Curriculum Vitae

Stefano Mizzaro

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Contents

1 General information

- I was born in Udine (Italy), on January 21, 1966. I am male, married, I have two children. Nationality: Italian.

- Current permanent position: Full professor at the Department of Mathematics, Computer Science, and Physics University of Udine, Italy.

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2 Education

- December 10, 1992: I received my Master's degree in Computer Science ("Laurea in Scienze dell'Informazione") with full marks (110/110) at the University of Udine (Italy).

- November 1993 – February 1997: I have been a Ph. D. student in Engineering of Information ("Dottorato in Ingegneria dell'Informazione") at the University of Trieste (Italy). I received my Ph. D. in September 1997.

3   Research activity

My overall research area is Information Retrieval (IR), and my main research interest is IR evaluation. Though, I have been, and still am, working on other different fields like: mobile and context aware systems, scholarly publishing, crowdsourcing, misinformation detection. Overall, I published about 150 papers, on Google scholar I have more than 3300 citations and an h-index of 25 (https://goo.gl/aTvHOR); on Scopus I have more than 1200 citations and an h-index of 16. My two most cited research papers, of which I am single author, count more than 1200 citations on Google Scholar. I have received six awards for my papers; again, two of them are for papers of which I am single author.

My research contributions are described in detail and mainly in chronological order in the following subsections.

3.1   Master's degree and post-Master's

- My research activity started with my Master's ("Laurea") thesis [t1], supervised by Prof. Marco Colombetti (Department of Electronic Engineering and Information Sciences, Polytechnic of Milan, Italy). The thesis is in the field of AI, more specifically on semantic-pragmatic aspects of computational linguistics (or Natural Language Processing), namely temporal presuppositions (*i.e.,* problems related to the use of the words 'before' and 'after' in natural language) and counterfactuals (*i.e.,* sentences—or utterances—referring to a non-real course of events). In my thesis I developed the *recursive models*, a computational tool for modeling, at a semantic-pragmatic level, utterances containing these linguistic phenomena, and I implemented a computer system that uses the recursive models for interacting in natural language with the user. This work led to some publications [J1, C1, c4].

- December 1992 – February 1994: I worked with the AI group at the AI Laboratory of the Department of Mathematics and Computer Science of the University of Udine, supervised by Prof. Carlo Tasso and Giorgio Brajnik. I worked within the FIRE (*Flexible Information Retrieval Environment*) project, situated in the field of *intelligent IR*, that studies if and how AI techniques can profitably be used in order to improve the effectiveness of IR systems. The specific aim of FIRE project was to design, implement and evaluate a knowledge based IR system.

3.2   PhD

From November 1993 to February 1997 I have been working at my Ph. D. , supervised by Prof. Giuseppe O. Longo (Department of Electrotechnics, Electronics and Computer Science, University of Trieste) and Prof. Carlo Tasso (Department of Mathematics and Computer Science, University of Udine).

My Ph. D. thesis [t2] concerns intelligent user interfaces to IR systems, *i.e.,* IR systems capable of directly interacting with the user on the basis of the knowledge represented in some knowledge base. The thesis has two parts: theoretical foundations and applications.

- **Conceptual foundations of IR.** From the theoretical-foundational side, I analyzed the three notions (crucial for IR) of *information*, *information need*, and *relevance*, trying to formally define such concepts and to sketch a formal cognitive framework for IR [C4, c5] (with the first of these papers I received the *CoLIS 2 Young Scientist Award*, a prize for the best paper presented at that conference by a young researcher). I investigated in detail the concept of relevance: how many, and which, *types of relevance* are there [J3, C3, C5, c1]? And what types have already been identified [J2, J4]? With the paper [J3] I received the Informer (British Computer Society IR Group newsletter) *Best Student Paper in IR*, an award for the best paper written by an European student in the period 1st November 1996 – 1st November 1997. The two papers [J2, J3] (of which I am the single author) count more than 1000 citations on Google scholar.

I also started to study epistemological, philosophical, and cognitive issues, stimulated by Giuseppe O. Longo interests (and I already touched on those issues with Marco Colombetti during my Master's degree): I reflected on problems like "What is knowledge? Information? Data? Meaning?" [c2].

- **Evaluation of IR systems.** From the practical side, I studied if and how AI techniques can be profitably used to allow the users of an IR system to express their needs in a more correct and complete way, and which methodology to use to evaluate user interfaces to IR systems. More specifically, I tried to improve the effectiveness of the reformulation phase; this work led to the FIRE system [j1] and to its evaluation [C2, j2, c3].

3.3   Postdoc

From 1997 to 2000 I continued my research in the IR field, funded by some grants. More details follow, in chronological order.

- July–August 1997: I supervised the implementation of a search engine for JHEP (*The Journal of High Energy Physics*, see `jhep.sissa.it`), an electronic journal run at the SISSA–ISAS (International School for Advanced Studies, Trieste, Italy).

- 15 September 1997 – 15 September 1998: I have been a grant holder at Fondazione Ugo Bordoni (Rome, Italy). The topic of the grant was the evaluation of information retrieval and filtering systems [C8, J5].

- February 1998: I have been an external consultant for the group directed by Vincent Torre at SISSA–ISAS, for the implementation of a biological data base.

- October – December 1998: I have been an external consultant for the above mentioned JHEP project at SISSA. I designed an information filtering system and proposed a new model for the dissemination of scientific knowledge [C10, J6].

- November 1998 – October 1999: I have had a CNR (Italian National Research Council) grant at the Department of Mathematics and Computer Science, University of Udine. The topic of the grant was "Intelligent interfaces for information access: how to represent users needs". I have continued the researches in my Ph. D. thesis and studied the disagreement among relevance judges [C6, C7].

- 15 June 1999 – 15 September 1999: I have been a visiting researcher at Microsoft Research (Cambridge, UK), with Stephen Robertson. I have been working on image retrieval.

- October 1999 – October 2001. I got a grant for "Young researchers" ("Progetto giovani ricercatori") from the University of Udine to continue my research of the concept of information, with a broader approach that goes beyond IR [C9].

- March – August 2000. I have had a research assistant contract within the TIPS projects.

3.4   Researcher

From September 2000 to October 2006 I have had a permanent position as Researcher ("Ricercatore", similar to Assistant professor). The position was at the Faculty of Science, and at the Department of Computer Science, Udine University, for the discipline Information Processing Systems ("ING-INF/05: Sistemi di Elaborazione delle Informazioni").

In the 2000–2006 period my research continued on the topics of the previous years, again in the broad information access field and on both conceptual/foundational and practical aspects. I also tried to broaden my interests and I got interested in scholarly publication and communication, in mobile and wireless context-aware devices and systems, and in object-oriented and agent-oriented software development. Results are described in more detail in the cited publications, and can be summarized as follows.

- **Advanced interfaces for information access.** With other colleagues I have been working on designing, implementing, and evaluating some user interfaces for information access. Some of these systems support the user during the query formulation and reformulation activities; others help to filter the retrieved information on the basis of a user profile describing his or her interest [J5, J8, C12]. These systems have been applied to different areas, including Web pages, scholarly papers, and e-mail messages [C13, E1, c6, J11], and some of them are specifically aimed at mobile devices. On information access with mobile devices I co-edited the volume [E2].

- **Clustering search engines on mobile devices.** Within a cooperation with researchers at Fondazione Ugo Bordoni, Rome, we studied the effectiveness of search engines that present the retrieved results as a hierarchy of clusters. We specifically aimed at understanding the effectiveness on mobile devices. We implemented and evaluated the CREDINO system [C23].

- **IR effectiveness metrics.** I proposed and evaluated a novel effectiveness metric for IR systems. The ADM (Average Distance Measure) metric [C11] is different from commonly used metrics because it is based on a notion of relevance that is not binary (either a document is relevant or it is not) but continuous (a document can be more or less relevant than another one – as well as more or less retrieved by a search engine). ADM has also been experimentally evaluated with positive results [J10, C16, C25]. I also started a more systematic survey and analysis of existing IR effectiveness metrics [C24].

- **Quality control in scholarly publication.** I continued my research (started in [C10, J6]) on the new model for scholarly dissemination and peer review based on reviews provided by readers [J9]. I refined the proposal and experimentally evaluated it. Some theoretical and conceptual arguments, and the results of the simulations, indeed seem to demonstrate that judgments expressed by the reader can effectively replace of supplement peer reviews, and that the system seems to be able to guarantee the quality of scholarly literature even without peer review.

  On this topic, I also gave an invited talk at the "EASE Seminar - Habits in Science Communication and Science Publishing", Barcelona, 29 April 2005. EASE is the European Association of Science Editors. The title of my talk was: "Peer review and Internet: Threats, opportunities, and an alternative approach".

- **The concept of relevance in IR.** I continued my studies on the concept of relevance, in two directions: I investigated whether advance computational linguistics techniques can be useful to exploit beyond topical relevance criteria in documents and queries[C15]; and I studied the concept of relevance when using mobile devices for information access [C14, J12, E2]. I also published the invited editorial [J14].

  I have been invited to participate to the panel "Advancing Relevance Research: Theory Integration, Methodological Progress, and Critical Questions" at the "2003 Annual Meeting of the American Society for Information Science and Technology", 19–22 October 2003 (`www.asis.org/Conferences/AM03/`).

- **Conceptual models of information.** I continued my conceptual and foundational research on the concept of information [J7].

- **Object- and Agent-based local search.** I participated in a project aiming at applying advanced techniques of object oriented analysis and design and of multiagent systems to improve a software for local search and timetabling, with Andrea Schaerf, Luca Di Gaspero and a student [C17].

- **Mobile Context-Awareness.** I studied the context-aware theme. With some colleagues (co-authors of the relevant publications) and in cooperation with CRS (Vimar research center, `www.vimar.com`), that partially funded some research projects, we proposed a novel

framework, named MoBe (Mobile Being) to automatic download and execution of context-dependent applications on mobile devices. These research projects lead to the publications [C20, C21, C22]. I also co-edited a special issue of the Personal and Ubiquitous Computing journal [E3]. With Vincenzo Della Mea and some students we studied the effectiveness of Java Micro Edition for the development of telemedicine applications on mobile devices [C18, C19, J13].

From July 2006 to October 2006 I spent 4 months at Microsoft Research (Cambridge, UK) as a visiting researcher. I cooperated with Steve Robertson on different projects on IR effectiveness evaluation.

3.5   Associate and Full professor

From November 2006 to September 2019 I have been Associate Professor, and since October 2020 I am Full Professor. Both are permanent positions, full-time, at the Department of Computer Science, Udine University, for the discipline Information Processing Systems ("ING-INF/05: Sistemi di Elaborazione delle Informazioni"). I have been, and still am, both continuing previous research and undertaking novel research directions, as detailed in the following.

- **Relevance.** On a conceptual level, [J27] analyzes the concept of relevance in the real world, with reference to places, people, etc. More pragmatically,and relying on a crowdsourcing approach (see below), the idea of using magnitude estimation to gather continuous relevance values (in place of binary or categorical as it is usually done) is proposed and experimentally validated in [C51, C53, C57, J30]. Other fine grained relevance scales are studied in [C70], and their transformation in [C78]. The time used to express a relevance judgement is studied in [C62] and the agreement between relevance assessors is studied in [C66, C67]. Artificial relevance profiles (of ranked lists of retrieved documents by IR systems) are studied in [C77].

  Fine grained scales are used in [C75, C80, C81] for gathering truthfulness values, with the aim of fake news and misinformation detection; again on the same topic, news accuracy is studied by means of a multidimensional approach in [C74].

- **Evaluation metrics.** I continued my work on IR effectiveness metrics. In [J15] the last results on the ADM metric are presented. I am also working at a long, detailed, and complete survey of IR effectiveness metrics.

  Within the 3-SHIRT research project (PRIN 2006) the evaluation of retrieval effectiveness of three dimensional objects and models has been discussed [C34].

  In [C66] an agreement-based effectiveness metric is proposed.

- **TREC data analysis.** In [C27] I have proposed, with Stephen Robertson, a novel way of analysing TREC results. In [C30] I presented an alternative approach. In [J17, c10, C45, c12, C63, C72, J34, J36] we discuss the idea of using fewer topics in TREC and TREC-like evaluation initiatives. In [C42] the proposal of evaluating, in a TREC-like setting, different systems on different topics is discussed. In [C46] TREC is analyzed from the novel viewpoint of engineering topics, besides systems. In [c13] it is proposed to adopt the same approach to the evaluation of recommender systems. In [C52, C56] the related but independent idea of using different document subsets is studied. In [C60, C64] we study whether end-users are able to predict the difficulty of queries (indeed, TREC topics), to fine tune retrieval systems and evaluation. In [C79] we analyze the overall effect of topic difficulty on IR evaluation.

  In [J33, J37] we study TREC-based effectiveness evaluation without human relevance judgments; the dual problem of topic difficulty estimation is analyzed in [C69].

  In [C71] we propose IRevalOO, and alternative to trec_eval which is more general and extensible.

- **Mobile context-aware systems.** We continued our work on providing relevant information to mobile device users on the basis of their context. MoBe internal inferential mechanism based on Artificial intelligence techniques is described in [C31, J16]. In [J19] we describe MoBe evolution and adaptation to Web page retrieval, that lead to the Context-Aware Browser (CAB). In [C32, C41, J20] we propose and use a TREC-like benchmark approach for effectiveness evaluation of MoBe and CAB. In [J22] the CAB is extended towards a more social approach, based on tags.

  I also continued to work on mobile clustering: we extended the CREDINO system to work on small screen devices and evaluated it [J18]; and we also proposed and evaluated an alternative visualization technique for the clusters, based on tagclouds [c8].

  In [C48, C49, C55, C58, J28, C59] we study the similarity of users on the basis of their models built from their activity on social networks (Twitter) and the locations they visit more often. To this aim we classify tweets by means of text-enrichment.

  I also co-auther a book on Mobile IR [B1], the first on that topic [J35].

- **Web 2.0.** With other colleagues and students, we have tried to exploit the ideas of Web 2.0, or Social Web. We proposed the integration of "2.0" services (blogs, Wikipedia, Flickr, YouTube, Second Life, tags, etc.) to provide relevant information to visitors of museums, libraries, archeological sites, etc., directly on visitor's own devices (phones, tablets, etc.) [C28, C29].

- **Destination prediction.** With some students we propose a novel model for "pre-destination": we aim at reliably predicting trajectory and destination of a user on the basis of the data gathered by means of his/her mobile device. In [C33, C35] some preliminary results are presented.

- **Crowdsourcing.** I tried to understand whether the crowdsourcing marketplaces available on the Web can be exploited to study the beyond topical relevance criteria (specifically for e-commerce and geographic IR) [C39, c9] and whether they can be used in TREC-like evaluation initiatives [C40, J23]. Paper [C40], although just a workshop paper, counts more than 180 citations on Google scholar. In [C43, J26] we combine crowdsourcing and mobile devices, with the aim of harnessing the workforce of people having short intervals of free time and their mobile devices. In [J25] we study the reliability of the crowd to label medical images and in [C61] to extract keyphrases from Arabic texts.

- **Readersourcing.** The work on the new model for quality control in scholarly publication has been refined and implemented, and named Readersourcing (crowdsourcing to the readers the peer review task) [J24, J32, c14, c15]. I also applied the model to a different environment [C36].

- **Axiometrics.** I have been, and still am, trying to propose some axioms that any IR effectiveness metric should satisfy. The rationale is that we have more than 100 IR effectiveness metrics, and counting, and we can not yet claim that we completely understand them. The first results are described in [C44, c11, C50]. We have also presented two tutorials based on the Axiometrics approach [C47, C54], organized a workshop on the more general theme of axiomatic thinking [C65, J31], and a more complete publication is in press [J38]. We have also adopted the same approach for the related but different problem of ordinal classification [C82].

  The importance of an axiomatic approach, or at least a formal approach, to IR effectiveness evaluation is discussed more generally in [C68]. Another theoretical approach is presented in [C73, C76].

- **Teaching of Web Information Retrieval.** In [C26, J21] I investigated what is the most effective way to teach IR, with a focus on Web IR and search engines.

- **Network science and IR.** I have proposed an IR model based on network science [c7]. This research is still at a preliminary stage and awaits resources for an experimental evaluation.

- **Misinformation.** In the last couple of years I have been particularly focusing on studying, analyzing, and detecting misinformation and so called "fake news", with various approaches and for various reasons (including ethical motives, teaching the new course on Social Computing, and a joint Facebook grant with Gianluca Demartini and Damiano Spina). From a theoretical standpoint, in [C82] we propose a novel metric for the ordinal classification task, which is usually the abstract task corresponding to assessing truthfulness, that is not judged on a binary scale but more often on three, six, or even one hundred levels. In [C75, C80, C81] we experiment in using crowdsourcing to assess truthfulness on fine grained scales, and taking into account assessor's behavior, background, and bias. In [C74] we study the usage of a multidimensional quality scale for fake news assessment through crowdsourcing.

4 Awards

The quality of my scientific contribution has been recognized by means of the following five awards:

1) October 1996: *CoLIS2 Young Scientist Award* for the best paper [C4] presented by a young researcher at the CoLIS2 conference.

2) March 1998: *Best Student Paper in IR*, awarded by "Informer" (British Computer Society IR Group newsletter) for the best paper [J3] by an European student in the period November 1996 – October 1997.

3) August 2015: *Best paper award — Honorable mention* awarded by ACM Special Interest Group in Information Retrieval for the paper [C57] presented at SIGIR 2015.

4) March 2016: *Best paper award* for the paper [C59] presented at the NewsIR@ECIR2016.

5) April 2016: *Highly Commended Paper in the 2016 Emerald Literati Network Awards for Excellence* for the paper [J27].

6) April 2020: *Best short paper award* for the paper [C80] presented at ECIR 2020.

   I also received the "Best Meta-reviewer Award" for the ECIR 2015 conference.

5 Organizational and service activity

5.1 Research projects

Some of my research work has been carried on in the context of some research projects, in which I have been involved from the proposal writing:

- October 1999 – October 2001. I got a two year grant for young researchers ("Progetto giovani ricercatori"). Grant amount: 8M Lira (some thousand euros). Topic of the grant: foundational understanding of the information concept.

- February 2000 – July 2002. TIPS project (Tools for Innovative Publishing in Science, Project IST-1999-10419), Information Society Technologies (IST) Programme, within the 5th European Union Framework. Total project budget: 1.100.000 euros. Project duration: 30 months. Udine University budget: di 230k euros.

- May 2002 – May 2004. InDiCo project (Integrated Digital Conferencing, Project IST-2001-34306), again within the IST 5th EU framework programme. Two-years follow up of previous TIPS project.

- January 2004 – December 2006. ICT for EU-India Cross Cultural Dissemination project, within the "EU-India Economic Cross Cultural Programme".

- In 2005 I managed a project in cooperation with the Over.IT company (Pordenone, Italy) about a mobile devices based optimization of a moving fleet. Budget: 40k euro.

- In 2006 I managed another project for geomarketing, again with Over.IT company. Budget: 40k euro.

- February 2007 – February 2009. I have been Principal Investigator of Udine research unit for the national PRIN 2006 project "Tecniche di Indicizzazione e Reperimento di Forme Tridimensionali (3-SHIRT)" (Indexing and retrieval techniques of three dimensional shapes (3-SHIRT)). Duration: 2 years. Budget: 73k euros.

- September 2007 – September 2010. I participated at the Project FIRB-MIUR RBIN04M8S8, "Istituto internazionale per la matematica applicabile e le scienze dell'informazione" (International institute for applicable mathematics and information sciences).

- May 2008 – May 2010. I participated at the regional project (L.R. 26/2005) "InfoBC: Informatica per i Beni Culturali: servizi innovativi mobili e 3D per il turismo" (InfoBC: Informatics for Cultural Heritage: mobile and 3D innovative services for tourism).

- December 2012 I received a research donation from Cesped company (Italy) to design, implement, and evaluate an enterprise social network. Budget: 44k euro.

- December 2012 – December 2013 I have been the recipient, as Principal Investigator, of a Google Research Award on the Axiometrics project. Budget: 47500 US dollars.

- April 2018. I received a research donation from SISSA-Medialab (Italia) for the project "R@SM: Readersourcing @ Sissa Medialab". Budget: 37.000 euro.

5.2 Other funding

I also received the following participation grants for conferences or visit:

- September 1996: Participation grant to the AI*IA-97 conference (Italian Association for Artificial Intelligence) (Naples, Italy).

- July 1997: participation grant to the SCIE97 Summer School (Frascati, Italy).

- March 1998: participation grant for the BCS-IRSG98 conference (Grenoble, France).

- April 1999: participation grant for the BCS-IRSG99 conference (Glasgow, UK).

- September 1999: ERCIM participation grant for the ECDL'99 conference.

- February 2012: reimbursement from RMIT University (Melbourne) for participation at the SWIRL 2012 invitational workshop.

- Year 2014: reimbursement from RMIT University (Melbourne) for travel and accommodation expenses during my sabbatical year.

- January 2015: grant ESF ELIAS—Short Visit Grant for one week visit to Julio Gonzalo, UNED, Madrid (Spain).

- October 2015: grant ESF ELIAS—Short Visit Grant for one week visit to Gianluca Demartini, University of Sheffield (UK).

- November-December 2015:reimbursement from Toulouse University (France) for a two week visit for scientific collaboration with Prof. Josiane Mothe.

- February 2018: reimbursement from RMIT University (Melbourne) for participation at the SWIRL 2018 invitational workshop.

- December 2017 – November 2018: I have been the academic tutor ("Scientific Director") of the grant "Big data, IoT and Cloud: ax explorative study of the data from gas, water, and electricity smart meters" ("assegno di ricerca Big data, IoT e Cloud: uno studio esplorativo dei dati ricavati da contatori smart del gas, dell'acqua e dell'elettricità", funded by finanziato dall'FSE nell'ambito del progetto *HEaD "HIGHER EDUCATION AND DEVELOPMENT" UNIUD - GRUPPO 1 OPERAZIONE 2*, iin collaborazione con AcegasApsAmga S.p.A.

5.3   Scientific meeting and events

I have (co)organized the following scientific meetings:

- I co-organized (with Carlo Tasso) the Workshop "Personalization Techniques in Electronic Publishing on the Web: Trends and Perspectives" held on 28/5/2002 at AH2002 conference (Malaga) (`www.dimi.uniud.it/~mizzaro/AH2002/`). Proceedings have been published as [E1].

- I co-organized (with Marco Fabbrichesi, Stevan Harnad and Corrado Pettenati) the "Workshop on Peer Review" held on 23-24/5/2003 in Trieste (`www.sissa.it/~marco/ws.html`).

- I co-organized (with Pekka Ala-Siuru, Nicholas J. Belkin and Oscar Mayora-Ibarra) the workshop "AI Moves to IA: Workshop on Artificial Intelligence, Information Access, and Mobile Computing" held on 11/8/2003 at the IJCAI 2003 conference (International Joint Conference on Artificial Intelligence) Acapulco, Mexico (`www.dimi.uniud.it/workshop/ai2ia/`).

- I was in the organizing committee of the conference "Mobile HCI 03: Fifth International Symposium on Human Computer Interaction with Mobile Devices and Services", held in Udine on 8–11/9/2003 (`hcilab.uniud.it/mobilehci/`).

- I co-organized with Fabio Crestani and Mark Dunlop) the "Workshop on Mobile and Ubiquitous Information Access" held on 8/9/2003 at the conference "Mobile HCI 03: Fifth International Symposium on Human Computer Interaction with Mobile Devices and Services", Udine (`www.dimi.uniud.it/workshop/mir/`). Besides the unpublished proceedings, the workshop led to the publication of a Lecture Notes in Computer Science volume [E2]; the volume contains extended and revised versions of the work presented at the workshop, plus some more invited papers.

- I co-organized (with Fabio Crestani e Matt Jones) the "Workshop on Mobile and Ubiquitous Information Access" (`www.cis.strath.ac.uk/muia04/`), held on 13/9/2004 at the conference "Mobile HCI 04: Sixth International Symposium on Human Computer Interaction with Mobile Devices and Services", Glasgow.

- I co-organized (with Paolo Coppola) the "First International Workshop on Quality Control in Digital Libraries (QCDL'06)", held in Udine on 27-28/4/ 2006 (`euindia.dimi.uniud.it/wo6.htm`).

- I created, with Massimo Melucci and Gabriella Pasi, the workshop series "Italian Information Retrieval (IIR) Workshop", which is being held yearly since 2010 and involves some dozens of mainly Italian researchers. I have been in the Program committee from 2010 to today, I have been Program Chair in 2010 and 2011 [e1, e2], and in the steering committee for the two following years.

- I served as PC chair of EVIA 2014: The Sixth International Workshop on Evaluating Information Access (Tokyo, Japan).

- I served as Tutorial chair of ECIR 2016 (Padova, Italy) [J29].

- I have been PC chair for short papers of ICTIR 2016 (Newark, DE, US).

- I have co-organized the SIGIR'17 Workshop on Axiomatic Thinking for Information Retrieval and Related Tasks (ATIR) [C65, J31].

5.4 Reviewing activity

- I have been a referee for several scientific journals, including:

    - Interacting with Computers (Elsevier);
    - Journal of Intelligent Information Systems (Kluwer);
    - Information Processing and Management;
    - Journal of the American Society for Information Science; Journal of the American Society for Information Science and Technology;
    - ACM Transactions on Information Systems;
    - Journal of Documentation;
    - Information Retrieval Journal;
    - ACM Transactions on the Web;
    - Journal of Digital Libraries;
    - Personal and Ubiquitous Computing;
    - EPL (Europhysics Letters);
    - PLOS One.

- I also acted as chair, program committee member, and/or referee for many conferences and workshops. Besides the above workshops that I organized, these include the following, in chronological order (I have been in the program committee of those highlighted with a "*"):

    - Final MIRA conference, Glasgow, April 1999;
    - BCS-IRSG 2000, Cambridge (UK), 2000;
    - ACM-SAC 2004, Nicosia (Cyprus), March 2004;
    - ACM SIGIR 2004, Sheffield (UK), July 2004 (also for tutorials);
    - CoLIS5, Glasgow, UK, June 2005 (*);
    - ACM SIGIR 2005, Sheffield, UK, August 2005 (both papers and posters);
    - ACM SAC-IAR 2005 (ACM Symposium on Applied Computing — Special Track on Information Access and Retrieval), Santa Fe, New Mexico.
    - FQAS 2006, Seventh International Conference on Flexible Query Answering Systems, Milan, Italy, June 2006 (*);
    - ACM SIGIR 2006, Seattle, WA, August 2006 (both papers and posters);
    - IIiX 2006, First International Symposium on Information Interaction in Context, Copenaghen, Danimarca, October 2006 (*);
    - ECIR 2007, Rome, April 2007 (*);
    - EMOBS 07, 1st IEEE Workshop on Mobile-Based Software and Applications, Beijing, China, July 2007 (*);
    - ICTIR 2007, 1st International Conference on the Theory of Information Retrieval, Budapest, Hungary, October 2007 (*);
    - MHCI 2007, Mobile HCI, Singapore.

- ACM SIGIR 2007, Amsterdam, July 2007 (both papers and posters);
- WAC 2007, Wireless Applications and Computing, Lisbon, Portugal, July 2008 (*);
- ECIR 2008, Glasgow, April 2008 (*);
- ACM SIGIR 2008, Singapore, July 2008 (both papers and posters);
- UBICOMM 2008, The Second International Conference on Mobile Ubiquitous Computing, Systems, Services and Technologies (*);
- IIiX 2008, London 14-17 October 2008 (*);
- ECIR 2009, Toulouse (France) (*);
- ICTIR 2009, Cambridge (UK) (*);
- SIGIR 2009 (*);
- WI'09, Web Intelligence 2009, Milan, Italy (*);
- "The Future of IR Evaluation" workshop at SIGIR 09 (*);
- CLEF 2010 (*);
- ECIR 2010 (*)
- IIiX 2010 (*);
- Mobile HCI 2010 (*);
- SIGIR 2010 (*);
- Workshop on Crowdsourcing for Search Evaluation, at SIGIR 2010 (*);
- CLEF 2011 (*);
- ECIR 2011 (*);
- SAC-IAR 2012 (*);
- CIR2011 at SIGIR 2011 (*);
- Crowdsourcing for Search and Data Mining (CSDM 2011) and WSDM 2011 (*);
- Crowd Search Workshop at WWW 2012 (*);
- SIGIR 2012 (posters and doctoral consortium) (*);
- Ninth Asia IR Societies (AIRS) conference (AIRS 2013) (*);
- SIGIR 2013 (short papers) (*);
- ECIR 2014, senior PC and workshops (*);
- IIiX 2014;
- SIGIR 2014, papers (both long and short) and tutorials (*);
- ECIR 2015, metareviewer (*);
- SIGIR 2015, Area Chair for long papers (*);
- FDIA 2015;
- ECIR 2016: Tutorial chair, reviewer for NewsIR workshop (*);
- SIGIR 2016, Area Chair for long papers (*), reviewer for Demos;
- ICTIR 2016: PC chair for short papers (*);
- IIR 2016 (*);
- EVIA 2017 (*);
- IIR 2017 (*);
- ECIR 2018 (*);
- IRCDL 2018 (*);

- IIR 2018 (*);
- WWW 2018 (*);
- IRCDL 2019 (*);
- ECIR 2019 (*);
- SIGIR 2019 (*);
- SIGIR 2019 (Doctoral Consortium);
- The Web Conference 2019 (*);
- EVIA 2019 (*);
- SIGIR 2020 (*);
- CIRCLE 2020 (*).

- I am in the editorial committee of Knowledge and Information — Studies in Information Science, deGruyter (Berlin and New York); Communications in Mobile Computing (ComC), Springer; Hemera: revista de ciencias bibliotecológica y de la información; and the Computer Science series of the Italian publisher Franco Angeli.

- I have acted as evaluator of EU projects for the fourth call of the 6th Framework (IST-FP6, strategic objective "Semantic based Knowledge and Content Systems"). I participated in the evaluation process in Brussels, on 18–27 April 2005.

- I have acted twice (in 2016 and 2018) as evaluator of research proposals for the National Science Centre (Poland), under the Funding scheme OPUS.

- Since July 2017 I am in the external committe for a Ph.D. student of the Università della Svizzera Italiana (USI, Lugano, Switzerland).

- In June 2018 I have acted as external expert in the 2018 doctoral consortium committee of the UNED university (Madrid, Spagna).

5.5 Sabbatical

From January 2014 to December 2014 I have been on sabbatical leave, for the year 2014, at RMIT University (Melbourne, Australia) with Mark Sanderson. The collaboration has so far produced the following publications [C46, C51, C52, C53, C56, C57, J30, J36], and we are currently working on further ones. I am also acting as an external consultant in a research project funded by the Australian Research Council; in this respect, I have visited RMIT University in February 2018.

5.6 Other information

- 1992 – today: I am doing full-time research and teaching since my degree.I have participated to many conferences, workshops, meetings, and summer schools; I have visited some research institutes.

- November 1993: I won a public competition for a position in software engineering and Artificial Intelligence at IRST, a research institute in Trento (Italy). I renounced that position after starting the Ph. D.

- June 1997: I have been ranked at the second position after a selection for a permanent position of assistant lecturer at the University College Dublin.

- December 1997: I have been appointed as a Tenured Associate Professor affiliated to the institute of "Information Science and Information Retrieval Theory" at the department of Aalborg (Denmark) of the "Royal School of Library and Information Science", Copenhagen, Denmark. I renounced to this position.

- April 1998: I won an eight months CNR research grant for visiting "CLIPS-IMAG institute", University Joseph Fourier, Grenoble (France). I renounced to this grant because it was incompatible with the contemporary CNR grant at Udine University.

- In 2006 i co-founded with some colleagues and students the MoBe company (www.mobe.it, an academic spinoff of Udine University) still in business in the field of systems and services development for mobile devices. MoBe has been shortlisted at StartCup 2006, a business plan competition, has received funding support within the technological incubator TechnoSeed in 2006-2008, has had an increasing turnover of some hundreds thousand euros per year, and has hired about 20 persons, mainly former Master's and PhD students of Udine University.

- I have given the following invited presentations:
  - Invited talk at the BCS-IRSG99 conference on the paper [J3] for the Informer award.
  - Panel participant at the "Advancing Relevance Research: Theory Integration, Methodological Progress, and Critical Questions" at the conference "2003 Annual Meeting of the American Society for Information Science and Technology", 19-22 October 2003 (www.asis.org/Conferences/AM03/).
  - Invited talk "Peer review and Internet: Threats, opportunities, and an alternative approach" at the "EASE Seminar - Habits in Science Communication and Science Publishing", Barcelona, 29 April 2005.
  - I gave the lecture on "Evaluation" at the "ESSIR 2005 European Summer School in Information Retrieval", Dublin, Ireland, 5-9 September 2005.
  - Invited talk "Readersourcing: Scholarly publishing, peer review, and barefoot cobbler's children", at the FDIA symposium, within the ESSIR 2009 Summer school, Padua, Italy.
  - I presented the lecture on "Axiometrics – An axiomatic approach to evaluation metrics" at ESSIR 2015: The 10th European Summer School in Information Retrieval, Thessaloniki, Greece, 31 Aug - 4 Sep 2015.

- I participated in four invitational workshops:
  - The second Google EMEA Faculty Summit, Zurich, 10-12 February 2009;
  - Dagstuhl-Seminar 09101 (Interactive IR, March 2009), www.dagstuhl.de/Materials/index.en.phtml?09101;
  - SWIRL (The Second Strategic Workshop on Information Retrieval in Lorne, February 2012) www.cs.rmit.edu.au/swirl12/.
  - SWIRL (The Third Strategic Workshop on Information Retrieval in Lorne, February 2018) https://sites.google.com/view/swirl3/home.

- I have presented several of my papers at conference. In particular, I presented: [C1, C3, C4, C5, C6, C7, C9, C10, C11, C12, C14, C16, C21, C23, C24, C25, C26, C27, C30, C32, C41, C42, C43, C44, C45, C46, C47, C48, C50, C53, C54, C55, C59, C74, C75, c1, c2, c3, c4, c5, c8]

- I chaired some sessions at some conferences, plus the above listed workshops that I organized.

- I have been invited to give several talks at international research centers:
  - "A cognitive analysis of information retrieval", University of Glasgow (U.K.), 24/5/1996;
  - "Evaluating User Interfaces to Information Retrieval Systems: A Case Study on User Support", University of Bari (Italy), 19/12/1996;
  - "Strategic help in user interfaces for information retrieval", Microsoft Research Cambridge (U. K.), 28/7/1999;

- "Capisci tu di Java?", University of Siena (Italy), 23/3/2000;

- "ADM: A retrieval effectiveness measure based on continuous relevance", University of Strathclyde (Glasgow, U.K.), Department of Computer and Information Sciences, 14/9/2004;

- "Two scenarios in Mobile Information Retrieval: understanding mobile relevance and filtering of context-aware applications in the MoBe approach", City University (London, U. K.), 13/4/2006;

- "Two tales on relevance crowdsourcing: criteria and assessment", University of Zurich - Irchel (Switzerland), 13/10/2009;

- "Frozen footprints and barefoot cobbler's children: time to rethink scholarly publishing?", RMIT University (Melbourne, Australia), 14/2/2012;

- "The Context Aware Browser: context-aware IR", University of Toulouse (France), 26/11/2012;

- "Readersourcing: Scholarly publishing, peer review, and barefoot cobbler's children", University of Fribourg (Switzerland), 13/2/2013;

- "Axiometrics: Axioms of Information Retrieval Effectiveness Metrics", RMIT University (Melbourne, Australia), 14/3/2014;

- "Topicality was dead, long lived topicality" RMIT University (Melbourne, Australia), WEIRD 2014 Workshop, with Paul Thomas, 17/7/2014;

- "Crowdsourcing Relevance Magnitudes", University of Toulouse (France), 3/12/2015;

- "Crowdsourcing Relevance Magnitudes", University of Lugano (Switzerland), 5/2/2016;

- "Crowdsourcing Fine-Grained Relevance Judgments", UNED University (Madrid, Spain), 12/6/2018.

- I have acted as external examiner for a national competition for a position as university researcher (ING-INF/05) at the Engineering Faculty of Padua University, in October 2004.

- In the years 2005–2007 I have been in the Evaluation committee ("Nucleo di Valutazione") of Udine University.

- Since June 2007 I am in the Faculty committee of PhD in Computer Science of Udine University.

- In the years 2007–2009 I have been in the Evaluation committee ("Nucleo di Valutazione") of Udine University.

- With the main aim of creating links with local companies, I have been acting as an external consultant for some of them:

  - October 2001 – July 2002. I acted as an external consultant for the Meteor company (Ronchi dei Legionari, Italy), on the topic of object-oriented analysis and design methodologies.

  - In January – May 2003 I designed and partly taught a course on advanced Java programming aimed at some employees of Data Consult company (Pordenone, Italy).

  - In 2004 I acted as an external consultant for the Data Consult company (Pordenone, Italy), concerning information extraction from legal data.

  - September 2013 – January 2014. I taught a 40 hours course on Java Enterprise Edition and object-oriented design at the Solari company, Udine.

- In 2007 I co-founded with Paolo Coppola the SMDC lab (Sistemi Mobili e Dipendenti dal Contesto, Mobile and Context-Aware Systems) at the Department of Mathematics and Computer Science of Udine University.

- Since July 2018 I am the head of the Udine node of Big Data laboratory of the CINI consortium.

- Since January 2018 I act as the research delegate of the Department of Mathematics, Computer Science, and Physics. As such, I am a component of the University committee for scientific research.

- Since October 2018, for three years, I am the coordinator of the bachelor degree course program in Multimedia Science and Technology and of the Master degree course program in Multimedia Communication and Information Technologies at the University of Udine.

- I have served in several committes for Faculty, Department, and Course degree program.

- I have presented in some occasions the Bachelor's and Master's degree programs of my department to prospective students.

- In December 2013 I got the Italian habilitation for full professorship, area 09/H1 "Sistemi di elaborazione delle informazioni". I've been appointed Full professor at University of Udine starting from 1st October 2019.

6 Teaching

Since 1996 I have been lecturing at Udine University on the following topics: Introduction to Computer Science, Foundations of Computer Science, Programming, Server-Side Programming, Web Information Retrieval, Object Oriented Analysis and Design, and Network Science. Both Bachelor's and Master's students are attending the lectures; they are graduating mainly in Computer Science and Information Technology. From 1996 I have been lecturing about 120-150 hours (class hours) per year.

My university teaching activity has been carried on at the Udine University, mainly at the Faculty of Sciences (now Department of Mathematics and Computer Science) and occasionally at the Faculties of Economics, Engineering, Humanities. I have been teaching to 1st–5th year students, and to PhD students as well.

More in detail, my teaching activity is the following, in chronological order:

- February – May 1997: I have been a (temporary) contract professor of the annual (120 hours) course "Fundamentals of computer science" (about 250 students) for the degrees in Civil and Mechanical Engineering at the University of Udine, Italy, for the academic year 1996/97.

- February – May 1998: I taught the same course ("Fundamentals of computer science"), as a temporary lecturer, also in the academic year 1997/98.

- September 1998 – March 1999. I have been teaching the following courses, as a temporary lecturer for the academic year 1998/99:

  - "Fundamentals of computer science", for the Bachelor's degree in Electronic engineering, Udine University (50 hours).
  - "Java programming" (30 hours) for the Bachelor's degree in Computer Science, Udine University.
  - "General computer science" (50 hours) for the Bachelor's degree in Italian literature, Udine University.

- September 1999 – March 2000. I have been teaching the following courses, as a temporary lecturer for the academic year 1999/00:

  - "Fundamentals of computer science", for the Bachelor's degree in Electronic engineering, Udine University (50 hours).

- "Java programming" (30 hours) for the Bachelor's degree in Computer Science, Udine University.
- "General computer science" (40 hours) for the Bachelor's degree in Italian literature, Udine University.

- Academic Year 2000/01. I lectured the following two courses:

  - Java module (25 hours), within the course "Programming languages" for the Bachelor's degree in Computer Science, Faculty of Sciences, Udine University.

  - Introduction to programming module (35 hours) within the course "Information Systems" for the Bachelor's degree in Statistics and Informatics for Enterprise management, Faculty of Economics, Udine University.

- Academic Year 2001/02. I lectured the following two courses:

  - Introduction to Java programming and laboratory module (16+48 hours, 2+4 credits) within the course "Programming" for the Bachelor's degree in Web and Multimedia Technologies, Faculty of Sciences, Udine University.

  - Introduction to programming module (35 hours, 6 credits) within the course "Information Systems" for the Bachelor's degree in Statistics and Informatics for Enterprise management, Faculty of Economics, Udine University.

- Academic Year 2002/03. I taught the course "Programming and laboratory" (48+48 hours, 6+4 credits) for the Bachelor's degree in Web and Multimedia Technologies, Faculty of Sciences, Udine University.

- Academic Year 2003/04. I lectured the following three courses:

  - "Programming and laboratory" (24 hours, 3 credits) for the Bachelor's degree in Web and Multimedia Technologies, Faculty of Sciences, Udine University.

  - "Server-Side technologies laboratory" (24 hours, 2 credits) for the Bachelor's degree in Web and Multimedia Technologies, Faculty of Sciences, Udine University.

  - "Object Oriented Analysis and Design" (48 hours, 6 credits) for the Master's degree in Computer Science, Faculty of Sciences, Udine University.

- In the eight Academic Years from 2004/05 to 2011/12 I taught, yearly, the following three courses:

  - "Programming and laboratory" (24 hours, 3 credits) for the Bachelor's degree in Web and Multimedia Technologies, Faculty of Sciences, Udine University.

  - "Object Oriented Analysis and Design" (48 hours, 6 credits) for the two Master's degrees in Computer Science and in Information Technology, Faculty of Sciences, Udine University.

  - "Web Information Retrieval" (48 hours, 6 credits) for the two Master's degrees in Computer Science, and in Information Technology, Faculty of Sciences, Udine University.

- In the Academic Years 2006/07 and 2007/08 I also taught two elective modules (10 hours each) at the "Scuola Superiore" of Udine University, on Multi-agent systems and Bayesian Networks in Artificial Intelligence.

- In 2009 I taught the course "Web Information Retrieval" (20 hours) for the PhD students in Computer Science, Udine University.

- Academic Year 2012/13 I taught the following 4 courses:

  - "Programming and laboratory" (24 hours, 3 credits) for the Bachelor's degree in Web and Multimedia Technologies, Faculty of Sciences, Udine University.

- "Object Oriented Analysis and Design" (48 hours, 6 credits) for the two Master's degrees in Computer Science and in Multimedia Communication and Information Technology, Faculty of Sciences, Udine University.
- "Web Information Retrieval" (48 hours, 6 credits) for the two Master's degrees in Computer Science and in Multimedia Communication and Information Technology, Faculty of Sciences, Udine University.
- "Network Science" (24 hours, 3 credits) for the two Master's degrees in Computer Science and in Multimedia Communication and Information Technology, Faculty of Sciences, Udine University.

- In the Academic Year 2013/14 I taught the following 3 courses:

  - "Programming and laboratory" (48 hours, 6 credits) for the Bachelor's degree in Web and Multimedia Technologies, Department of Mathematics and Computer Science, Udine University.
  - "Web Information Retrieval" (48 hours, 6 credits) for the two Master's degrees in Computer Science and in Multimedia Communication and Information Technology, Department of Mathematics and Computer Science, Udine University.
  - "Network Science" (24 hours, 3 credits) for the two Master's degrees in Computer Science and in Multimedia Communication and Information Technology, Department of Mathematics and Computer Science, Udine University.

- In the Academic Year 2014/15 I taught the following 2 courses (I have a somehow relieved teaching load because of sabbatical leave in 2014):

  - "Programming and laboratory" (48 hours, 6 credits) for the Bachelor's degree in Web and Multimedia Technologies, Department of Mathematics and Computer Science, Udine University.
  - "Object Oriented Analysis and Design" (48 hours, 6 credits) for the two Master's degrees in Computer Science and in Multimedia Communication and Information Technology, Department of Mathematics and Computer Science, Udine University.

- In the Academic Year 2015/16 I taught the following 2 courses:

  - "Programming and laboratory" (72 hours, 8 credits) for the Bachelor's degree in Web and Multimedia Technologies, Department of Mathematics and Computer Science, Udine University.
  - "Web Information Retrieval" (48 hours, 6 credits) for the two Master's degrees in Computer Science and in Multimedia Communication and Information Technology, Department of Mathematics and Computer Science, Udine University.

- In the Academic Year 2016/17 I taught the following 3 courses:

  - "Programming and laboratory" (48 hours, 6 credits) for the Bachelor's degree in Web and Multimedia Technologies, Department of Mathematics and Computer Science, Udine University.
  - "Information Retrieval" (48 hours, 6 credits) for the two Master's degrees in Computer Science and International Computer Science, plus the Master's degree in Multimedia Communication and Information Technology, Department of Mathematics and Computer Science, Udine University.
  - "Object Oriented Analysis and Design" (48 hours, 6 credits) for the two Master's degrees in Computer Science and in Multimedia Communication and Information Technology, Department of Mathematics and Computer Science, Udine University.

- In the Academic Year 2017/18 I taught the following 2 courses:

- "Information Retrieval" (48 hours, 6 credits) for the two Master's degrees in Computer Science and International Computer Science, plus the Master's degree in Multimedia Communication and Information Technology (as "Web Information Retrieval"), Department of Mathematics, Computer Science, and Physics, Udine University.

- "Object Oriented Analysis and Design" (72 hours, 9 credits) for the two Master's degrees in Computer Science and in Multimedia Communication and Information Technology, Department of Mathematics, Computer Science, and Physics, Udine University.

- In the Academic Year 2018/19 I have been teaching the same 2 courses of the previous A.A.

- In the Academic Year 2019/20 I am teaching the following 3 courses:

    - "Social Computing" (48 hours, 6 credits) for the Bachelor's degree in Internet of Things, Big Data & Web, Department of Mathematics, Computer Science, and Physics, Udine University.

    - "Information Retrieval" (48 hours, 6 credits) for the two Master's degrees in Computer Science and International Computer Science, plus the Master's degree in Multimedia Communication and Information Technology (as "Web Information Retrieval"), Department of Mathematics, Computer Science, and Physics, Udine University.

    - "Object Oriented Analysis and Design" (48 hours, 6 credits) for the two Master's degrees in Computer Science and in Multimedia Communication and Information Technology, Department of Mathematics, Computer Science, and Physics, Udine University.

- I have been supervising about 100 Bachelor's and Master's degree theses, and four PhD theses (Luca Vassena, "Context-aware retrieval for mobile devices: a tale of three systems", Marco Pavan "Effectiveness of Data Enrichment on Categorization: Two Case Studies on Short Texts and User Movements", Eddy Maddalena "Crowdsourcing Relevance: Two Studies on Assessment"), and Kevin Roitero ("Cheap IR Evaluation: Fewer Topics, No Relevance Judgements, and Crowdsourced Assessments") at the University of Udine. Luca Vassena Master's thesis, that I supervised, won the AICA-Federcomin award for the best Master's thesis in ICT in 2006. I am currently supervising one PhD students at the University of Udine.

On the basis of my teaching experience, I wrote two books. The first [b1] demonstrates how Java can be taught as a first programming language to first year university students; the book is now in its 4th edition. The second one [b2] is an exercise book, that collects several programming problems and their solutions. I supervised (with Luca Di Gaspero) the translation of Meilir Page-Jones book "Object oriented design with UML" in 2001. I wrote some lecture notes, not formally published but used also by students in other universities. My web page "How not to write a thesis" (www.dimi.uniud.it/mizzaro/dida/come-non-scrivere-la-tesi.html, in Italian) is quite well known.

The Programming course had a mandatory laboratory activity, in which I have been experimenting for several years a novel peer assessment Web system: in it, students have to upload exercise solutions and evaluation of other student's solutions; the algorithm proposed in [J9, J24] is then used to evaluate them.

Students "customer satisfaction" evaluations, gathered anonymously by the evaluation committee of Udine University, have always been positive.

In the Academic Years from 2002/03 to 2007 I have been in the Committee for a Master in "Information Technology", jointly organized by Udine University and Birla Science Center (Hyderabad, India). In the Master I taught the course "Programming".

I also taught some extra-university courses:

- January–February 1992: I taught in a professional "post-diploma" course (ENAIP, Udine). The topic of the course was "spread sheets".

- October 1996 – June 1997: I have been a teacher in secondary schools (I.T.I. "Malignani", Udine, course "Laboratory of Industrial Computer Science").

- October 1997 – March 1998: I taught for 60 hours at the professional course for "software technician", organized by the "Consorzio Friuli Formazione" and by the Department of Electric, Management and Mechanic Engineering of the University of Udine. Topics: fundamentals of computer science, C and Java programming languages.

- September 1999. I taught a course on "Introduction to programming" for the Bachelor's degree in Cultural heritage, Faculty of Italian Literature, University of Udine (10 hours).

- April – July 2000. Course on "Java Programming" at IAL in Udine (20 hours).

- In 2007/08 I have been the coordinator of the cluster in "information and Communication Technologies (ICT)" for the AlForm project, having regional funding and aiming at permanent high education for graduates, and involving Universities of Udine and Trieste, SISSA (Trieste), and some local companies. Inside AlForm, I have also lectured 14 hours on software design topics.

Publications list

International books

[B1] Fabio Crestani, S. Mizzaro, and Ivan Scagnetto. *Mobile Information Retrieval*. Springer Briefs in Computer Science. Springer, 2017. ISBN: 978-3-319-60776-4 (Print) 978-3-319-60777-1 (Online). DOI: 10.1007/978-3-319-60777-1.

International journals and book chapters

[J1] S. Mizzaro. Towards recursive models—A computational tool for the semantics of temporal presuppositions and counterfactuals in natural language. *Informatica - An International Journal of Computing and Informatics (ISSN 0359-5596)*, 21(1):59–77, March 1997. The Slovene Society Informatika, Ljubljana, Slovenia.

[J2] S. Mizzaro. Relevance: The whole history. *Journal of the American Society for Information Science*, 48(9):810–832, September 1997. John Wiley & Sons Inc., New York, NY.

[J3] S. Mizzaro. How many relevances in information retrieval? *Interacting With Computers*, 10(3):305–322, June 1998. ISSN: 0953-5438. Elsevier, The Netherlands. Paper awarded with the Informer (British Computer Society IR Group newsletter) 'Best Student Paper in IR', a prize for the best paper by an European student in the period 1st November 1996 - 1st November 1997.

[J4] S. Mizzaro. Relevance: The whole history. In T. Bellardo Hahn and M. Buckland, editors, *Historical Studies in Information Science*, pages 221–244. 1998. ISBN:1-57387-062-5. Paper [J2] republished with a short addendum.

[J5] E. Berenci, C. Carpineto, V. Giannini, and S. Mizzaro. Effectiveness of keyword-based display and selection of retrieval results for interactive searches. *International Journal on Digital Libraries*, 3(3):249–260, October 2000. ISSN: 1432-5012.

[J6] S. Mizzaro and Paolo Zandegiacomo Riziò. An automatically refereed scholarly electronic journal: Formal specifications. *Informatica - An International Journal of Computing and Informatics (ISSN 0359-5596)*, 24(4):431–438, December 2000. The Slovene Society Informatika, Ljubljana, Slovenia.

[J7] S. Mizzaro. Towards a theory of epistemic information. In H. Jaakkola, H. Kangassalo, and E. Kawaguchi, editors, *Information Modelling and Knowledge Bases XII*, pages 1–20. IOS Press, Amsterdam, 2001. ISSN: 0922-6389.

[J8] Giorgio Brajnik, S. Mizzaro, Carlo Tasso, and Fabio Venuti. Strategic help in user interfaces for information retrieval. *Journal of the American Society for Information Science and Technology*, 53(5):343–358, 2002.

[J9] S. Mizzaro. Quality control in scholarly publishing: A new proposal. *Journal of the American Society for Information Science and Technology*, 54(11):989–1005, 2003.

[J10] Vincenzo Della Mea and S. Mizzaro. Measuring retrieval effectiveness: A new proposal and a first experimental validation. *Journal of the American Society for Information Science and Technology*, 55(6):530–543, 2004.

[J11] Marco Cignini, S. Mizzaro, Carlo Tasso, and Andrea Virgili. E-mail on the move: Categorization, filtering, and alerting on mobile devices with the ifMail prototype. In F. Crestani, M. Dunlop, and S. Mizzaro, editors, *Mobile and Ubiquitous Information Access*, volume 2954 of *LNCS*, pages 107–123. Springer-Verlag, Berlin Heidelberg, 2004.

[J12] Paolo Coppola, Vincenzo Della Mea, Luca Di Gaspero, and S. Mizzaro. The concept of relevance in mobile and ubiquitous information access. In F. Crestani, M. Dunlop, and S. Mizzaro, editors, *Mobile and Ubiquitous Information Access*, volume 2954 of *LNCS*, pages 1–10. Springer-Verlag, Berlin Heidelberg, 2004.

[J13] Giulia Cattarossi, Elisa Cogoi, Vincenzo Della Mea, and Mizzaro S. Pubmed access from mobile devices: Existing solutions and a new prototype. *Technology and Health Care*, 13:368–369, 2005. ISSN: 0928-7329.

[J14] S. Mizzaro. System and user relevance in information retrieval: A necessary unity. *Hemera*, 4(7):4–5, 2006. ISSN: 1665-5834.

[J15] Vincenzo Della Mea, Gianluca Demartini, Luca Di Gaspero, and S. Mizzaro. Measuring Retrieval Effectiveness with Average Distance Measure (ADM). *Information Wissenschaft und Praxis*, 57(8):405–416, 2006.

[J16] Paolo Coppola, Vincenzo Della Mea, Luca Di Gaspero, Raffaella Lomuscio, Danny Mischis, S. Mizzaro, Elena Nazzi, Ivan Scagnetto, and Luca Vassena. AI techniques in a context-aware ubiquitous environment. In *Advances in Intelligent Multimedia and Pervasive Computing, Series in Computer Communications and Networks*. Springer Verlag, 2009.

[J17] John Guiver, S. Mizzaro, and Stephen Robertson. A few good topics: Experiments in topic set reduction for retrieval evaluation. *ACM Transactions on Information Systems*, 27(4):1–26, 2009.

[J18] Claudio Carpineto, S. Mizzaro, Giovanni Romano, and Matteo Snidero. Mobile information retrieval with search results clustering: Prototypes and evaluations. *Journal of the American Society for Information Science and Technology*, 60(5):877–895, 2009.

[J19] Paolo Coppola, Luca Di Gaspero, Vincenzo Della Mea, Danny Mischis, S. Mizzaro, Ivan Scagnetto, and Luca Vassena. The Context-Aware Browser. *IEEE Intelligent Systems*, 25(1):38–47, 2010.

[J20] Davide Menegon, S. Mizzaro, Elena Nazzi, and Luca Vassena. Evaluating the Context Aware Browser: A benchmark for proactive, mobile, and contextual web search. In *Handbook of Research on Mobility and Computing: Evolving Technologies and Ubiquitous Impacts*, pages 1–15. IGI GLOBAL, 2011.

[J21] S. Mizzaro. Teaching web information retrieval to computer science students: A concrete approach and its analysis. In *Teaching and Learning Information Retrieval*, pages 137–152. Springer, 2011.

[J22] S. Mizzaro and Luca Vassena. A social approach to context-aware retrieval. *World Wide Web*, 14(4):377–405, 2011.

[J23] Omar Alonso and S. Mizzaro. Using crowdsourcing for TREC relevance assessment. *Information Processing and Management*, 48:1053–1066, 2012.

[J24] S. Mizzaro. Readersourcing - A Manifesto. *Journal of the American Society for Information Science and Technology*, 63:1666–1672, 2012.

[J25] Vincenzo Della Mea, Eddy Maddalena, S. Mizzaro, Piernicola Machin, and Carlo A Beltrami. Preliminary results from a crowdsourcing experiment in immunohistochemistry. *Diagnostic Pathology*, 9(Suppl 1):S6, 2014.

[J26] Vincenzo Della Mea, Eddy Maddalena, and S. Mizzaro. Mobile crowdsourcing: four experiments on platforms and tasks. *Distributed and Parallel Databases*, 33(1):123–141, 2015.

[J27] Stefano De Sabbata, S. Mizzaro, and Tumasch Reichenbacher. Geographic dimensions of relevance. *Journal of Documentation*, 71(4), 2015.

[J28] Marco Pavan, S. Mizzaro, and Ivan Scagnetto. *Mining Movement Data to Extract Personal Points of Interest: A Feature Based Approach*, pages 35–61. Studies in Computational Intelligence, http://www.springer.com/series/7092. Springer International Publishing, Cham, 2017.

[J29] Nicola Ferro, Fabio Crestani, Marie-Francine Moens, Josiane Mothe, Fabrizio Silvestri, Jaana Kekäläinen, Paolo Rosso, Paul D. Clough, Gabriella Pasi, Christina Lioma, S. Mizzaro, Giorgio Maria Di Nunzio, Claudia Hauff, Omar Alonso, Pavel Serdyukov, and Gianmaria Silvello. Report on ECIR 2016: 38th european conference on information retrieval. *SIGIR Forum*, 50(1):12–27, June 2016.

[J30] Eddy Maddalena, S. Mizzaro, Falk Scholer, and Andrew Turpin. On crowdsourcing relevance magnitudes for information retrieval evaluation. *ACM Transactions on Information Systems*, 35(3):19:1–19:32, January 2017.

[J31] Enrique Amigó, Hui Fang, S. Mizzaro, and ChengXiang Zhai. Report on the SIGIR 2017 Workshop on Axiomatic Thinking for Information Retrieval and Related Tasks (ATIR). *SIGIR Forum*, 51(3):99–106, February 2018.

[J32] S. Mizzaro. Evaluation in academic publishing: Crowdsourcing peer review? *ERCIM NEWS*, (113):11–12, 2018.

[J33] Kevin Roitero, Marco Passon, Giuseppe Serra, and S. Mizzaro. Reproduce. Generalize. Extend. On Information Retrieval Evaluation Without Relevance Judgments. *ACM Journal on Data and Information Quality*, 10(3):11:1–11:32, September 2018.

[J34] Kevin Roitero, Michael Soprano, Andrea Brunello, and S. Mizzaro. Reproduce and improve: An evolutionary approach to select a few good topics for information retrieval evaluation. *ACM Journal on Data and Information Quality*, 10(3):12:1–12:21, September 2018.

[J35] S. Mizzaro and Ivan Scagnetto. Mobile search behaviors: An in-depth analysis based on contexts, APPs, and devices. Dan Wu and Shaobo Liang. synthesis lectures on information concepts, retrieval, and services. San Rafael, CA: Morgan & Claypool, 2018. 159 pp. $51.96 (e-book). (ISBN 9781681733005). *Journal of the Association for Information Science and Technology*, December 2018. DOI: 10.1002/asi.24157.

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