

# Amirhossein Aleyasen

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## EDUCATION

*Ph.D. Student*, Computer Science, University of Illinois at Urbana-Champaign 2015-2018 (expected)

Advisor: Prof. Marianne Winslett

*Master of Science*, Computer Science, University of Illinois at Urbana-Champaign 2013-2015

Advisors: Prof. Marianne Winslett, Prof. Jana Diesner

*Master of Science*, Mechatronics Engineering, Sharif University of Technology, Tehran, Iran 2009-2012

Advisors: Prof. Saeed Bagheri Shouraki, Prof. Gholamreza Vossoughi

*Bachelor of Science*, Computer Engineering, Sharif University of Technology, Tehran, Iran 2005-2009

Advisor: Prof. Raman Ramsin

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## RESEARCH INTERESTS

- Data Management and Curation
  - Linked Data
  - Text Mining
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## AWARDS AND HONORS

- **Best Paper Award** at ACM Computer-Human Interaction (CHI) 2015. 2015
  - **Siebel Scholar**, Class of 2015. This award is given to 85 top graduate students from the world's leading graduate schools each year, in recognition of their academic excellence and demonstrated leadership. 2014
  - **Honorable Mention Award (4<sup>th</sup> place)** in the Facebook Midwest Regional Hackathon among 400 students 2013
  - **Finalist** of the SignalFire University Hacker Olympics among 500 students and recipient of travel grant for the final competition in San Francisco. 2013
  - **Exceptional Talent Award** from the B.Sc. Program in Information Technology from Computer Engineering Department of Sharif University of Technology 2009
  - **4<sup>th</sup> rank** according to GPA among B.Sc. students of Information Technology program in Computer Engineering Department of Sharif University of Technology 2009
  - **151<sup>st</sup> rank** in the National University Entrance Examination (Mathematics) for the B.Sc. degree among more than 400,000 participants 2005
  - **Bronze Medal** in 14<sup>th</sup> Iranian National Olympiad in Informatics (INOI) 2004
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## PUBLICATIONS

1. Yodsawalai Chodpathumwan, Amirhossein Aleyasen, Arash Termehchy, Yizhou Sun, Towards Representation Independent Similarity Search Over Graph Databases, CIKM, 2016.
2. Huong Luu, Amirhossein Aleyasen, Marianne Winslett, Yasha Mostofi, Kaidong Peng, Toward Universal Analysis and Visualization of HPC Application Input/Output Behavior, PMBS, 2015
3. Yodsawalai Chodpathumwan, Amirhossein Aleyasen, Arash Termehchy, Yizhou Sun, Universal-DB: Towards Representation Independent Graph Analytics, PVLDB, 2015.
4. Amirhossein Aleyasen, Entity Recognition for Multi-Modal Socio-Technical Systems, Master Thesis, 2015.
5. Amirhossein Aleyasen, Oleksii Starov, Alyssa Phung Au, Allan M. Schiffman, Jeff Shrager, On the Privacy Practices of Just Plain Sites, Workshop on Privacy in the Electronic Society (WPES), 2015.
6. Motahhare Eslami, Amirhossein Aleyasen, Karrie Karahalios, Kevin Hamilton, Christian Sandvig, FeedVis: A Path for Exploring News Feed Curation Algorithms, Computer-Supported Cooperative Work (CSCW) demo 2015.

7. Motahhare Eslami, Aimee Rickman, Kristen Vaccaro, Amirhossein Aleyasen, Karrie Karahalios, Kevin Hamilton, Christian Sandvig, 'I always assumed that I wasn't really that close to [her]': Reasoning about invisible algorithms in the news feed, ACM Conference on Human Factors in Computing Systems (CHI), 2015. **[awarded best paper]**
8. Jinseok Kim, Jana Diesner, Heejun Kim, Amirhossein Aleyasen, Hwan-Min Kim, Why name ambiguity resolution matters for scholarly big data research. BigData Conference, 2014.
9. Yodsawalai Chodpathumwan, Arash Termehchy, Yizhou Sun, Amirhossein Aleyasin, Jose Picado, Toward General Similarity Search Over Graphs, Graph Data Management Experiences & Systems (GRADES), 2014.
10. Motahhare Eslami, Amirhossein Aleyasen, Roshanak Zilouchian Moghaddam, Karrie G. Karahalios, Evaluating Automated Friend Grouping in Online Social Networks, International Conference on Social Informatics (SocInfo), 2014.
11. Jana Diesner, Amirhossein Aleyasen, Shubhanshu Mishra, Aaron Schecter, Noshir Contractor. Comparison of Communication Networks Built from Explicit and Implicit Data, Computational Approaches to Social Modeling (ChASM), 2014.
12. Jana Diesner, Amirhossein Aleyasen. ConText: Software for the Integrated Analysis of Text Data and Network Data. Conference of International Communication Association (ICA), 2014.
13. Motahhare Eslami, Amirhossein Aleyasen, Roshanak Zilouchian Moghaddam, Karrie G. Karahalios, Evaluation of Automated Friend Grouping in Online Social Networks, ACM Conference on Human Factors in Computing Systems (CHI) Extended Abstracts, 2014.
14. Sean Wilner, Amirhossein Aleyasen, Shubhanshu Mishra, Kiumars Soltani, Jana Diesner. Comparison of Network Data Constructed from Text Data and Textual Meta-data, XXXIV International Sunbelt Social Network Conference, 2014.
15. Jana Diesner, Susie Pak, Jinseok Kim, Kiumars Soltani, Amirhossein Aleyasen. Computational Assessment of the Impact of Social Justice. iConference, 2014.
16. Motahhare Eslami, Amirhossein Aleyasen, Karrie G. Karahalios, Make Community Detection More Human, Human Computer Interaction Consortium (HCIC), 2013.
17. Jana Diesner, Amirhossein Aleyasen, Jinseok Kim, Shubhanshu Mishra, Kiumars Soltani. Using Socio-Semantic Network Analysis for Assessing the Impact of Documentaries, Workshop on Information in Networks (WIN), 2013.

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## RESEARCH EXPERIENCE

### Data Management

*The Data and Information Systems (DAIS) Group, Computer Science Department, University of Illinois at Urbana-Champaign*

Under supervision of Marianne Winslett

- **xCurator** March 2016-Present  
Add structure and enhance the quality of domain-specific semistructured data by extracting entities and their type and associations, identification and merging of duplicate entities, linking related entities, all in a lightweight easy-to-use and scalable framework that effectively incorporates user feedback in all phases.
- **General Similarity Search Over Graph Databases** March 2014-Jan 2016  
Developing a novel theoretical framework to define the concept of generality precisely and analyze the robustness of a similarity search algorithm against various representational changes.
- **The Usable Query Capacity of Databases** Dec 2012-Jun 2014  
Exploring the impact of meta-data and schema on the ability of data management systems to answer noisy queries.

### Text Mining and Information Extraction

*Social-Technical Data Analytics (SODA) Group, Graduate School of Library and Information Science, University of Illinois at Urbana-Champaign*

Under supervision of Jana Diesner

- **Entity Recognition for Multi-Modal Socio-Technical Systems** Jan 2014-Jul 2015  
In my master thesis, I have built an entity recognizer that supports named entities (e.g. person names and organizations) as well as non-named entities (e.g. physical objects). It supports a wide range of entity classes that are relevant for analyzing multi-modal, socio-technical systems.

- **ConText: Software for the Integrated Analysis of Text Data and Network Data** Aug 2013-Present  
Developing ConText, a free and open tool for providing methodological and technical innovation for the construction and fusion of different types of network data from natural language text data and the joint analysis of text data and network data.
- **Computational Solution and Methodology for Assessing the Impact of Social Justice Documentaries** Apr 2013-Mar 2014  
Developing and applying a computational solution to understand the impact of social justice documentaries on (changes in) knowledge and behavior on the individual, group/community and societal level.
- **Identification of Organizational Social Media Footprint and Computational Expansion of Controlled Vocabulary** Aug 2013-Apr 2014  
The computational, systematic and empirical expansion of a controlled, human-curated, large-scale and practically employed medical vocabulary and the evaluation of this procedure.

### HCI and Social Network Analysis

*Social Spaces Group, Computer Science Department, University of Illinois at Urbana-Champaign*

Under supervision of Karrie G. Karahalios

- **Humanizing Group Detection Evaluation over Social Networks** Sep 2012-Oct 2013  
Evaluating clustering algorithms' performance over Facebook friendship networks by developing a community detection application and conducting human studies.
- **The Effects of Algorithm Awareness in Social Media** May 2013-Present  
Investigating the awareness of hidden algorithms and its effects in social media by studying Facebook News Feed curation algorithm and analyzing people's behaviour considering their awareness level of the algorithm.

### WORK EXPERIENCE

- **CommerceNet**, Palo Alto, CA Summer 2014  
Research Intern
  - Developing a framework on user privacy issues in the small to medium business websites and conducting a large scale empirical study in order to evaluate the current state of these websites in protecting users' privacy.
- **RahTech Co**, Tehran, Iran 2009-2012  
Project Manager/Senior Software Engineer/Database Administrator
  - Design, development and deployment of a bus management system for metropolitan transportation of Mashhad, second largest city in Iran. This system improves the quality of bus fleet services, monitors performance of fleets on different lines and controls the quality of bus lines services.
  - Design, development and deployment of a real time passenger information system (RTPIS) for metropolitan transportation of Mashhad, second largest city in Iran. This system includes predictions for arrival and departure times appearing in the stations as well as mobile devices.
  - Design, development and deployment of a fleet management system for small and medium enterprises (SMEs).
- **FANAP Co**, Tehran, Iran 2008-2009  
Software Engineer
  - Design, development and deployment of a payment switch monitoring system for Pasargad Bank, the fifth largest bank in Iran.
- **Javaneh Narmafzar Co**, Tehran, Iran 2007-2008  
Software Engineer
  - Design, development and deployment of Adstrim, a web-based video advertising system. It generates video ads dynamically from user's resources (image, audio, video and text) and publishes it on Web.

### TEACHING EXPERIENCE

*Teaching Assistant, Sharif University of Technology*

- Linear Control Systems Spring 2009
- Application Engineering Spring 2009
- Internet Engineering Fall 2008
- Design of Algorithms Fall 2007, Spring 2008
- Introduction to Programming Fall 2006

**PROFESSIONAL ACTIVITIES**

- External reviewer for VLDB 2015, VLDB 2014, ICWSM 2014, SocInfo 2014, SSDBM 2013
  - Member of the Iran National Elite Institute 2006-Present
  - Member of Young Scholars Club (The Iranian Olympiad Organization) 2003-Present
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