Kevin Roitero

Current Position: Post Doctoral Research Fellow at University of Udine.
Email: kevin.roitero@outlook.com | roitero.kevin@spes.uniud.it
Web: https://kevinroitero.com/

EXPERIENCE

- **University of Udine**   Udine, ITA
  Post Doctoral Research Fellow / Research Fellow   *Gen 2020 – Dec 2020*
  Project: "Analysis and development of computer science methods for detecting fake news in the medical area on social media". Scientific sector: INF/01 Informatica.

- **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.
  Department of Mathematics, computer Science, and Physics.   *Nov 2016 – Nov 2019*
  Focus: Information retrieval, crowd-sourcing, machine and transfer learning, data mining and analysis, and statistical modeling. Scholarship provided by University of Udine. Grade: Cum Laude. Graduation Date: 19 March 2020.

- **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.

- **University of Udine**   Udine, ITA
  Bachelor Degree in Computer Science.   *Sept 2014 – Oct 2016*
  Grade: 102/110. Graduation Date: 17 October 2014.

PUBLICATIONS

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

Metrics (at 2nd December 2020):

	Scholar	Scopus	ACM Digital Library
articles	31	28	16
citations	144	74	51
citations/article	4.65	2.64	3.19
h-index	6	5	–

Year: 2020

- **Underlying Cause of Death Identification from Death Certificates using Reverse Coding to Text and a NLP Based Deep Learning Approach**
  Vincenzo Della Mea, Mihai Horia Popescu, and <u>Kevin Roitero</u>.
  Informatics in Medicine Unlocked. Journal Rank: Scimago Q3 (2020).

- **Detection of HER2 from Haematoxylin-Eosin SlidesThrough a Cascade of Deep Learning Classifiers via Multi-Instance Learning**
  David La Barbera, António Polónia, <u>Kevin Roitero</u>, Eduardo Conde-Sousa, and Vincenzo Della Mea.
  Journal of Imaging, Special Issue "Deep Learning on Medical Image Analysis".

- **The COVID-19 Infodemic: Can the Crowd Judge Recent Misinformation Objectively?**
  <u>Kevin Roitero</u>, Michael Soprano, Beatrice Portelli, Damiano Spina, Vincenzo Della Mea, Giuseppe Serra, Stefano Mizzaro, and Gianluca Demartini
  Proceedings of the 29th ACM International Conference on Information and Knowledge Management (CIKM2020). Online. October 19-23, 2020. Conference Rank: Core A, GGS A+.

- **Underlying Cause of Death Identification from Death Certificates via Categorical Embeddings and Convolutional Neural Networks**
  Vincenzo Della Mea, Mihai Horia Popescu, <u>Kevin Roitero</u>
  Proceedings of the 8th IEEE International Conference on Healthcare Informatics (ICHI2020). Oldenburg, Germany. Nov 30 – Dec 3 2020.

- **Can The Crowd Identify Misinformation Objectively? The Effects of Judgments Scale and Assessor's Bias.**
  <u>Kevin Roitero</u>, Michael Soprano, Shaoyang Fan, Damiano Spina, Stefano Mizzaro, and Gianluca Demartini
  Proceedings of the 43st International ACM SIGIR Conference on Research and Development in Information Retrieval. Xi'an, China. July 25-30, 2020. Conference Rank: Core A*, GGS A++.

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

- **Leveraging Behavioral Heterogeneity Across Markets for Cross-Market Training of Recommender Systems**
  <u>Kevin Roitero</u>, Ben Carterette, Rishabh Mehrotra and Mounia Lalmas.
  Proceedings of the The 10th International Workshop on Location and the Web in conjunction with The Web Conference.

- **Crowdsourcing Truthfulness: The Impact of Judgment Scale and Assessor Bias**
  David La barbera, <u>Kevin Roitero</u>, Damiano Spina, Gianluca Demartini, and Stefano Mizzaro.
  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.**

- **Effectiveness Evaluation Without Human Relevance Judgments: A Systematic Analysis of Existing Methods and of their Combinations**
  <u>Kevin Roitero</u>, Andrea Brunello, Giuseppe Serra, and Stefano Mizzaro.
  Information Processing and Management (IPM). Journal Rank: Scimago Q1 (2020).

- **Crowd Worker Strategies in Relevance Judgment Tasks.**
  Lei Han, Eddy Maddalena, Alessandro Checco, Cristina Sarasua, Ujwal Gadiraju, <u>Kevin Roitero</u>, and Gianluca Demartini
  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+.

Year: 2019

- **The Impact of Task Abandonment in Crowdsourcing.**
  Lei Han, <u>Kevin Roitero</u>, Ujwal Gadiraju, Cristina Sarasua, Alessandro Checco, Eddy Maddalena, and Gianluca Demartini.
  IEEE Transactions on Knowledge and Data Engineering (TKDE). Journal Rank: Scimago Q1 (2019).

- **Bias and Fairness in Effectiveness Evaluation by Means of Network Analysis and Mixture Models.**
  Michael Soprano, <u>Kevin Roitero</u>, and Stefano Mizzaro.
  Proceedings of the 10th Italian Information Retrieval Workshop, Padua, Italy, September 16-18, 2019.

- **Towards Stochastic Simulations of Relevance Profiles.**
  <u>Kevin Roitero</u>, Andrea Brunello, Julián Urbano and Stefano Mizzaro.

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+.

- **On Transforming Relevance Scales.**
  Lei Han, <u>Kevin Roitero</u>, Eddy Maddalena, Stefano Mizzaro and Gianluca Demartini.
  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++.

- **HITS Hits Readersourcing: Validating Peer Review Alternatives Using Network Analysis.**
  Michael Soprano, <u>Kevin Roitero</u>, and Stefano Mizzaro.
  Proceedings of the 4th Joint Workshop on Bibliometric-enhanced Information Retrieval and Natural Language Processing for Digital Libraries (BIRNDL 2019).

- **Fewer Topics? A Million Topics? Both?! On Topics Subsets in Test Collections.**
  <u>Kevin Roitero</u>, J. Shane Culpepper, Mark Sanderson, Falk Scholer, and Stefano Mizzaro
  Information Retrieval Journal (IRJ).

- **On Topic Difficulty in IR Evaluation: The Effect of Corpora, Systems, and System Components.**
  Shane Culpepper, Oren Kurland, Stefano Mizzaro, <u>Kevin Roitero</u> and Fabio Zampieri.
  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++.

- **All Those Wasted Hours: On Task Abandonment in Crowdsourcing.**
  Lei Han, <u>Kevin Roitero</u>, Ujwal Gadiraju, Cristina Sarasua, Alessandro Checco, Eddy Maddalena and Gianluca Demartini.
  ACM International Conference on Web Search and Data Mining, WSDM 2019, Melbourne, Australia. Conference Conference Rank: Core A*, GGS A+.

Year: 2018

- **How Many Truth Levels? Six? One Hundred? Even more? Validating Truthfulness of Statements via Crowdsourcing.**
  <u>Kevin Roitero</u>, Damiano Spina, Gianluca Demartini, and Stefano Mizzaro.
  RDSM 2018 : Workshop on Rumours and Deception in Social Media.

- **Reproduce. Generalize. Extend. On Information Retrieval Evaluation without Relevance Judgments.**
  <u>Kevin Roitero</u>, Marco Passon, Giuseppe Serra, and Stefano Mizzaro.
  ACM Journal of Data and Information Quality (JDIQ). Journal Rank: Scimago Q2 (2018).

- **Reproduce and Improve: An Evolutionary Approach to Select a Few Good Topics for Information Retrieval Evaluation.**
  <u>Kevin Roitero</u>, Michael Soprano, Andrea Brunello, and Stefano Mizzaro.
  ACM Journal of Data and Information Quality (JDIQ). Journal Rank: Scimago Q2 (2018).

- **On Fine-Grained Relevance Scales.**
  <u>Kevin Roitero</u>, Eddy Maddalena, Gianluca Demartini and Stefano Mizzaro.
  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++.

- **Query Performance Prediction and Effectiveness Evaluation Without Relevance Judgments: Two Sides of the Same Coin.**
  Stefano Mizzaro, Josiane Mothe, <u>Kevin Roitero</u>, and Md Zia Ullah.
  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++.

- **IRevalOO: An Object Oriented Framework for Retrieval Evaluation.**
  <u>Kevin Roitero</u>, Eddy Maddalena, Ponte Yannick and Stefano Mizzaro.
  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++.

- **Effectiveness Evaluation with a Subset of Topics: A Practical Approach.**
  <u>Kevin Roitero</u>, Michael Soprano and Stefano Mizzaro.
  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++.

- **CHeap and Engineered Evaluation of Retrieval Systems.**
  <u>Kevin Roitero</u>.
  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++.

Year: 2017

- **Let's Agree to Disagree: Fixing Agreement Measures for Crowdsourcing.**

Alessandro Checco, <u>Kevin Roitero</u>, Eddy Maddalena, Gianluca Demartini and Stefano Mizzaro.
Proceedings of the The fifth AAAI Conference on Human Computation and Crowdsourcing, AAAI HCOMP2017. Quebec City, Canada. October 24-26 2017.

- **Considering Assessor Agreement in IR Evaluation.**
  Eddy Maddalena, <u>Kevin Roitero</u>, Gianluca Demartini and Stefano Mizzaro.
  Proceedings of the 3rd ACM International Conference on the Theory of Information Retrieval, ICTIR2017. Amsterdam, Netherlands. October 1-4 2017.
- **Economic Evaluation of Recommender Systems: A Proposal.**
  <u>Kevin Roitero</u>, Stefano Mizzaro, and Giuseppe Serra.
  Proceedings of the 8th Italian Information Retrieval Workshop, Switzerland. June 05-07, 2017.
- **Do Easy Topics Predict Effectiveness Better Than Difficult Topics?**
  <u>Kevin Roitero</u>, Eddy Maddalena, and Stefano Mizzaro.
  Proceedings of the 39th European Conference on IR Research, ECIR 2017, Aberdeen, UK, April 8-13, 2017. Conference Rank: Core A, GGS A-.

  Year: 2016
- **Improving the Efficiency of Retrieval Effectiveness Evaluation: Finding a Few Good Topics with Clustering?**
  <u>Kevin Roitero</u> and Stefano Mizzaro.
  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 Metodologies for Data Analysis**. University of Padova (29 Oct 2020 - 12 Nov2020, 3 Lectures, 12 hours). *PhD Course (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), 4 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".
- **Reviewing Process:** I served as a reviewer in: 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 (2020), CIRCLE2020, HT2020 (PC Member of web and society track), The Web Conference 2020, ECIR2018, IIR2018.
- **Affiliations:** I am 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. I am an external-collaborator of the AILab (Artificial Intelligence Laboratory) at the University of Udine, Italy, see http://ailab.uniud.it/members/.

Skills

- **Networking:** I worked with various non-homogeneous research groups, building many research partnerships.
- **Technical:** Proficient in: Python, R, NumPy, SciPy, Pandas, Keras, TensorFlow, PyTorch, Fast.AI, SQL, Javascript, 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, Figure Eight, Amazon Mechanical Turk, Docker, Office Suite, Linux Shell, Drobox, 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 (12km/1h), 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.
- **Other:** During the 3rd year of the PhD I was accepted for an Internship at Apple Cambrige (UK) in the NLP SIRI understanding team.

Honors, Awards, and Grants

- My Ph.D. thesis has been selected among the ones defended in the department in the year 2020 to be submitted for the prize "con.Scienze2020".
- 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. 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.
- 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.