Dmytro Karamshuk, PHD

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EDUCATION

- PhD (in 2013) in computer science and engineering from Institute of Advanced Studies IMT Lucca, Italy in collaboration with National Research Council of Italy and University of Cambridge
- BSc (in 2005) and MSc (in 2007) with honors in computer science and engineering from Kyiv Polytechnic Institute (Top-1 in Ukraine as rated by UNESCO, Top-3 in Ukraine as rated by QS)

WORK EXPERIENCE

September 2016 – today	senior data scientist	Skyscanner.com
November 2014 – August 2016	postdoctoral researcher, ESRC project in computational social science	Department of Informatics, King's College London, UK
August 2013 – November 2014	postdoctoral researcher, EPSRC project in collaboration with BBC	Department of Informatics, King's College London, UK
April 2012 – September 2012	visiting research associate in data mining and smart cities	Computer Laboratory, University of Cambridge, UK
2010 – 2013	research associate in stochastic modelling of human mobility and smart cities	Institute for Informatics and Telematics, National Research Council (CNR), Pisa, Italy
2005 – 2010	CEO and co-founder of a software startup with 20 engineers on board	STANFY.com, Ukraine

TEACHING EXPERIENCE

2016 – 4 hours	Data Mining and Machine Learning, Invited Lecture	King's College London
2015 – 10 hours	Recommender Systems, Lecturer	AACIMP Summer School Kyiv Polytechnic Institute
2015 – 8 weeks · 3h/week	Practical Experience of Programming, Teaching Assistant	King's College London
2015 – 4 weeks · 2h/week	Data Structures, Teaching Assistant	King's College London
2015 – 4 weeks · 2h/week	Programming Applications, Teaching Assistant	King's College London

AREAS OF EXPERTISE

- data mining and machine learning
- analysis and modeling of behavior of online users, recommender systems
- geo-location social networks, location recommendations
- video streaming services, content delivery networks, video recommendations
- computational social science, analysis of media bias, natural language processing

INDUSTRIAL COLLABORATIONS

- chief data scientist and co-organizer of Future of Water challenge with NERC and Unilever, 2016
- EPSRC project in collaboration with British Broadcast Corporation (BBC), 2013 - 2015
- contributed to 1903-2011 IEEE Standard for the Functional Architecture of Next Generation Service Overlay Networks, 2014

AWARDS & GRANTS

2016	EPSRC Impact Acceleration Proof of Concept Grant	King's College London with support from Facebook
2016	EPSRC Impact Acceleration Commercial Propositions Grant	King's College London
2012	Erasmus Mobility Grant	University of Cambridge IMT Lucca, Italy
2010 - 2013	PhD scholarship	IMT Lucca, Italy
2001	2nd place award, national competition of research works in Informatics	Junior Academy of Science, Ukraine

PROGRAMMING SKILLS

- Languages – Java, Python
- Statistical and ML libraries – Weka, scikit-learn, Theano and Caffe, NLTK, gensim
- Databases – SQL, MongoDB
- Distributed computing – Spark, Hadoop

PROFESSIONAL SERVICE

- PC member at the International Joint Conference on Artificial Intelligence (IJCAI), 2016
- PC member at the International AAAI Conference on Web and Social Media (ICWSM), 2016 and 2015
- PC member at the workshop on NEws and publiC Opinion (NECO) at ICWSM, 2016
- web chair at the 6th IEEE International Workshop on Network Science for Communication Networks, 2014
- co-chair at the workshop on Systems Support for Data Analysis and Social Graphs, King's College, 2014
- reviewer for the ACM International Joint Conference on Pervasive and Ubiquitous Computing, 2016

- reviewer for Elsevier Computer Networks (COMNET), 2016
- reviewer for Journal of the Royal Society Interface, 2016
- reviewer for Simulation Modelling Practice and Theory, 2016
- reviewer for IEEE Transactions on Big Data, 2016
- reviewer for Computer Communications, 2015
- reviewer for ACM Transactions on Intelligent Systems and Technology, 2015
- reviewer for Transactions on Mobile Computing, 2015
- reviewer for SPRS International Journal of Geo-Information, 2015
- reviewer for Data Mining and Knowledge Discovery, 2015
- reviewer for Pervasive and Mobile Computing, 2014
- reviewer for IEEE Pervasive Computing, 2013

PUBLICATIONS (sorted by the rank of the journal/conference)

AR = Acceptance Ratio; Top-X = as rated among all journals and conferences by H5 citation index

REFEREED CONFERENCES (FULL PAPERS)

- Predicting Pinterest: Automating a distributed human computation. C. Zhong, D. Karamshuk, N. Sastry, **World Wide Web Conference – WWW [AR – 14%, Top-1 in Information Systems, H5 – 75]**, Florence, 2015.
- Geo-Spotting: Mining Online Location-based Services for Optimal Retail Store Placement. D. Karamshuk, A. Noulas, S. Scellato, V. Nicosia, C. Mascolo, ACM SIGKDD **Conference on Knowledge Discovery and Data Mining – KDD [AR – 17%, Top-2 in Data Mining, H5 - 64]**, Chicago, 2013.
- ISP-friendly Peer-assisted On-demand Streaming of Long Duration Content in BBC iPlayer. D. Karamshuk, N. Sastry, A. Secker, J. Chandaria, **IEEE INFOCOM [AR - 19%, Top-3 in Computer Networks, H5 – 78]**, Hong Kong, 2015.
- On Factors Affecting the Usage and Adoption of a Nation-wide TV Streaming Service. D. Karamshuk, N. Sastry, A. Secker, J. Chandaria, **IEEE INFOCOM [AR - 19%, Top-3 in Computer Networks, H5 – 78]**, Hong Kong, 2015.
- Provisioning Cost-Effective Mobile Video Caching. E. Ghoreishi, V. Friderikos, D. Karamshuk, N. Sastry, and H. Aghvami. IEEE **International Conference on Communications - ICC [Top-18 in Computer Networks, H5 – 46]**, Kuala Lumpur, 2016.
- An arrival based framework for human mobility modeling. D. Karamshuk, C. Boldrini, M. Conti, and A. Passarella, IEEE International Symposium on a **World of Wireless Mobile and Multimedia Networks – WoWMoM [AR - 18%, H5 – 22]**, San Francisco, 2012.

REFEREED JOURNALS

- Human mobility models for opportunistic networks. D. Karamshuk, C. Boldrini, M. Conti, and A. Passarella, IEEE **Communications Magazine [Top-1 in Computer Networks, H5 – 90]**, 2011.
- Identifying Geographic Clusters: A Network Approach. R. Catini, D. Karamshuk, O. Penner, M. Riccaboni, Elsevier **Journal on Research Policy [Top-3 in Social Sciences, H5 – 77]**, 2015.
- Take-away TV: Recharging Work Commutes with Greedy and Predictive Preloading of TV Content. D. Karamshuk, N. Sastry, M. al-Bassam, A. Secker, J. Chandaria. IEEE **Journal on Selected Areas in Communications (J-SAC) [Top-6 in Computer Networks, H5 – 66]**, 2016.
- SCORE: Exploiting global broadcasts to create offline personal channels for on-demand access. G. Nencioni, N. Sastry, G. Tyson, V. Badrinarayanan, D. Karamshuk, J. Chandaria, J. Crowcroft. IEEE/ACM **Transactions on Networking [Top-10 in Computer Networks, H5 – 58]**, 2015.
- SPoT: Representing the Social, Spatial, and Temporal Dimensions of Human Mobility with a Unifying Framework. D. Karamshuk, C. Boldrini, M. Conti, and A. Passarella, Elsevier **Journal on Pervasive and Mobile Computing [H5 – 35]**, 11, 2014.

OTHER

- Towards transdisciplinary collaboration between computer and social scientists: Initial experiences and reflections. Dmytro Karamshuk, Mladen Pupavac, Frances Shaw, Julie Brownlie, Vanessa Pupavac, Nishanth Sastry. Book chapter to appear in **Social Network Analysis: Interdisciplinary Approaches and Case Studies.**
- Automated Predictive Curation of Items, **US Provisional Patent**, 62/162778 (US), C. Zhong, D. Karamshuk, N. Sastry.
- 1903-2011- **IEEE Standard** for the Functional Architecture of Next Generation Service Overlay Networks. Contributed to the standard as a member of the corresponding working group.

CURRENTLY UNDER REVIEW

- Understanding Geographical Video Viewing Patterns in Shanghai, Jiaqiang Liu, Huan Yan, Yong Li, Dmytro Karamshuk, Nishanth Sastry and Depeng Jin. **Submitted to a conference.**
- Memes, Memorable Terms, and Propaganda: Dynamics of Information Flows Between Mainstream and Social Media During Mass Crises. D. Karamshuk, T. Lokot, O. Pryymak, N. Sastry. **Submitted to a conference.**
- Survey on Peer-assisted Content Delivery Networks. Nasreen Anjum, Dmytro Karamshuk, Mohammad Shikh-Bahaei, Nishanth Sastry. **Submitted to a journal.**
- Wearing many (social) hats: How different are your different social network personae? Changtao Zhong, Hau-wen Chang, Dmytro Karamshuk, Dongwon Lee, Nishanth Sastry. **Submitted to a conference.**
- A Cost-Effective Approach to Caching-as-a-Service in Cloud-Based 5G Mobile Networks. Seyed Ehsan Ghoreishi, Dmytro Karamshuk, Vasilis Friderikos, Nishanth Sastry, Mischa Dohler and A. Hamid Aghvami. **Submitted to a journal.**

PRESS COVERAGE

- Major study links low internet usage to slow broadband, **BBC**, 2016, http://www.bbc.co.uk/news/technology-36538439
- Scotland affected by worst broadband speeds in UK, **Scotsman.com**, 2016, http://www.scotsman.com/business/companies/tech/scotland-affected-by-worst-broadband-speeds-in-uk-1-4155762
- Regions with worst broadband speeds 'use modern services the least', **USwitch.com**, 2016 https://www.uswitch.com/broadband/news/2016/06/regions_with_worst_internet_access_use_modern_services_the_least_/
- UK let down by slow broadband, **Advanced Television**, 2016, http://advanced-television.com/2016/06/15/uk-let-down-by-slow-broadband/
- UK Study Claims Slow Broadband Speed Fosters Low Internet Use, **ISPReview**, 2016, http://www.ispreview.co.uk/index.php/2016/06/uk-study-claims-slow-broadband-fosters-low-internet-use.html
- Foursquare check-ins tell stores where to set up shop, **New Scientist**, 2013, http://www.newscientist.com/article/mg21929304.600-foursquare-checkins-tell-stores-where-to-set-up-shop.html
- Social Media & Machine Learning tell Stores where to locate: Dmytro Karamshuk Interview, **Data Science Weekly**, 2013, http://www.datascienceweekly.org/data-scientist-interviews/social-media-data-machine-learning-optimal-retail-location-dmytro-karamshuk-interview
- Why Fast Food Restaurants need big data, **Computerra.ru,** 2013, http://www.computerra.ru/81262/mcdonalds-bigdata/
- How Foursquare Helps to Plan Cities, **Kpishnik.kpi.ua**, 2013, http://kpishnik.kpi.ua/karamshuk-on-big-data/
- Interview for **National Radio of Ukraine Channel 2**, 2015, http://www.nrcu.gov.ua/de/schedule/play-archive.html?periodItemID=962598
- Interview for **Hromadske Radio Ukraine**, 2015, http://hromadskeradio.org/gromadska-hvylya/yak-zaroblyayut-na-socmerezhah-legalno-i-nelegalno-dmytro-karamshuk
- Interview for **Review.uz**, 2015, http://review.uz/index.php/zhurnal/2015-year/03-2015/item/3144

INVITED TALKS

- Invited talk, **Ernst & Young London**, January, 2016
- Invited talk, **Yahoo London**, November, 2015
- Invited talk, **Big Innovation Centre**, October, 2015
- Invited talk, **EDHEC Business School Paris**, September, 2015
- Invited talk, **Microsoft Research Asia**, May, 2015
- Invited talk, **Hong Kong University of Science and Technology**, April ,2015
- Invited talk**, University of Cambridge**, March, 2015
- Invited talk, **Google London**, February, 2015
- Invited talk, **International Atomic Energy Agency**, Vienna, January, 2015
- Invited talk, **University of Cambridge**, October, 2013
- Invited talk, **Bell Labs**, Ireland, April, 2013

TED TALK

- TEDx talk, **TedXKyiv**, Ukraine, June, 2013, http://tedxtalks.ted.com/video/at-TEDxKyiv-5

CONFERENCE TALKS

- Two conference talks **at IEEE Conference on Computer Communications** - INFOCOM'2015, April, 2015
- Workshop talk, **The United Kingdom Network Operators' Forum** - UKNOF, April, 2015
- Two workshop talks, **Barcamp London**, September, 2014
- Workshop talk, **London Data Science Meetup**, October, 2013
- Workshop talk, **Next Generation Networking & Multi-Service Networks workshop** - Cosener's, July, 2014
- Workshop talk, **The United Kingdom Network Operators' Forum** - UKNOF, April, 2014
- poster presentation, ACM SIGKDD **Conference on Knowledge Discovery and Data Mining**, August, 2013