Niranjan Balasubramanian

Research Assistant Professor
Stony Brook University

E-mail: niranjan@cs.stonybrook.edu
Phone: 631 632 8470
Webpage: http://www3.cs.stonybrook.edu/~niranjan/

Research Interests

Natural Language Processing
Event extraction, Knowledge Extraction, and Question Answering.

Information Retrieval
Performance estimation, Query-dependent strategies, and Mobile search.

Education

Ph.D, Computer Science – University of Massachusetts Amherst, July 2011.
M.S., Computer Science – University at Buffalo (SUNY), July 2003.
B.Eng, Computer Science – Shanmugha College of Engineering, Tamilnadu, India, May 2001.

Work Experience

Research Assistant Professor **Stony Brook University**
Department of Computer Science and Jan 2015 – Present.
Biomedical Informatics

Postdoctoral Fellow **University of Washington**
Mentor: Oren Etzioni July 2011 – Dec 2014
Event Modeling and Question Answering using Open Information Extraction.

Research Assistant **University of Massachusetts**
Advisor: Prof. James Allan 2006 – 2011
Query dependent strategies in Information Retrieval

Software Engineer **Syracuse University**
Center for Natural Language Processing 2003–2006
Manager: Prof. Elizabeth D. Liddy
Development of Question Answering, and Information extraction tools.

Teaching

1. Grad: Advanced Topics in Computational Linguistics, Fall 2015, Stony Brook University.

2. Grad: Introduction to Natural Language Processing, Spring 2015, Stony Brook University.

Conference Publications

1. [**EMNLP 2015**] Exploring Markov Logic Networks or Question Answering
   Khot, T., Balasubramanian, N., Eric Gribkoff, Sabharwal, A., Clark, P., Etzioni, O.
   Conference on Empirical Methods in Natural Language Processing.

2. [**EMNLP 2013**] Generating Coherent Event Schemas at Scale.
   Balasubramanian, N., Soderland, S., Mausam, and Etzioni, O.
   Conference on Empirical Methods in Natural Language Processing.

3. [**CoNext 2012**] FindAll: A Local Search Engine for Mobile Phones.
   Balasubramanian, A., Balasubramanian, N., Huston, Samuel., Metzler, Donald.
   ACM CoNext conference.

4. [**SIGIR 2010**] Exploring Reductions for Long Web Queries.
   Balasubramanian, N., Kumaran, G., and Carvalho, V.
   ACM SIGIR Conference.

5. [**SIGIR 2010**] Learning to Select Rankers.
   Balasubramanian, N. and Allan, J.
   A poster paper at ACM SIGIR Conference.

6. [**SIGIR 2010**] Predicting Query Performance on the Web.
   Balasubramanian, N., Kumaran, G., and Carvalho, V.
   A poster paper at ACM SIGIR Conference.

7. [**ICSC 2010**] Topic Pages: An Alternative to the Ten Blue Links.
   Balasubramanian, N. and Cucerzan, S.
   IEEE Conference on Semantic Computing (**Among top 5 papers selected for IJSC journal.**)

8. [**CIKM 2009**] Automatic Generation of Topic Pages Using Query-based Aspect Models.
   Balasubramanian, N. and Cucerzan, S.
   A short paper at ACM Conference on Information and Knowledge Management

9. [**IMC 2009**] Energy Consumption in Mobile Phones: A Measurement Study and Implications for
   Network Applications.
   Balasubramanian, N., Balasubramanian, A. and Venkataramani, A.
   ACM Internet Measurement Conference.

10. [**SPIRE 2009**] Syntactic Query Models for Restatement Retrieval.
    Balasubramanian, N. and Allan, J.
    String Processing and Information Retrieval Conference.

11. [**SIGIR 2007**] A Comparison of Sentence Retrieval Techniques.
    Balasubramanian, N., Allan, J. and Croft, W. B.
    A poster at ACM SIGIR Conference.

Journal publications

1. [**IJSC 11**] Beyond Ranked Lists in Web Search: Aggregating Web Content in Topic Pages.
   Balasubramanian, N., and Cucerzan, S.
   International Journal of Semantic Computing, 2011.

Workshop publications

1. [**K-CAP 2015**] Semantic Role Labeling for Process Recognition Questions
   Louvan, S., Naik, C., Lynn, V., Arun, A., Balasubramanian, N., and Clark, P.
   K-CAP Scientific Knowledge Workshop 2015.

2. [**StarAI 2015**] Markov Logic Networks for Natural Language Question Answering. Khot, T.,
   Balasubramanian, N., Eric Gribkoff, Sabharwal, A., Clark, P., Etzioni, O.
   International Workshop on Statistical Relational AI.

3. [**AKBC 2014**] Automatic Construction of Inference-Supporting Knowledge Bases [**Best Paper**]
   Clark, P., Balasubramanian, N., Bhakthavatsalam, S., Humphreys, K., Kinkead, J., Sabharwal, A.,
   Tajford, O.
   Automatic Knowledge Base Construction and Web-scale Knowledge Extraction 2014.

4. [**AKBC 2013**] A Study of the AKBC/Requirements for Passing an Elementary Science Test.
   Clark P., Harrison P., Balasubramanian N.
   Automatic Knowledge Base Construction and Web-scale Knowledge Extraction at CIKM 2013.

5. [**AKBC 2012**] Rel-grams: A Probabilistic Model of Relations in Text.
   Balasubramanian, N., Soderland, S., Mausam, Etzioni, O.
   Automatic Knowledge Base Construction and Web-scale Knowledge Extraction at NAACL 2012.

6. [**AKBC 2012**] Constructing a Textual KB from a Biology TextBook.
   Clark, P., Harrison, P., Balasubramanian, N., Etzioni, O.
   Automatic Knowledge Base Construction and Web-scale Knowledge Extraction at NAACL 2012.

7. [**NW-NLP 2012**] Answering Biology Questions using Textual Reasoning.
   Clark, P., Harrison, P., Balasubramanian, N.
   Pacific Northwest Regional NLP Workshop 2012.

Technical Reports

1. [**2012**] Out of the Box Information Extraction: a Case Study using Bio-Medical Texts.
   Balasubramanian, N., Soderland, S., Mausam, Etzioni, O., and Bart, R.
   Technical Report (UW-CS-2012-xxx) in Computer Science, University of Washington.

2. [**2011**] Modeling Relative Effectiveness to Leverage Multiple Ranking Algorithms.
   Balasubramanian, N. and Allan, J.
   CIIR Technical Report (IR-xxx) in University of Massachusetts Amherst.

3. [**2009**] Energy Aware Search from Mobile Phones.
   Balasubramanian, N., Venkataramani, A. and Allan, J.,
   CIIR Technical Report (IR-706) in University of Massachusetts Amherst.

4. [**2009**] Energy Consumption in Mobile Phones: Measurement, Design Implications, and Algorithms.
   Balasubramanian, N., Balasubramanian, A., and Venkataramani, A.
   Technical Report (UM-CS-2009-022) in Computer Science, University of Massachusetts Amherst.

Invited Contributions

1. [**2010**] Online Feature Selection for Information Retrieval.
   Balasubramanian, N., Kumaran, G., Carvalho, V. and Allan, J.
   Feature Generation and Selection Workshop for Information Retrieval, SIGIR 2010.

Theses

1. **Ph.D. [2011]** Query-dependent Selection of Retrieval Alternatives.
   Advisor: James Allan
   University of Massachusetts Amherst.

2. **Masters [2003]** Automatic Acquisition of Concept Hierarchies in an Integrated Information Retrieval/Information Extraction framework.
   Advisor: Rohini Srihari
   University at Buffalo.

Invited talks

1. **University at Buffalo** - Open Event Schemas, CS Colloquium Series, October 2013.
2. **Decide.com** - Machine Learning for Information Retrieval, March 2012.
3. **University of Washington** - Machine Learning for Information Retrieval, AI Seminar, Feb 2012.
4. **University of Waterloo** - Query-dependent Selection of Retrieval Alternatives, March 2010.
5. **University at Buffalo** - Query-dependent Selection of Retrieval Alternatives, March 2010.

Services and Awards

1. **Reviewing:**

   IR – SIGIR 2015, ACL 2015, 2012-14 posters, CIKM 2012-13

   NLP – EMNLP 2012-13, AAAI 2012-13

2. **Travel Award**: SIGIR 2010.

3. **Graduate Student Representative, UMass CS**: 2010.