

Alexandra Olteanu

alexandra@aolteanu.com

<http://www.aolteanu.com>

Research Interests

Computational Social Science, Social Computing, Crisis Computing, Social Systems, Social Media, Data Biases, Data Quality, Algorithmic Discrimination, Social Issues

Education

École Polytechnique Fédérale de Lausanne (EPFL), Switzerland Sept. 2011 - Jan. 2016

Ph.D. in Computer Science

Distributed Information Systems Laboratory, under the direction of Prof. Karl Aberer

Thesis: *Probing the Limits of Social Data: Biases, Methods and Domain Knowledge*

Vrije University of Amsterdam, Netherlands & “Politehnica” University of Bucharest, Romania Sept. 2009 - Aug. 2011

Double-degree Research M.Sc. in Parallel and Distributed Computer Systems

Thesis: *P2P Social Networking*, under the direction of Prof. Guillaume Pierre

“Politehnica” University of Bucharest, Romania Sept. 2005 - Aug. 2009

B.Sc. in Computer Science. Specialization in System Programming.

Thesis: *Rescheduling and Error Recovery Algorithm for GRID Environments*, under the direction of Prof. Valentin Cristea & Prof. Florin Pop.

Research & Work Experience

École Polytechnique Fédérale de Lausanne (EPFL), Switzerland Sept. 2011 - Jan. 2016

Research Assistant in the Distributed Information Systems Laboratory, working with Prof. Karl Aberer

Lausanne, Switzerland

My work has focused on how to better gauge and assess web and social media data. Specifically, I focused on identifying and leveraging distinctive traits of data (e.g., source, type, credibility) within particular domains (e.g., climate change, crisis situations) and media (e.g., Twitter, news, websites) to build or guide the development of dedicated tools (e.g., data collection and filtering, credibility prediction), as well as to quantify various data pitfalls (e.g. collection, media or population biases).

Microsoft Research, US Jun. 2015 - Sept. 2015

Research Intern in the Context, Learning, and User Experience for Search (CLUES) Group, working with Emre Kıcıman

Redmond, US

I worked on the experimental design and evaluation methodology of the QuantifiedAll system which aims to extract information about the outcomes of people’s actions and situations from social media in order to help others with e.g. decision-making or goal achievement.

Qatar Computing Research Institute (QCRI), Qatar Sept. 2013 - Feb. 2014

Research Associate Intern in the Social Computing Group, working with Carlos Castillo

Doha, Qatar

We showed that using a generic crisis-lexicon to collect microblogged posts during mass emergencies leads to collections with higher recall than those obtained with crisis-specific keywords manually chosen by experts; it also helps to preserve the original distribution of message types. Since then, I also maintain crisislex.org, a repository of crisis-related social media data and tools.

Vrije University of Amsterdam (VU), Netherlands Jan. - Aug. 2011

Research Master Project, working with Prof. Guillaume Pierre

Amsterdam, Netherlands

We showed that building robust and scalable online social networks on top of P2P systems is feasible from an architectural standpoint. In this regard, I implemented a dedicated simulation framework that scales to millions of nodes.

“Politehnica” University of Bucharest, Romania Oct. 2009 - Aug. 2010

Research Assistant, working with Prof. Costin Boiangiu

Bucharest, Romania

I worked on designing image segmentation algorithms that improve the input of Optical Character Recognition (OCR) systems. Part of my work became part of a course on analysis and extraction of information in documents. My work was supported by CCS Content Conversion Specialists GmbH.

WebWise.ro, Romania

Software Engineer (project-based)

Jul. - Aug. 2009

Slatina, Romania

I implemented, using a classic LAMP stack, an application-specific content management system consisting of two types of interfaces for different levels of user privileges.

“Politehnica” University of Bucharest, Romania

Research student collaborator; working with Prof. Valentin Cristea & Prof. Florin Pop

Dec. 2008 - Aug. 2010

Bucharest, Romania

Research projects on resource management in large-scale distributed systems. I evaluated a set of scheduling heuristics, employed data mining techniques to uncover system behavior patterns and implemented various extensions to the MONARC II simulation framework.

Publications

- [CSCW'17] **What Does Social Media Say about the Outcomes of Personal Experiences?** [Alexandra Olteanu](#), Onur Varol, and Emre Kıcıman. *To appear: Proc. of the 20th ACM Computer Supported Cooperative Work and Social Computing (CSCW'17), Portland, OR, US, February 2017.*
- [ICWSM'16 Short Paper, IC2S2'16 Talk, CI'16 Poster] **Towards an Open-Domain Framework for Distilling the Outcomes of Personal Experiences from Social Media Timelines.** [Alexandra Olteanu](#), Onur Varol, and Emre Kıcıman. *In Proc. of 10th International AAAI Conference on Web and Social Media (ICWSM'16), Cologne, Germany, May 2016. This work has also been presented at Collective Intelligence (CI'16), New York, US, June 2016, and at the International Conference on Computational Social Science (IC2S2'16), Illinois, US, June 2016.*
- [AAAI SSS'16 EA] **Characterizing the Demographics Behind the #BlackLivesMatter Movement.** [Alexandra Olteanu](#), Ingmar Weber, and Daniel Gatica-Perez. *In AAAI Spring Symposia on Observational Studies through Social Media and Other Human-Generated Content (SSS'16 OSSM), Stanford, US, March 2016.*
- [ICWSM'15] **Comparing Events Coverage in Online News and Social Media: The Case of Climate Change.** [Alexandra Olteanu](#), Carlos Castillo, Nicholas Diakopoulos, and Karl Aberer. *In Proc. of 9th International AAAI Conference on Web and Social Media (ICWSM'15), Oxford, UK, May 2015.*
- [CSCW'15] **What to Expect When the Unexpected Happens: Social Media Communications Across Crises.** [Alexandra Olteanu](#), Sarah Vieweg, and Carlos Castillo. *In Proc. of 18th ACM Computer Supported Cooperative Work and Social Computing (CSCW'15), Vancouver, BC, Canada, March 2015.*
- [WISE'14] **Comparing the Predictive Capability of Social and Interest Affinity for Recommendations.** [Alexandra Olteanu](#), Anne-Marie Kermarrec, and Karl Aberer. *In Proc. of 15th International Conference on Web Information Systems Engineering (WISE'14), Thessaloniki, Greece, October 2014 (Best paper award).*
- [ICWSM'14] **CrisisLex: A Lexicon for Collecting and Filtering Microblogged Communications in Crises.** [Alexandra Olteanu](#), Carlos Castillo, Fernando Diaz, and Sarah Vieweg. *In Proc. of 8th International AAAI Conference on Weblogs and Social Media (ICWSM'14), Ann Arbor, US, June 2014.*
- [CHI'13 EA] **CredibleWeb: A Platform for Web Credibility Evaluation.** Zhicong Huang, [Alexandra Olteanu](#), and Karl Aberer. *In Proc. of CHI'13 Extended Abstracts on Human Factors in Computing Systems, Paris, France, May 2013.*
- [ECIR'13] **Web Credibility: Features Exploration and Credibility Prediction.** [Alexandra Olteanu](#), Stanislav Peshterliev, Xin Liu, and Karl Aberer. *In Proc. of the 34th European Conference on Information Retrieval (ECIR'13), Moscow, Russia, March 2013.*
- [ICDM'12 Demo] **Topick: Accurate Topic Distillation from Users Streams.** Anton Dimitrov, [Alexandra Olteanu](#), Luke McDowell, and Karl Aberer. *In Proc. of 13th IEEE International Conference on Data Mining (ICDM'12), Demo Session, Brussels, Belgium, December 2012.*

- [CIKM'12] **A Decentralized Recommender System for Effective Web Credibility Assessment.** Thanasis Papaioannou, Jean-Eudes Ranvier, [Alexandra Olteanu](#), and Karl Aberer. *In Proc. of the 21th ACM International Conference on Information and Knowledge Management (CIKM'12), Hawaii, USA, November 2012.*
- [SNS'12] **Towards Robust and Scalable Peer-to-Peer Social Networks.** [Alexandra Olteanu](#), and Guillaume Pierre. *In Proc. of the 5th EuroSys' Workshop on Social Network Systems (SNS'12), Bern, Switzerland, May 2012 (Best paper award).*
- [Elsevier CMA'12] **A Dynamic Rescheduling Algorithm for Resource Management in Large Scale Dependable Distributed Systems.** [Alexandra Olteanu](#), Florin Pop, Ciprian Dobre, Valentin Cristea. *Computers & Mathematics with Applications 63(9), Elsevier, Volume 63(9), May 2012.*
- [GHC'10 Poster] **Adaptive Scheduling Approach Used for Rescheduling in Distributed Systems.** [Alexandra Olteanu](#), Florin Pop. *Grace Hopper Celebration of Women in Computing Conference, Atlanta, USA, November 2010.*
- [GHC'10 Poster] **Adaptive Binarization Method with Variable Window Size.** [Alexandra Olteanu](#), Alexandru Stefanescu, Costin-Anton Boiangiu. *Grace Hopper Celebration of Women in Computing Conference, Atlanta, USA, November 2010.*

Tutorials

A Critical Review of Online Social Data: Limitations, Ethical Challenges, and Current Solutions. Carlos Castillo, Fernando Diaz, Emre Kıcıman, and [Alexandra Olteanu](#) (Alphabetical Order). *At the 10th International AAI Conference on Web and Social Media (ICWSM'16), Cologne, Germany, May 2016.*

Awards & Grants

ACM-W Scholarship for 2015 ACM Conference on Computer-Supported Cooperative Work and Social Computing	2015
Student Travel Grant for 8th and 9th International AAI Conference on Web and Social Media	2015 -2014
Best Paper Award at 15th International Conference on Web Information Systems Engineering (WISE'14)	2014
Best Paper Award at 5th EuroSys' Workshop on Social Network Systems (SNS'12)	2012
Google Global Community Scholarship for Grace Hopper Celebration of Women in Computing	2010
"Dinu Patriciu" Private Scholarship for excellent academic results	2010
Research scholarship in cooperation with CCS Content Conversion Specialists GmbH	2009
3rd place Image Processing Session	2010
3rd place Managerial Communication Session <i>Student Scientific Communications</i> at "Politehnica" University of Bucharest	2006

Selected Media Coverage & Impact

CrisisLex Taxonomies Available in GDELT Global Knowledge Graph

GDELT Project, July 2015

<http://blog.gdeltproject.org/crisislex-taxonomies-now-available-in-gkg/>

Why You Shouldn't Only Get Your Climate Change News from the Mainstream Media

The Washington Post, April 2015

<http://www.washingtonpost.com/news/energy-environment/wp/2015/04/21/how-to-get-twitter-riled-up-about-global-warming/>

Earthquakes, Hurricanes and Other Disasters on Twitter

La Stampa (in Italian), March 2015

<http://www.lastampa.it/2015/03/26/multimedia/tecnologia/terremoti-uragani-e-altre-calamitcos-li-racconta-twitter-jQGdKvF6Dq61Q3axYkfmUI/pagina.html>

Crisis Tweets Study Identifies What to Expect During Emergencies

Emergency Management, February 2015

<http://www.emergencymgmt.com/training/Crisis-Tweets-Study-Expect-During-Emergencies.html>

The Role of Twitter During Emergencies and Disasters

Sky TG25 (in Italian), February 2015

http://tg24.sky.it/tg24/mondo/2015/02/18/twitter_ruolo_disastri_studio_differenti_tipi_di_informazioni.html

Could This Be The Most Comprehensive Study of Crisis Tweets Yet?

iRevolutions Blog, February 2015

<http://irevolution.net/2015/02/16/comprehensive-crisis-tweets-study/>

World Humanitarian Data and Trends 2014

United Nations Office for the Coordination of Humanitarian Affairs, December 2014

<http://www.unocha.org/data-and-trends-2014/>

Teaching

École Polytechnique Fédérale de Lausanne (EPFL)

Teaching Assistant

- *Probabilities and Statistics* (bachelor level) Spring 2015
- *Analysis I* (bachelor level) Fall 2014
- *Algorithms* (bachelor level) Fall 2012

Advising Activities

- *Twitter as an Indicator of Food Security* (M.Sc. Thesis, Busser Alexander) Spring 2015
- *The Impact of Twitter on Stock Markets* (Semester Project, Victor Kristof) Fall 2014
- *An Empirical Analysis of the Evolution of Climate Change Discussions in Twitter* (Semester Project, Antoine Bastien) Fall 2014
- *Debating Climate Change: How to Identify Credible Information and Sources from Twitter* (M.Sc. Thesis, Ashish Bindal) Spring 2014
- *Robust Web Content Evaluation Systems* (M.Sc. Thesis, Bogdan Stoica) Fall 2013
- *A Platform for Web Content Evaluation* (Semester Project, Zhicong Huang) Fall 2012
- *Assess Web Credibility* (Semester Project, Stanislav Peshterliev) Spring 2012
- *Inferring User Expertise from Online Social Network Content* (Semester Project, Anton Dimitrov) Spring 2012

“Politehnica” University of Bucharest

Advising Activities

- *Data Transmissions for Multimedia* (class projects, M.Sc. level) Fall 2009
- *Analysis and Extraction of Information in Documents* (class projects, M.Sc. level) Spring 2010
- *Computational Geometry* (class projects, M.Sc. level) Spring 2010
- *Summer school for developing image processing applications* (instructor) Summer 2010

Professional Service

Program Committee: ICWSM'16, SIGIR'16 (short papers)

External Reviewer: CHI'16, CSCW'16, WISE'12/'13/'14, VLDB'13, ICDE'13, IWSOS'13, ISWC'12, ICDCS'12

Skills

Programming: Python (current projects); C++, Java, C (past projects); PHP, CSS, HTML (occasionally)

Miscellaneous

Languages: English (fluent), Romanian (native), French, Spanish, Italian (basic)

Hobbies: Snowboarding, cooking, swimming. In a past life I also used to paint clocks and mirror frames.

Last updated: October 1th, 2016

<http://www.aolteanu.com/docs/aolteanu-cv.pdf>
