&value=BRAMBILLA%2C+MARCO&rpp=100

Competitive Research Projects Activities

SCIENTIFIC LEADERSHIP

Marco Brambilla has been leading the Politecnico units for the following projects, for which he personally attracted funds.

- AutoMobile (2013-15). EU project on methods and tools for model-driven engineering of mobile software applications. Total funding: 1 MLN Euro, of which managed at Politecnico: 550K Euro. Managed people: 7 studs., 4 personnel.
- EIT Digital Cities and M.S. projects (2015-19) on smart city data collection and analysis. Total funding: over 3 MLN Euro, of which managed at Politecnico: 360K Euro. Managed people: 6 studs., 4 personnel.
- Trigger (2018-2020). EU H2020 project on improving citizens' involvement in public policy and foresight through technology, data science, gamification, and crowdsourcing. Total funding: over 1.5 MLN Euro, of which managed at Politecnico: 240K Euro. Managed people: 3 studs., 4 personnel.
- FaST – Fashion Sensing Technology (2016-2019). Lombardy Region SmartFashion project. Total funding: around 200K Euro, of which managed at Politecnico: 40K Euro. Managed people: 6 studs., 1 personnel.
- BeMyPlace (2017-2018). Lombardy Region SmartLiving project. Total funding: around 200K Euro, of which managed at Politecnico (DEIB part): 30K Euro. Managed people: 3 studs., 1 personnel.

PROJECT TECHNICAL LEADERSHIP AND SCIENTIFIC CO-LEADERSHIP

Marco Brambilla has been co-leading the Politecnico units for the following projects:

- Cooper (2005-08). EU project on architecture and methodology for the implementation of collaborative Web applications. Funding: 200K Euro ca. Managed people: 4 students.
- ESA MyHMI (2005-07). Italian project on software models and architectures for embedded low-performance industrial and home devices. Funding: 600K Euro ca. Managed people: 12 studs., 3 personnel.
- Pharos (2008-10). EU project on framework of federated search engines for audiovisual content and enterprise search. Funding: 500K Euro ca. Managed people: 10 studs., 4 personnel.
- SeCo (2008-13). EU project on rank-aware composition of multi-domain search services; exploratory search. Funding: 2.500K Euro ca. Managed people: 18 studs., 5 personnel.
- BPM4People (2011-13). EU project on methods and tools for Social Business Process Mgmt. and social enterprise. Funding: 600K Euro ca. Managed people: 8 studs., 6 personnel.

PROJECT PARTICIPATION

Marco Brambilla participated also to the following projects:

- Cisco.com applied research (2001)
- W3I3 EU project (2001)
- WebSI EU project (2001-2004)
- Cooper EU project (2005-2008)
- Cubrik EU project (2011-2014)
- MODAcloud EU project (2012-2015)
- UrbanScope Politecnico Project (2014-2016)
- Safari Njema Polisocial Project (2019-2020)
- HOPE PRIN project (2019-now).

Scientific Community Service

Marco Brambilla is member of ISWE (International Society of Web Engineering) and is steering committee member of ICWE (International Conference on Web Engineering).

REVIEW AND EVALUATION OF RESEARCH PROJECTS

Marco Brambilla has collaborated with several institutions as reviewer of project results and as evaluator for project proposals during the selection phase of open calls for projects.

- 2015-16: Reviewer of research and innovation projects for Regione Emilia Romagna
- 2013: Reviewer of research and innovation projects for Provincia di Trento
- 2012: Reviewer of research and innovation projects for Provincia di Trento
- 2011: Reviewer for European Commission. STREP projects of 7FP
- 2011: Evaluator of research proposals *FIRB - Futuro* (Italian Ministry of University and Research)
- 2010: Reviewer for European Commission. STREP projects del 7FP
- 2010: Evaluator of research proposals for European Commission. STREP projects del 7FP
- 2010: Evaluator of research proposals for NWO (Netherlands Organisation for Scientific Research)
- 2010: Evaluator of research proposals for PRIN program (Italian Ministry of University and Research)
- 2009: Reviewer of European Commission. STREP projects of 7FP
- 2009: Evaluator of research proposals for NWO (Netherlands Organisation for Scientific Research)
- 2009: Evaluator of research proposals for Provincia di Trento

CONFERENCES ORGANIZATION

- ICWE (International Conference on Web Engineering) 2021: PC chair
- ICWE (International Conference on Web Engineering) 2020: Tutorial chair
- SAC (Symposium on Applied Computing) 2017 - 2019: Track chair
- ESOCC (Business Process Management Conf.) 2018: Industrial Chair
- BPM (Business Process Management Conf.) 2017: Industrial Chair
- ICWE (International Conference on Web Engineering) 2016: Track chair
- ICWE (International Conference on Web Engineering) 2015: Ph.D. Symposium chair
- ICWE (International Conference on Web Engineering) 2014: Track chair
- ICWE (International Conference on Web Engineering) 2013: Track chair and steering committee liason
- ICWE (International Conference on Web Engineering) 2012: Program Committee chair
- ICWE (International Conference on Web Engineering) 2007: Organization chair

BOARD OF INTERNATIONAL JOURNALS

- Associate editor of SIGMOD Record (ACM) (2015-2019)
- Associate editor of Advances in Human Computer Interactions (Hindawi) (2017-now)
- Associate editor of Journal of Web Engineering (Rinton) (2019-now)

REVIEWER OF INTERNATIONAL JOURNALS

- DKE Journal on Data and Knowledge Engineering Journal (Elsevier Science) (2003-2010)
- Journal on Software and System Modeling (SOSYM) (2011-2019)
- ACM Transactions on the Web (2008-2013)
- IEEE Transactions on Systems, Man, and Cybernetics (2010)
- ACM Internet Computing (2008)
- IET Software (2007-2011)
- IEEE Transactions on Software Engineering (2007)
- Elsevier SCP (2006)
- Journal of Web Engineering (2006-2012)

WORKSHOP ORGANIZATION

- MDE Intelligence (workshop on Modeling and AI) at Models 2019
- Intelligent Exploration of Semantic Data workshop (IESD 2016 and IESD 2015) at ISWC 2016 and 2015
- IEEE Workshop on Communicating Business Process and Software Models (CPSM 2013) at ICSM 2013
- CrowdSearch workshop at WWW 2012
- Model-driven Web Engineering workshop (MDWE 2012) at ICWE 2012
- Very Large Data Search workshop (VLDS 2012) at VLDB 2012
- CloudMDE 2012, 2014, and 2015 workshop at ECMFA 2012
- Model-driven Web Engineering workshop (MDWE 2011) at ICWE 2011
- Workshop on Search, Exploration and Navigation of Web Sources (ExploreWeb 2011) at ICWE 2011
- Very Large Data Search workshop (VLDS 2011) at VLDB 2011
- International Workshop on Adaptive and Self-Managing Enterprise Applications (ASMEA 2005)

Publications

Updated lists of publications by Marco Brambilla are available online at:

- Google Scholar: https://scholar.google.it/citations?user=YQV_ChkAAAAJ&hl=en
- DBLP: http://dblp.uni-trier.de/pers/ht/b/Brambilla_0001:Marco
- Scopus: https://www.scopus.com/authid/detail.uri?authorId=8863963800
- Orcid: https://orcid.org/0000-0002-8753-2434

A complete list is also available at the end of the CV.

Invited Talks

2022:

- Exploring the bi-verse: a trip across the digital and physical ecospheres. WISE conference, Biarritz (France), November 2022.

2019:

- Making Sense and Giving Sense to Modeling and Models. Invited speech at CEA, Paris, July 2019.

2018:

- Experiences in Technology Transfer in Software Engineering. Keynote speech at Sistedes, National Days of Software Development and Deployment, Sevilla, September 2018.

2017:

- Myths and Challenges in Knowledge Extraction and Big Data Analysis on Human-Generated Content from Web and Social Media Sources. Keynote at KDWeb 2017
- Model Me If You Can - Challenges and Benefits of Individual and Mass Data Analysis for Enterprises. Keynote at ICEIS 2017, Porto, Portugal, April 2017.

2016:

- Model-driven Development of Software Applications Front-end with IFML. Invited speech at TuDelft, August 2016.

2015:

- Modeling and Execution of Software User Interfaces. Keynote speech at MODELSWARD 2015, Anger, France, February 2015.

2014:

- Invited talks (cycle of two seminars) "Model-driven specification and esecution of Business Processes" at Steven's Institute, Hoboken, NJ, USA, March 2014.

2013:

- Invited talk "Exploratory Search and Social Network Based Crowdsourcing" at L'Aquila University, March 2013.
- Invited talk "Modeling the front end of software applications with IFML" at Florida Atlantic University (FAU), FL, USA, September 2013.
- Invited talk "Mobile, BPM e Cloud tramite MDD: una leva tecnologica per il business" at SMAU 2013, Milano, 23 Oct. 2013.
- Invited talk "The standardization process: challenges and benefits. The IFML experience in OMG" at MUMIA EU COST Action meeting, Thessaloniki, November 2013.
- Invited talk "Modeling the front end of software applications with IFML" at Università di Genova, December 2013.

2012:

- Invited talk "Exploratory Search upon Semantically Described Web Data Sources: Service registration and methodology" at SSW Workshop at VLDB Conf., Istanbul, August 2012.
- Invited talk "Web Data Management through Crowdsourcing upon Social Networks" at SSW Workshop at ASONAM conference, Istanbul, August 2012.
- Invited talk "BPM e CLOUD: la partnership ideale" at SMAU 2012, Milano, 17 Oct. 2012.

2011:

- Invited talk "Social BPM: prospettive e impatto sull'organizzazione" at SMAU 2011, Milano, 19 Oct 2011.
- Invited talk "Modellazione concettuale: l'esperienza di WebML e WebRatio" at Università di Genova, December 2011.

2010:

- Invited talk "Social network management per gli enti pubblici" at Fondazione Cariplo, Milano.
- ùùùInvited seminar "WebML and model-driven development of BP-based Web applications" at Ecole des Mines de Nantes, Nantes, France, May 2010.
- Invited talk "Le sfide e i trend innovativi del BPM (Business Process Management) al servizio dell'azienda" at SMAU 2010, Milano, 20 Oct. 2010.

2009:

- Invited talk "Engineering search computing applications: vision and challenges" at Conference ACM ESEC/FSE, Amsterdam.

2005:

- Invited seminar "Exception handling within workflow-based Web applications", 4 Nov. 2005 at University of California, San Diego (USA), Department of Computer Science & Engineering.

2004:

- Invited seminar "Modeling and implementation of workflow-based and Web services enabled Web applications", 5 Apr. 2004 at University of California, San Diego (USA), Department of Computer Science & Engineering.
- Invited seminar "WebML: a modeling language for data-intensive Web applications", 29 Mar. 2004 at University of California, San Diego (USA), Department of Computer Science & Engineering.
- Invited seminar "Modellazione concettuale di applicazioni Web data-intensive", 6 Feb. 2004 at Dipartimento di Informatica e Sistemistica dell'Università La Sapienza di Roma.
- Invited talk "Modeling and implementation of workflow-based Web applications", 17 Oct. 2003 at Harvard Medical School, Childrens' Hospital, Boston (USA).

2002:

- Invited seminar "Conceptual modeling of Web applications", Aug. 2002, EDBT Summer School, Cargese (France).

TUTORIALS

- "Engineering Web Search Applications" at the 10th International Conference on Web Engineering - ICWE 2010 (July 2010, Vienna, Austria). [url: https://icwe2010.webengineering.org/Conference/tutorials.html#T2]
- "IFML: Building the front end of Web and Mobile applications with OMGs Interaction Flow Modeling Language" at the 14th International Conference on Web Engineering - ICWE 2014 (July 2014, Toulouse, France). [url: http://icwe2014.webengineering.org/tutorials-selected/]