

Kevin Roitero

Current Position: Post Doctoral Research Fellow at University of Udine.

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EXPERIENCE

- **University of Udine** Udine, ITA
Post Doctoral Research Fellow Jan 2021 – Dec 2021
Project: “Crowdsourcing and Machine Learning: Computational tools to identify medical misinformation (“fake news”) on social media”.
- **University of Padova** Padova, ITA
Adjunct/Associate Lecturer Oct 2020 – Jan 2021
Adjunct Lecturer at the Department of Statical Sciences of the University of Padova to teach part of the “Programming Methodologies for Data Analysis” course for the PhD Program (XXXVI cycle) in “Statistical Sciences”.
- **University of Udine** Udine, ITA
Adjunct/Associate Lecturer Jan 2020 – Feb 2021
Adjunct Lecturer at the Polytechnic Department of Engineering and Architecture (DPIA) of the University of Udine to teach the “Web Applications” course for the “Electronic Engineering” and “Industrial Systems Engineering and Management” courses, MSc.
- **University of Udine** Udine, ITA
Post Doctoral Research Fellow / Research Fellow Jan 2020 – Dec 2020
Project: “Analysis and development of computer science methods for detecting fake news in the medical area on social media”.
- **University of Udine** Udine, ITA
Research Fellow Nov 2019 – Dec 2019
Project: “Audit e Feedback in Emergenza: data analytics su tempi di soccorso territoriale”, carried on in “SOC Istituto di Igiene ed Epidemiologia Clinica”. The project deals with the analysis of the times and the data collected on the ambulances operating in the FVG region.
- **Spotify** London, GBR
Research Intern Sept 2018 – Dec 2018
Project: Statistical modeling, machine and transfer learning techniques to model internal processes. Manager: Mounia Lalmas-Roelleke (Director, Tech Research).
- **School of Information Technology and Electrical Engineering, UQ.** Brisbane, AUS.
Short visiting period (as PhD Student) to visit Gianluca Demartini. 23 July 2018 – 30 July 2018
- **ISAR Group, RMIT University.** Melbourne, AUS.
Visiting period (as PhD Student). Grant by the ISAR Group. Mar 2018 – July 2018
- **Information School, University of Sheffield.** Sheffield, GBR.
Visiting period (as PhD Student). Grant by ERASMUS+ Traineeship. Apr 2017 – June 2017
- **Alpen-Adria-Universität** Klagenfurt, AUT
Visiting period (as Master Student). Grant by University of Udine and ERASMUS. Sept 2015 – Feb 2016

EDUCATION

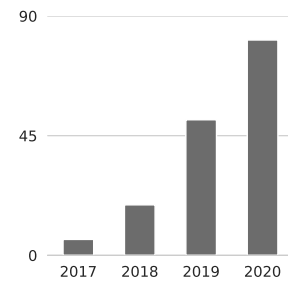
- **Ph.D., University of Udine** Udine, ITA.
Ph.D., Department of Mathematics, computer Science, and Physics. Nov 2016 – Nov 2019
Focus: Information Retrieval, crowdsourcing, machine and transfer learning, data mining and analysis, and statistical modeling. Scholarship provided by University of Udine. Title of the Thesis: “Cheap IR Evaluation: Fewer Topics, No Relevance Judgements, and Crowdsourced Assessments.”. Supervisor: Stefano Mizzaro. Grade: Cum Laude.
Graduation Date: 19 March 2020.
- **MS, University of Udine & Alpen-Adria-Universität** Udine, ITA & Klagenfurt, AUT
Master Joint Degree in International Computer Science. Sept 2014 – July 2016
Grade: cum laude (110 cum laude/110). Graduation date: 22 July 2016.
- **BS, University of Udine** Udine, ITA
Bachelor Degree in Computer Science. Sept 2014 – Oct 2016
Grade: 102/110. Graduation Date: 17 October 2014.

- **Google Scholar:** <https://scholar.google.com/citations?hl=en&user=1xd52jMAAAAJ>
- **DBLP:** <https://dblp.uni-trier.de/pers/hd/r/Roitero:Kevin>

Metrics (at 1 June 2021):

	Scholar	Scopus	ACM DL
Articles	32	30	16
Citations	180	90	58
Citations/article	5.63	3.00	3.63
H-index	8	5	—
i10-index	7	—	—

Citation Trend (Scholar)



Conference Papers

- Mihai Horia Popescu, Kevin Roitero, Stefano Travasci, and Vincenzo Della Mea. Automatic Assignment of ICD-10 Codes to Diagnostic Texts using Transformers Based Techniques. *Proceedings of the 9th IEEE International Conference on Healthcare Informatics (ICHI2021)*. Victoria, British Columbia, Canada. August 9th-12th, 2021.
- Kevin Roitero, Michael Soprano, Beatrice Portelli, Damiano Spina, Vincenzo Della Mea, Giuseppe Serra, Stefano Mizzaro, and Gianluca Demartini. The COVID-19 Infodemic: Can the Crowd Judge Recent Misinformation Objectively? *Proceedings of the 29th ACM International Conference on Information and Knowledge Management (CIKM2020)*. Online. October 19-23, 2020. Conference Rank: CORE A, GGS A+.
- Vincenzo Della Mea, Mihai Horia Popescu, Kevin Roitero. Underlying Cause of Death Identification from Death Certificates via Categorical Embeddings and Convolutional Neural Networks. *Proceedings of the 8th IEEE International Conference on Healthcare Informatics (ICHI2020)*. Oldenburg, Germany. Nov 30 – Dec 3 2020.
- Kevin Roitero, Michael Soprano, Shaoyang Fan, Damiano Spina, Stefano Mizzaro, and Gianluca Demartini. Can The Crowd Identify Misinformation Objectively? The Effects of Judgments Scale and Assessor's Bias. *Proceedings of the 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval*. Xi'an, China. July 25-30, 2020. Conference Rank: CORE A*, GGS A++.
- David La Barbera, Kevin Roitero, Damiano Spina, Gianluca Demartini, and Stefano Mizzaro. Crowdsourcing Truthfulness: The Impact of Judgment Scale and Assessor Bias. *Proceedings of the 42nd European Conference on IR Research, ECIR 2020, Lisbon, Portugal, April 14-17, 2020*. Conference Rank: CORE A, GGS A-. **Best Short Paper Award.**
- Lei Han, Eddy Maddalena, Alessandro Checco, Cristina Sarasua, Ujwal Gadiraju, Kevin Roitero, and Gianluca Demartini. Crowd Worker Strategies in Relevance Judgment Tasks. *Proceedings of the 13th ACM International Conference on Web Search and Data Mining, WSDM 2020, Houston, Texas. February 3-7, 2020*. Conference Rank: CORE A*, GGS A+.
- Kevin Roitero, Andrea Brunello, Julián Urbano and Stefano Mizzaro. Towards Stochastic Simulations of Relevance Profiles. *Proceedings of the 28th ACM International Conference on Information and Knowledge Management (CIKM2019)*. Beijing, China. November 3-7, 2019. Conference Rank: CORE A, GGS A+.
- Lei Han, Kevin Roitero, Eddy Maddalena, Stefano Mizzaro and Gianluca Demartini. On Transforming Relevance Scales. *Proceedings of the 28th ACM International Conference on Information and Knowledge Management (CIKM2019)*. Beijing, China. November 3-7, 2019. Conference Rank: CORE A*, GGS A++.
- Shane Culpepper, Oren Kurland, Stefano Mizzaro, Kevin Roitero and Fabio Zampieri. On Topic Difficulty in IR Evaluation: The Effect of Corpora, Systems, and System Components. *Proceedings of the 42nd International ACM SIGIR Conference on Research and Development in Information Retrieval*. Paris, France. July 21-25, 2019. Conference Rank: CORE A*, GGS A++.
- Lei Han, Kevin Roitero, Ujwal Gadiraju, Cristina Sarasua, Alessandro Checco, Eddy Maddalena and Gianluca Demartini. All Those Wasted Hours: On Task Abandonment in Crowdsourcing. *ACM International Conference on Web Search and Data Mining, WSDM 2019, Melbourne, Australia*. Conference Rank: CORE A*, GGS A+.
- Kevin Roitero, Eddy Maddalena, Gianluca Demartini and Stefano Mizzaro. On Fine-Grained Relevance Scales. *Proceedings of the 41st International ACM SIGIR Conference on Research and Development in Information Retrieval*. Ann Arbor Michigan, U.S.A. July 8-12, 2018. Conference Rank: CORE A*, GGS A++.

- Stefano Mizzaro, Josiane Mothe, Kevin Roitero, and Md Zia Ullah. Query Performance Prediction and Effectiveness Evaluation Without Relevance Judgments: Two Sides of the Same Coin. *Proceedings of the 41st International ACM SIGIR Conference on Research and Development in Information Retrieval*. Ann Arbor Michigan, U.S.A. July 8-12, 2018. Conference Rank: CORE A*, GGS A++.
- Kevin Roitero, Eddy Maddalena, Ponte Yannick and Stefano Mizzaro. IRevalOO: An Object Oriented Framework for Retrieval Evaluation. *Proceedings of the 41st International ACM SIGIR Conference on Research and Development in Information Retrieval*. Ann Arbor Michigan, U.S.A. July 8-12, 2018. Conference Rank: CORE A*, GGS A++.
- Kevin Roitero, Michael Soprano and Stefano Mizzaro. Effectiveness Evaluation with a Subset of Topics: A Practical Approach. *Proceedings of the 41st International ACM SIGIR Conference on Research and Development in Information Retrieval*. Ann Arbor Michigan, U.S.A. July 8-12, 2018. Conference Rank: CORE A*, GGS A++.
- Kevin Roitero. Cheap and Engineered Evaluation of Retrieval Systems. *Doctoral Consortium of the 41st International ACM SIGIR Conference on Research and Development in Information Retrieval*. Ann Arbor Michigan, U.S.A. July 8-12, 2018. Conference Rank: CORE A*, GGS A++.
- Alessandro Checco, Kevin Roitero, Eddy Maddalena, Gianluca Demartini and Stefano Mizzaro. Let's Agree to Disagree: Fixing Agreement Measures for Crowdsourcing. *Proceedings of the The fifth AAAI Conference on Human Computation and Crowdsourcing, AAAI HCOMP2017*. Quebec City, Canada. October 24-26 2017.
- Eddy Maddalena, Kevin Roitero, Gianluca Demartini and Stefano Mizzaro. Considering Assessor Agreement in IR Evaluation. *Proceedings of the 3rd ACM International Conference on the Theory of Information Retrieval, ICTIR2017*. Amsterdam, Netherlands. October 1-4 2017.
- Kevin Roitero, Eddy Maddalena, and Stefano Mizzaro. Do Easy Topics Predict Effectiveness Better Than Difficult Topics? *Proceedings of the 39th European Conference on IR Research, ECIR 2017, Aberdeen, UK, April 8-13, 2017*. Conference Rank: CORE A, GGS A-.

Articles

- Kevin Roitero. Cheap IR Evaluation: Fewer Topics, No Relevance Judgements, and Crowdsourced Assessments. *SIGIR Forum*. December 2020, Volume 54, Number 2.
- Vincenzo Della Mea, Mihai Horia Popescu, and Kevin Roitero. Underlying Cause of Death Identification from Death Certificates using Reverse Coding to Text and a NLP Based Deep Learning Approach. *Informatics in Medicine Unlocked*. Journal Rank: Scimago Q3 (2020).
- David La Barbera, António Polónia, Kevin Roitero, Eduardo Conde-Sousa, and Vincenzo Della Mea. Detection of HER2 from Haematoxylin-Eosin SlidesThrough a Cascade of Deep Learning Classifiers via Multi-Instance Learning. *Journal of Imaging, Special Issue "Deep Learning on Medical Image Analysis"*.
- Kevin Roitero, Andrea Brunello, Giuseppe Serra, and Stefano Mizzaro. Effectiveness Evaluation Without Human Relevance Judgments: A Systematic Analysis of Existing Methods and of their Combinations. *Information Processing and Management (IPM)*. Journal Rank: Scimago Q1 (2020).
- Lei Han, Kevin Roitero, Ujwal Gadiraju, Cristina Sarasua, Alessandro Checco, Eddy Maddalena, and Gianluca Demartini. The Impact of Task Abandonment in Crowdsourcing. *IEEE Transactions on Knowledge and Data Engineering (TKDE)*. Journal Rank: Scimago Q1 (2019).
- Kevin Roitero, J. Shane Culpepper, Mark Sanderson, Falk Scholer, and Stefano Mizzaro Fewer Topics? A Million Topics? Both?! On Topics Subsets in Test Collections. *Information Retrieval Journal (IRJ)*.
- Kevin Roitero, Marco Passon, Giuseppe Serra, and Stefano Mizzaro. Reproduce. Generalize. Extend. On Information Retrieval Evaluation without Relevance Judgments. *ACM Journal of Data and Information Quality (JDIQ)*. Journal Rank: Scimago Q2 (2018).
- Kevin Roitero, Michael Soprano, Andrea Brunello, and Stefano Mizzaro. Reproduce and Improve: An Evolutionary Approach to Select a Few Good Topics for Information Retrieval Evaluation. *ACM Journal of Data and Information Quality (JDIQ)*. Journal Rank: Scimago Q2 (2018).

Workshop Papers

- Kevin Roitero, Cristian Bozzato, Vincenzo Della Mea, Stefano Mizzaro, and Giuseppe Serra. Twitter goes to the Doctor: Detecting Medical Tweets using Machine Learning and BERT. *Proceedings of Semantic Indexing and Information Retrieval for Health (SIIRH2020) Workshop, in conjunction with the 42nd European Conference on IR Research, ECIR 2020, Lisbon, Portugal, April 14-17, 2020*.

- Kevin Roitero, Ben Carterette, Rishabh Mehrotra and Mounia Lalmas. Leveraging Behavioral Heterogeneity Across Markets for Cross-Market Training of Recommender Systems. *Proceedings of the The 10th International Workshop on Location and the Web in conjunction with The Web Conference*.
- Michael Soprano, Kevin Roitero, and Stefano Mizzaro. Bias and Fairness in Effectiveness Evaluation by Means of Network Analysis and Mixture Models. *Proceedings of the 10th Italian Information Retrieval Workshop, Padua, Italy, September 16-18, 2019*.
- Michael Soprano, Kevin Roitero, and Stefano Mizzaro. HITS Hits Readersourcing: Validating Peer Review Alternatives Using Network Analysis. *Proceedings of the 4th Joint Workshop on Bibliometric-enhanced Information Retrieval and Natural Language Processing for Digital Libraries (BIRNDL 2019)*.
- Kevin Roitero, Damiano Spina, Gianluca Demartini, and Stefano Mizzaro. How Many Truth Levels? Six? One Hundred? Even more? Validating Truthfulness of Statements via Crowdsourcing. *RDSM 2018 : Workshop on Rumours and Deception in Social Media*.
- Kevin Roitero, Stefano Mizzaro, and Giuseppe Serra. Economic Evaluation of Recommender Systems: A Proposal. *Proceedings of the 8th Italian Information Retrieval Workshop, Switzerland. June 05-07, 2017*.
- Kevin Roitero and Stefano Mizzaro. Improving the Efficiency of Retrieval Effectiveness Evaluation: Finding a Few Good Topics with Clustering? *Proceedings of the 7th Italian Information Retrieval Workshop, Venezia, Italy, May 30-31, 2016*.

TALKS

- **27 July 2020**. Can The Crowd Identify Misinformation Objectively? The Effects of Judgments Scale and Assessor's Bias. *ACM SIGIR Conference on Research and Development in Information Retrieval. Held remotely due to COVID-19*.
- **16 April 2020**. Fewer topics? A million topics? Both?! On topics subsets in test collections. *Presentation of IRJ Paper at the European Conference on IR Research, ECIR 2020, Lisbon, Portugal, April 14-17, 2020. (Held remotely due to COVID-19)*.
- **14 April 2020**. Twitter goes to the Doctor: Detecting Medical Tweets using Machine Learning and BERT. *SSIRH Workshop at the European Conference on IR Research, ECIR 2020, Lisbon, Portugal, April 14-17, 2020. (Held remotely due to COVID-19)*.
- **14 November 2019**. Magnitude Estimation for Relevance Assessment (& Other Applications). *European Network for Combining Language Learning with Crowdsourcing Techniques, enetCollect. Sliema, Malta*.
- **25 July 2019**. HITS Hits Readersourcing: Validating Peer Review Alternatives Using Network Analysis. *ACM SIGIR Conference on Research and Development in Information Retrieval. Paris, France*.
- **7 June 2019**. Economical Evaluation of Systems: Users as a Signal. *Spotify NYC*.
- **15 March 2019**. Let's Agree to Disagree: Fixing Agreement Measures for Crowdsourcing. *European Network for Combining Language Learning with Crowdsourcing Techniques, enetCollect. Lisbon*.
- **14 November 2018**. Internal Research Talk. *Spotify. London, Great Britain*.
- **11 July 2018**. On fine Grained Relevance Scales. *ACM SIGIR Conference on Research and Development in Information Retrieval. Ann Arbor Michigan, U.S.A.*
- **17 May 2018**. iPython notebooks for data analysis and plotting. *RMIT University, Melbourne, Australia*.
- **10 May 2018**. Crowdsourcing relevance judgments and considering agreement in IR evaluation (with a new agreement measure) *RMIT University, Melbourne, Australia*.
- **6 June 2017**. Economic Evaluation of Recommender Systems: A Proposal. *IIR2017, Lugano. Switzerland*.
- **10 April 2017**. Do Easy Topics Predict Effectiveness Better Than Difficult Topics? *ECIR2017, Aberdeen. UK*.
- **30 May 2016**. Improving the Efficiency of Retrieval Effectiveness Evaluation: Finding a Few Good Topics with Clustering? *IIR 2016, Venezia. Italy*.
- **12 May 2016**. Improving the Efficiency of Retrieval Effectiveness Evaluation: Finding a Few Good Topics with Clustering and Dimensionality Reduction. *MSc Course Web Information Retrieval). University of Udine, Udine. Italy*.

TEACHING

- **Programming Methodologies for Data Analysis (modules)**. University of Padova (2020). *PhD Program (XXXVI cycle) in "Statistical Sciences"*.
- **Web Applications**. University of Udine (2019-2020). *"Electronic Engineering" and "Industrial Systems Engineering and Management" courses, MSc*.
- **Social Computing (modules)**. University of Udine (2019-2020). *"Internet of Things, Big data & Web" course, MSc*.
- **Operating Systems (laboratory)**. University of Udine (2016-2017). *"Computer Science" course, BSc*.

ACADEMIC ACTIVITY

- **Mentoring:** I co-supervised the thesis of 8 Master (MSC), 5 Bachelor (BSC) Students, and various students advanced projects and seminars. Many of the thesis lead to published results. One Master Thesis received the prize FIDAPA: “Non ci sono mestieri da donne”.
- **Organizational Roles:** 30th ACM International Conference on Information and Knowledge Management, CIKM2021 (Proceedings Chair), Symposium on Biases in Human Computation and Crowdsourcing, BHCC 2021 (Proceedings Chair).
- **Program Committee Roles:** ACM Transactions on Information Systems (TOIS), SIGIR 2021 (PC Member of the full paper track), Hypertext 2021 (PC Member of the main track), Information Processing and Management (IPM), The Web Conference 2021, CLIC-it 2020 (PC Member of the track Information Extraction, Information Retrieval and Question Answering), CIKM2020 (PC Member of full research paper track), International Journal of Digital Libraries–IJDL, CIRCLE2020, HT2020 (PC Member of web and society track), The Web Conference 2020, ECIR 2018, IIR 2018.
- **Affiliations:**
 - part of the MITEL (Medical Informatics, Telemedicine & eHealth Lab) at the University of Udine, Italy, see http://mitel.dimi.uniud.it/mitel2/?page_id=62
 - external-collaborator of the AILab (Artificial Intelligence Laboratory) at the University of Udine, Italy, see <http://ailab.uniud.it/members/>.
 - part of the SMDC Lab (Social, Mobile, Data, Crowd) at the University of Udine, Italy, see <http://smdc.uniud.it/smdc/membri/?lang=en/>

SKILLS

- **Networking:** I worked with various interdisciplinary research groups, building many research partnerships (more than 30 co-authors).
- **Technical:** Proficient in: Python, R, NumPy, SciPy, Pandas, Keras, TensorFlow, PyTorch, Fast.AI, SQL, Javascript, Node.js, BigQuery, \LaTeX . Familiar with: Java, HTML, CSS, C, WEKA, PyMC3; Basic knowledge of: MATLAB, Scala.
- **Platforms/tools:** GitHub, Google Cloud Suite, Jupyter Notebooks, Slack, Amazon AWS, Amazon Mechanical Turk, Docker, Office Suite, Linux Shell, Dropbox, Google Drive.
- **Languages:** Italian (Mother tongue), English (Listening: C1, Reading: C1, Spoken Interaction: C1, Spoken Production: C1, Writing: C1).
- **Personal Interests:** eager reader, decent runner, film and series watcher, music enthusiast; trying to be the nerd the world needs; keen to minimalism, the art of giving importance to things that really matter. Pronouns: He/Him/His.
- **Other:** During the 3rd year of the Ph.D. I was accepted for an Internship at Apple Cambridge (UK) in the “NLP SIRI understanding team”.

HONORS, AWARDS, AND GRANTS

- Seal of the Friuli Venezia Giulia Region Council (Sigillo del Consiglio Regionale del Friuli Venezia Giulia).
- Winner of the prize “con.Scienze2020” for the **best Ph.D. thesis** in Computer Science discussed in 2020 in Italy.
- Student Grant to attend “SIGIR2020”, the conference was held remotely due to COVID-19. I Served also as Volunteer at the event.
- **Best Short Paper Award** at “ECIR2020”, for the paper “Crowdsourcing Truthfulness: The Impact of Judgment Scale and Assessor Bias”.
- Student Grant to attend “ECIR2020”, Lisbon, Portugal. Provided by ECIR.
- Student Grant to attend “ASIRF2019”, Schloss Dagstuhl, Germany. Provided by ASIRF.
- Student Grant to attend “SIGIR2019”, Paris, France. Provided by ACM SIGIR.
- Participation in the 7th **Heidelberg Laureate Forum** (top 200 young researchers in mathematics and computer science). Provided by Heidelberg Laureate Forum Foundation (HLFF).
- Invited Talk to European Network for Combining Language Learning with Crowdsourcing Techniques 2019.
- Student Grant to attend “SIGIR2018”, Ann Arbor, Michigan, U.S.A. Provided by ACM SIGIR.
- Allowance to visit RMIT ISAR Group at RMIT University, Melbourne, AUS. Provided by RMIT ISAR (Temporary Activity subclass 408 VISA).
- Student Grant to attend “ICTIR2017”, Amsterdam, NE. Provided by ACM SIGIR.
- Allowance to visit Information School at University of Sheffield, UK. Provided by ERASMUS+ Traineeship.
- Student Grant to attend “ECIR2017”, Aberdeen, UK. Provided by BCS IRGS.
- Scholarship for the Ph.D. program of the University of Udine. Provided by University of Udine.
- Allowance to visit Alpen-Adria-Universität Kalgenfurt, AU. Provided by University of Udine, and ERAMUS Project.

REFERENCES

Available on request.

PRIVACY

In compliance with the GDPR and the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize you to use and process my personal details contained in this document.

Autorizzo il trattamento dei miei dati personali ai sensi del GDPR 679/16 e del Decreto Legislativo 30 giugno 2003 n. 196 (“Codice in materia di protezione dei dati personali”) ai fini di attività di ricerca e selezione del personale e contatti lavorativi.