### **ICTIR 2015**

ACM SIGIR International Conference on the Theory of Information Retrieval



#### **PROGRAM**

Northampton, Massachusetts, U.S.A.

September 27 – 30, 2015

ictir2015.org

#### General Chairs' Welcome

Welcome to ICTIR 2015, the 5<sup>th</sup> International Conference on the Theory of Information Retrieval and the first conference with that name to be fully sponsored by the ACM Special Interest Group on Information Retrieval (SIGIR). Becoming part of the SIGIR family, along with the well-known SIGIR conference and the new CHIIR conference, will improve both the coordination between these venues and the availability of resources such as student scholarships. We believe that ICTIR is a natural complement to the SIGIR conference, with a stronger emphasis on theory and formal approaches, and less emphasis on large-scale experimentation and practice.

Given that ICTIR has generally been a smaller, more discussion-oriented conference than SIGIR, we hope that you will find the Pioneer Valley, and Northampton in particular, an ideal venue for this September meeting. This area provides a relaxing small-town setting, beautiful Fall colors, and enough restaurants and bars to satisfy those of you used to living in large cities. The Center for Intelligent Information Retrieval and the University of Massachusetts are just on the other side of the Connecticut River in Amherst, and Noah Webster and Melvil Dewey did some of their best work at Amherst College, so there is a strong association with information retrieval. Given the quality of research that will be presented here at ICTIR 2015, this should be another milestone in this local IR history. Enjoy the conference!

#### James Allan

College of Information and Computer Sciences University of Massachusetts Amherst

#### **Bruce Croft**

College of Information and Computer Sciences University of Massachusetts Amherst

### Program Chairs' Welcome

The program chairs are excited to welcome you to ICTIR.

The conference aims to provide a forum for the presentation and discussion of research related to the *foundational* aspects of Information Retrieval (IR), including, for example, new or improved models of relevance, ranking, representation, information needs, and evaluation. Norbert Fuhr helped define foundation precisely as *a scientific result that others can build upon and use for their own research*. The class of scientific works solicited in the call for papers thus covered both purely theoretical contributions as well as reproducible experimental results; where reproducibility is emphasized (e.g., through sharing the data sets and/or software implementations).

The conference has been very successful in attracting high quality contributions, helping us compose a strong and varied program. The conference received a healthy number of submissions: 4 tutorials out of which we accepted 2 (or 50%), 43 short paper submissions where we accepted 22 (51%), and, 57 long paper submissions out of which 29 have been included in the final program (51%). (As an aside, due to the high quality of the submission pool, we would like to emphasize that acceptance rate is obviously not an indicator of quality!)

We thank all the program committee members for their effort and excellent reviews, and the Tutorial Chair, Peter Bruza, and his committee for the selection of tutorials. We invite you to enjoy the scientific program with exciting novel results in our field!

Long Paper PC Chairs:

Short Paper PC Chairs:

#### **Arjen De Vries**

CWI & Delft University of Technology

#### ChengXiang Zhai

University of Illinois at Urbana-Champaign

#### **Norbert Fuhr**

University Duisburg-Essen

#### Yi Zhang

University of California Santa Cruz

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#### Sponsors and Supporters

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### Oracle Labs

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### **Sponsors and Supporters**

#### **Sponsors**





#### **Local Organizer**



### **Conference Organization**

#### **General Chairs:**

James Allan (University of Massachusetts Amherst, USA) Bruce Croft (University of Massachusetts Amherst, USA)

#### **Program Chairs:**

Arjen de Vries (CWI & Delft University of Technology, The Netherlands)

ChengXiang Zhai (University of Illinois at Urbana-Champaign, USA)

#### **Program Chairs, Short Papers:**

Norbert Fuhr (University Duisburg-Essen, Germany) Yi Zhang (University of California Santa Cruz, USA)

#### **Tutorial Chair:**

Peter Bruza (Queensland University of Technology, Australia)

#### **Local Arrangements:**

Jean Joyce (University of Massachusetts Amherst, USA) Kate Moruzzi (University of Massachusetts Amherst, USA)

#### **Steering Committee:**

Leif Azzopardi (University of Glasgow, United Kingdom)

Peter Bruza (Queensland University of Technology, Australia)

Susan Dumais (Microsoft Research, USA)

Jaap Kamps, SIGIR representative (University of Amsterdam, The Netherlands)

Oren Kurland, Chair (Technion - Israel Institute of Technology, Israel)

Birger Larsen (Aalborg University, Denmark)

Donald Metzler (Google, USA)

Stefan Rueger, BCS-IRSG representative (the Open University, United Kingdom)

Keith van Rijsbergen, Honorary Chair (University of Glasgow, United Kingdom)

#### **Photography Credits:**

David Fisher (University of Massachusetts Amherst, USA) Huong Phan (University of Massachusetts Amherst, USA)

#### **Program Committee:**

Eugene Agichtein (Yahoo Labs and Emory University, USA)

Robin Aly (University of Twente, The Netherlands)

Giambattista Amati (Fondazione Ugo Bordoni, Italy)

Jaime Arguello (University of North Carolina at Chapel Hill, USA)

Leif Azzopardi (University of Glasgow, United Kingdom)

Krisztian Balog (University of Stavanger, Norway)

Alejandro Bellogin (Universidad Autónoma de Madrid, Spain)

Michael Bendersky (Google, USA)

Peter Bruza (Queensland University of Technology, Australia)

Katriina Byström (Oslo and Akershus University College of Applied Sciences, Norway)

Jamie Callan (Carnegie Mellon University, USA)

Mark Carman (Monash University, Australia)

Claudio Carpineto (Fondazione Ugo Bordoni, Italy)

Ben Carterette (University of Delaware, USA)

Pablo Castells (Universidad Autónoma de Madrid, Spain)

Yi Chang (Yahoo! Labs, USA)

Tat-Seng Chua (National University of Singapore, Singapore)

Kevyn Collins-Thompson (University of Michigan, Ann Arbor, USA)

Fabio Crestani (University of Lugano (USI), Switzerland)

Ronan Cummins (Cambridge University, United Kingdom)

Jeffrey Dalton (Google, USA)

Arjen P. de Vries (CWI & Delft University of Technology, The Netherlands)

Gianluca Demartini (University of Sheffield, United Kingdom)

Thomas Demeester (Ghent University - iMinds, Belgium)

Fernando Diaz (Microsoft, USA)

Laura Dietz (Mannheim University, Germany)

Miles Efron (University of Illinois, USA)

Hui Fang (University of Delaware, USA)

Ingo Frommholz (University of Bedfordshire, United Kingdom)

Norbert Fuhr (University of Duisburg-Essen, Germany)

Eric Gaussier (University J. Fourier/Grenoble 1, France)

Julio Gonzalo (ETS de Ingeniería Informática, UNED, Spain)

Jiafeng Guo (Chinese Academy of Sciences, China)

Matthias Hagen (Bauhaus-Universität Weimar, Germany)

Allan Hanbury (TU Wien, Austria)

Morgan Harvey (Northumbria University, United Kingdom)

Ben He (University of Chinese Academy of Sciences, China)

Jiyin He (Centrum Wiskunde & Informatica, The Netherlands)

#### **Program Committee (continued):**

Djoerd Hiemstra (University of Twente, The Netherlands)

Jimmy Huang (York University, Canada)

Hideo Joho (*University of Tsukuba, Japan*)

Joemon M Jose (University of Glasgow, United Kingdom)

Jaap Kamps (University of Amsterdam, The Netherlands)

Evangelos Kanoulas (University of Amsterdam, The Netherlands)

Diane Kelly (University of North Carolina at Chapel Hill, USA)

Alexander Kotov (Wayne State University, USA)

Kriste Krstovski (University of Massachusetts Amherst / Harvard-

Smithsonian Center for Astrophysics, USA)

Oren Kurland (Technion - Israel Institute of Technology, Israel)

Mounia Lalmas (Yahoo Labs, United Kingdom)

Wai Lam (The Chinese University of Hong Kong, Hong Kong)

Birger Larsen (Aalborg University, Denmark)

Victor Lavrenko (University of Edinburgh, United Kingdom)

Christina Lioma (*University of Copenhagen, Denmark*)

Tie-Yan Liu (Microsoft Research Asia, China)

David Losada (Universidad de Santiago de Compostela, Spain)

Yuanhua Lv (Microsoft Research, USA)

Ilya Markov (University of Amsterdam, The Netherlands)

Massimo Melucci (University of Padova, Italy)

Donald Metzler (Google Inc., USA)

Jian-Yun Nie (University of Montreal, Canada)

Gabriella Pasi (Universita degli studi di Milano Bicocca, Italy)

Benjamin Piwowarski (*UPMC / CNRS, France*)

Barbara Poblete (University of Chile, Chile)

Thomas Roelleke (Queen Mary University of London, United Kingdom)

Stefan Rueger (The Open University, United Kingdom)

Tetsuya Sakai (Waseda University, Japan)

Mark Sanderson (RMIT University, Australia)

Rodrygo Santos (Universidade Federal de Minas Gerais, Brazil)

Mark Smucker (University of Waterloo, Canada)

Dawei Song (The Open University, United Kingdom)

Benno Stein (University of Weimar, Germany)

Theodora Tsikrika (CERTH, Greece)

Howard Turtle (Syracuse University, USA)

Olga Vechtomova (University of Waterloo, Canada)

Jun Wang (UCL, United Kingdom)

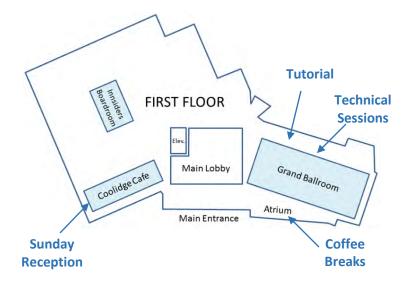
Grace Hui Yang (Georgetown University, USA)

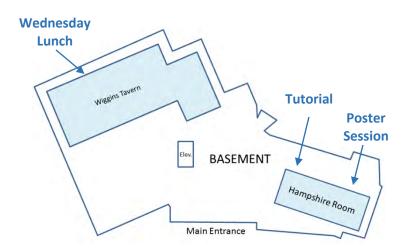
ChengXiang Zhai (University of Illinois, USA)

Yi Zhang (University of California Santa Cruz, USA)

Guido Zuccon (Queensland University of Technology, Australia)

### Hotel Northampton Floor Plan





### Overview of Schedule

Time	Sunday	day	Monday	Tuesday	Wednesday
8:30 a m				Registration (all day)	
9:00 a.m.			Breakfast Sreakfast	Breakfast	Breakfast
9:30 a.m.			Welcome and	7:	W1:
10:00 a.m.			Keynote Address	Technical Session	Technical Session
10:30 a.m.			Coffee Break	Coffee Break	Coffee Break
11:30 a.m.	Regist	Registration	M1:	T2:	W2:
12:00 p.m.			Technical Session	Technical Session	Technical Session
1.00 p.m.					(bebiyaa) daan l
1:30 p.m.	Tutorial	Tutorial	Lunch (on your own)	Lunch (on your own)	at Wiggins Tavern
2.00 p.m.	-	2		73.	10/3-
2.00 p.m.				Tookainel Consider	
2.20 p.m.	Coffee	Coffee Break	M2:	l ecnnical session	l echnical Session
3.30 p.m. ===	Tutorial		Technical Session	Coffee Break	
4.30 p.m	ulolia	101011		T4.	ICTIR Business Mtn
5:00 p.m.	_	2		Technical Session	and Wrap-Up
5.50 p.m.			Poster Session		
6:30 p.m.	Welcome Reception	Reception		Travel to Banquet	ICTIR 2015
7:30 p.m.				(until 10 p.m.)	PROGRAM

### Sunday's Schedule

Sunday, September 27, 2015

10:00 a.m.	Registration Opens Location: Hotel Northampton Lobby		
1:00 p.m. – 3:30 p.m.	Tutorials (in parallel)		
	Tutorial 1: Statistical Significance Testing in Information Retrieval: Theory and Practice	Tutorial 2: Theory of Retrieval: The Retrievability of Information	
	Ben Carterette, University of Delaware	Leif Azzopardi, University of Glasgow	
		Location: Hampshire Room	
	Location: Grand Ballroom		
3:00 p.m. – 3:30 p.m.			
•	Grand Ballroom		



### Monday's Schedule

### Monday, September 28, 2015 Technical Sessions held in the Grand Ballroom

8:00 a.m.	Registration Opens Location: Hotel Northampton Lobby			
8:30 a.m. – 9:00 a.m.	Continental Breakfast Location: Atrium			
9:00 a.m. – 9:15 a.m.	Welcome James Allan and Bruce Croft			
9:15 a.m. – 10:30 a.m.	Keynote Address: Embedded Representations of Lexical and Knowledge-Base Semantics  Andrew McCallum, University of Massachusetts Amherst			
10:30 a.m. – 11:00 a.m.	Coffee Break Location: Atrium  Begin poster set-up (Hampshire Room)			
11:00 a.m. – 12:30 p.m.	<ul> <li>Technical Session M1: IR Evaluation: Measures</li> <li>An Axiomatically Derived Measure for the Evaluation of Classification Algorithms         Fabrizio Sebastiani, Qatar Computing Research Institute, Qatar</li> <li>Towards a Formal Framework for Utility-oriented Measurements of Retrieval Effectiveness         Marco Ferrante, Nicola Ferro, and Maria Maistro, University of Padua, Italy</li> <li>Bayesian Inference for Information Retrieval Evaluation         Ben Carterette, University of Delaware, USA</li> </ul>			

### Monday's Schedule (continued)

### Monday, September 28, 2015 Technical Sessions held in the Grand Ballroom

12:30 p.m. –	Lunch (on your own)			
2:30 p.m.	See pages 23 – 26 for a list of restaurants			
2:30 p.m. – 4:30 p.m.	<ul> <li>Technical Session M2: Theoretical Framework &amp; Transfer Learning</li> <li>Transferring Learning To Rank Models for Web Search         Craig Macdonald, University of Glasgow, United Kingdom; B. Taner Dincer, Mugla University, Turkey; ladh Ounis, University of Glasgow, United Kingdom     </li> <li>The Probability Ranking Principle is Not Optimal in Adversarial Retrieval Settings         Ran Ben Basat, Moshe Tennenholtz, and Oren Kurland, Technion, Israel     </li> <li>Dynamic Information Retrieval: Theoretical Framework and Application         Marc Sloan and Jun Wang, University College London, United Kingdom     </li> <li>A Theoretical Analysis of Two-Stage Recommendation for Cold-Start Collaborative Filtering         Xiaoxue Zhao and Jun Wang, University College London, United Kingdom     </li> </ul>			
4:30 p.m. – 7:00 p.m.	Poster Session – Sponsored by Microsoft Research Location: Hampshire Room			

# Microsoft<sup>®</sup> Research

### Tuesday's Schedule

### Tuesday, September 29, 2015 Technical Sessions held in the Grand Ballroom

8:00 a.m.	Registration Opens Location: Hotel Northampton Lobby				
8:30 a.m. – 9:00 a.m.	Continental Breakfast Location: Atrium				
9:00 a.m. – 10:30 a.m.	<ul> <li>Technical Session T1: IR Evaluation: Interactive and Task Evaluation</li> <li>An Analysis of Theories of Search and Search Behavior         Leif Azzopardi, University of Glasgow, United Kingdom; Guido Zuccon, Queensland University of Technology (QUT), Australia     </li> <li>Dynamic Test Collections for Retrieval Evaluation         Ben Carterette, Ashraf Bah, and Mustafa Zengin, University of Delaware, USA     </li> <li>Development and Evaluation of Search Tasks for IIR Experiments using a Cognitive</li> </ul>				
	Complexity Framework Diane Kelly, Jaime Arguello, Ashlee Edwards, and Wan-Ching Wu, University of North Carolina at Chapel Hill, USA				
10:30 a.m. – 11:00 a.m.	Coffee Break Location: Atrium				

### Tuesday's Schedule (continued)

### Tuesday, September 29, 2015 Technical Sessions held in the Grand Ballroom

11:00 a.m. – 12:30 p.m.	<ul> <li>Technical Session T2: Query Representation</li> <li>Query Expansion with Freebase         Chenyan Xiong and Jamie Callan, Carnegie Mellon University, USA     </li> <li>Language-independent Query Representation for IR Model Parameter Estimation on Unlabeled Collections         Parantapa Goswami, Massih-Reza Amini, and Eric Gaussier, Université Grenoble-Alps, France     </li> <li>Terms, Topics &amp; Tasks: Enhanced User Modelling for Better Personalization         Rishabh Mehrotra and Emine Yilmaz, University College London, United Kingdom     </li> </ul>			
12:30 p.m. – 2:00 p.m.	Lunch (on your own) – note that today's lunch break is shorter than it was on Monday  Please remove posters from Hampshire Room			
2:00 p.m. – 3:30 p.m.	<ul> <li>Technical Session T3: Language Models for IR</li> <li>Axiomatic Analysis of Smoothing Methods in Language Models for Pseudo-Relevance Feedback         <ul> <li>Hussein Hazimeh and ChengXiang Zhai,</li> <li>University of Illinois at Urbana-Champaign, USA</li> </ul> </li> <li>On Divergence Measures and Static Index Pruning         <ul> <li>Ruey-Cheng Chen, RMIT University, Australia;</li> <li>Chia-Jung Lee and W. Bruce Croft, University of Massachusetts Amherst, USA</li> </ul> </li> <li>Partially Labeled Supervised Topic Models for Retrieving Similar Questions in CQA Forums         <ul> <li>Debasis Ganguly and Gareth J.F. Jones, Dublin</li> </ul> </li> </ul>			
3:30 pm. – 4:00 p.m.	Coffee Break Location: Atrium			

### Tuesday's Schedule (continued)

Tuesday, September 29, 2015

Technical Sessions held in the Grand Ballroom

4:00 p.m. – 5:30 p.m.	<ul> <li>Technical Session T4: Entity Analysis</li> <li>Entity Linking in Queries: Tasks and Evaluation         Faegheh Hasibi, Norwegian University of Science and Technology, Norway; Krisztian Balog, University of Stavanger; Svein Erik Bratsberg, Norwegian University of Science and Technology, Norway</li> <li>Random Walks on the Reputation Graph Sabir Ribas, Universidade Federal de Minas Gerais, Brazil; Berthier Ribeiro-Neto, Universidade Federal de Minas Gerais &amp; Google Inc., Brazil; Rodrygo L.T. Santos, Universidade Federal de Minas Gerais, Brazil; Edmundo de Souza e Silva, Universidade Federal do Rio de Janeiro, Brazil; Alberto Ueda, Universidade Federal de Minas Gerais, Brazil; Nivio Ziviani, Universidade Federal de Minas Gerais &amp; Zunnit Tech, Brazil</li> <li>Entropy and Graph Based Modelling of Document Coherence using Discourse</li> </ul>
	Document Coherence using Discourse Entities: An Application to IR Casper Petersen, Christina Lioma, and Jakob Grue Simonsen, University of Copenhagen, Denmark; Birger Larsen, Aalborg University Copenhagen, Denmark
6:00 p.m.	Bus departs for banquet
6:30 p.m. – 10:00 p.m.	Banquet at The Log Cabin, Holyoke, MA
10:00 p.m.	Bus departs for hotel

#### **Banquet Directions**

### The Log Cabin 500 Easthampton Road, Holyoke, MA

- Starting at the Hotel Northampton
- Turn right (southeast) out of the hotel parking lot onto King Street (Route 5/Route 10)
- Continue for 2.4 miles on Route 5 (called Pleasant Street and Mt Tom Road)
- Turn right onto East Street at green "Easthampton Center" sign
- After 3.4 miles, turn left onto Route 141 (called Holyoke Street and then Easthampton Road)
- Slightly more than a mile later, The Log Cabin will be on your right at 500 Easthampton Road, Holyoke, MA



### Wednesday's Schedule

Wednesday, September 30, 2015
Technical Sessions held in the Grand Ballroom

8:00 a.m.	Registration Opens Location: Main Floor Lobby					
8:30 a.m.	Continental Breakfast Location: Atrium					
9:00 a.m. – 10:30 a.m.	<ul> <li>Technical Session W1: IR Applications</li> <li>Improving Patent Search by Search Result Diversification         Youngho Kim and W. Bruce Croft, University of Massachusetts Amherst, USA</li> <li>On Microblog Dimensionality and Informativeness         Exploiting microblogs' structure and dimensions for ad-hoc retrieval         Jesus Alberto Rodriguez Perez and Joemon M. Jose, University of Glasgow, U.K.</li> <li>Online News Tracking for Ad-Hoc Information Needs         Jeroen B. P. Vuurens, Delft University of Technology, The Netherlands; Arjen P. de Vries, CWI, The Netherlands; Roi Blanco and Peter Mika, Yahoo Labs, England</li> </ul>					
10:30 a.m.	Coffee Break Location: Atrium					
11:00 a.m. – 12:30 p.m.	<ul> <li>Technical Session W2: NLP and IR</li> <li>IR meets NLP: On the Semantic Similarity between Subject-Verb-Object Phrases         Dmitrijs Milajevs, Mehrnoosh Sadrzadeh, and Thomas Roelleke, Queen Mary U. of London, UK     </li> <li>A Theoretical Analysis of Cross-lingual Semantic Relatedness in Vector Space Models         Lei Zhang, Karlsruhe Institute of Technology (KIT), Germany; Thanh Tran, San Jose State University, USA; Achim Rettinger, Karlsruhe Institute of Technology (KIT), Germany     </li> <li>Context Retrieval for Web Tables         Hong Wang, Anqi Liu, Jing Wang, Brian D. Ziebart and Clement T. Yu, University of Illinois at Chicago, USA; Warren Shen, Cohesity, USA     </li> </ul>					

## Wednesday's Schedule (continued)

Wednesday, September 30, 2015
Technical Sessions held in the Grand Ballroom

12:30 p.m. – 2:00 p.m.	Lunch Provided at Wiggins Tavern (in hotel)  – Sponsored by Oracle Labs
2:00 p.m. – 4:00 p.m.	<ul> <li>Technical Session W3: Learning-based Retrieval Models</li> <li>Session Search by Direct Policy Learning Jiyun Luo, Xuchu Dong, and Hui Yang, Georgetown University, USA</li> </ul>
	Implicit Preference Labels for Learning     Highly Selective Personalized Rankers     Paul Bennett, Milad Shokouhi and Rich     Caruana, Microsoft
	Learning Asymmetric Co-Relevance     Fiana Raiber and Oren Kurland, Technion,     Israel; Filip Radlinski and Milad Shokouhi,     Microsoft Cambridge, UK
	Learning to Reinforce Search Effectiveness Jiyun Luo, Xuchu Dong, and Hui Yang, Georgetown University, USA
4:00 p.m. – 5:30 p.m.	ICTIR Business Meeting and Wrap-Up

### Oracle Labs

### **Short Papers**

Presented on Monday, September 28<sup>th</sup> as posters (in alphabetic order by title)

- Anytime Ranking for Impact-Ordered Indexes
   Jimmy Lin, University of Waterloo, Canada; Andrew Trotman, eBay Inc.
- Building a Self-Contained Search Engine in the Browser Jimmy Lin, University of Waterloo, Canada
- Condensed List Relevance Models Fernando Diaz, Microsoft, USA
- Estimating the Uncertainty of Average F1 Scores
   Dell Zhang, Birkbeck, University of London, U.K.; Jun Wang and Xiaoxue Zhao, University College London, U.K.
- The Feasibility of Brute Force Scans for Real-Time Tweet Search

Yulu Wang, University of Maryland, USA; Jimmy Lin, University of Waterloo, Canada

- Improving Pseudo Relevance Feedback in the Divergence from Randomness Model
  - Dipasree Pal and Mandar Mitra, Indian Statistical Institute, India; Samar Bhattacharya, Jadavpur University, India
- An Initial Analytical Exploration of Retrievability
   Aldo Lipani, National Institute of Informatics, Tokyo-Japan;
   Mihai Lupu, Vienna University of Technology, Austria; Akiko Aizawa, National Institute of Informatics, Tokyo-Japan; Allan Hanbury, Vienna University of Technology, Austria
- On the Behavior of PRES Using Incomplete Judgment Sets

Ellen M. Voorhees, National Institute of Standards and Technology, USA

- Optimal Packing in Simple-Family Codecs
   Andrew Trotman, eBay Inc.; Michael Albert and Blake
   Burgess, University of Otago, New Zealand
- Pooling for User-Oriented Evaluation Measures
   Gaurav Baruah, Adam Roegiest, and Mark D. Smucker,
   University of Waterloo, Canada

#### Short Papers (continued)

Presented on Monday, September 28<sup>th</sup> as posters (in alphabetic order by title)

- Predicting Relevance Feedback Effectiveness with the Help of the Principle of Polyrepresentation in MIR David Zellhöfer, Berlin State Library, Prussian Cultural Heritage, Germany
- A Relationship Between the Average Precision and the Area Under the ROC Curve
   Wanhua Su, MacEwan University, Canada; Yan Yuan,

University of Alberta, Canada; Mu Zhu, University of Waterloo, Canada
 Revisiting Optimal Rank Aggregation: A Dynamic

- Programming Approach
  Shayan A. Tabrizi, U. of Tehran, Iran; Javid Dadashkarimi, U. of Tehran, Iran; Mostafa Dehghani, U. of Amsterdam, The Netherlands; Hassan Nasr Esfahani, Sharif U. of Technology,
- Iran; Azadeh Shakery, U. of Tehran, Iran
   Searching for Twitter Posts by Location
   Ariana Minot, Harvard University, USA; Andrew Heier, Davis King, Olga Simek, and Nicholas Stanisha, MIT Lincoln Laboratory, USA
- A Signaling Game Approach to Databases Querying and Interaction

Arash Termehchy, Oregon State University, USA; Behrouz Touri, University of Colorado, Boulder, USA

 Study of Heuristic IR Constraints Under Function Discovery Framework

Parantapa Goswami, Massih-Reza Amini, and Eric Gaussier, Université Grenoble-Alps, France

 Theoretical Categorization of Query Performance Predictors

Victor Makarenkov, Bracha Shapira, and Lior Rokach, Ben Gurion University of the Negev, Israel

Towards Less Biased Web Search
 Xitong Liu and Hui Fang, University of Delaware, USA; Deng Cai, Zhejiang University, China

#### Short Papers (continued)

Presented on Monday, September 28<sup>th</sup> as posters (in alphabetic order by title)

 Two Operators to Define and Manipulate Themes of a Document Collection

Emanuele Di Buccio and Massimo Melucci, University of Padua, Italy

 Using Part-of-Speech N-grams for Sensitive-Text Classification

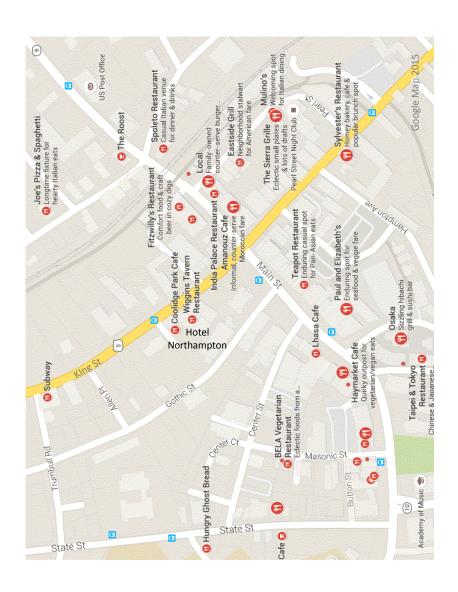
Graham McDonald, Craig Macdonald, and ladh Ounis, University Of Glasgow, U.K.

 Verboseness Fission for BM25 Document Length Normalization

Aldo Lipani, National Institute of Informatics, Tokyo-Japan; Mihai Lupu, Vienna University of Technology, Austria; Allan Hanbury, Vienna University of Technology, Austria; Akiko Aizawa, National Institute of Informatics, Tokyo-Japan



### Northampton Area Map



#### **Local Restaurants**

#### Restaurant websites available at ictir2015.org/dining

Amanouz Café (.1 mile from hotel) - [breakfast, lunch, dinner] Cuisine: informal Moroccan and Mediterranean 44 Main Street, Northampton, MA - 413-585-9128 Daily 8am – 10pm; Closed Mondays

**Bueno Y Sano** (.1 mile from hotel) [lunch, dinner] Cuisine: Mexican 134 Main Street, Northampton, MA – 413-586-7311 Daily 11 a.m. to 10 p.m. (Sundays – close at 9 p.m.)

**Coolidge Park Café** [breakfast, lunch, light dinner] (within Hotel Northampton) - 413-584-3100 Daily breakfast 7-10am, lunch dinner 11am – 10pm

**Eastside Grill** (.2 mile from hotel) [dinner] Cuisine: Steaks, Seafood 19 Strong Ave., Northampton, MA - 413-596-3347 Mon – Fri: 5 – 10 p.m.; Sat.: 4 – 10:30 p.m.; Sun. 4 – 9 p.m.

**Fitzwilly's Restaurant** (.1 mile from hotel) [lunch, dinner] 23 Main Street, Northampton, MA - 413-584-8666 Daily 11:30 a.m. - Midnight

India House (.4 mile from hotel) [lunch, dinner] Cuisine: Indian 45 State Street, Northampton MA – 413-586-6344 Daily 5:00pm – 9:30pm

India Palace (.1 mile from hotel) [lunch, dinner]
Cuisine: Indian
28 Main Street, Northampton, MA - 413-584-4892
Daily Lunch11:30am – 2:30pm; Dinner 4:30pm – 9:30pm

**Jake's** (217 feet north of hotel) [breakfast, lunch] 17 King Street, Northampton, MA - 413-584-9613 Daily 7am – 3pm

#### Local Restaurants (continued)

Restaurant websites available at ictir2015.org/dining

Joe's Pizza & Spaghetti (.3 mile from hotel) [lunch, dinner]

Cuisine: Italian

33 Market Street, Northampton, MA - 413-586-5637

Sun 12pm – 11pm; Mon-Fri: 4pm – 11pm

**Local Northampton** (.1 mile from hotel) [lunch, dinner]

Sun.-Thurs. 11:30 a.m. - 10 p.m.; Fri. & Sat. 11:30 a.m. - 3:00 a.m.

16 Main Street, Northampton, MA - 413-586-5857

Mama Iquana's (.3 mile from hotel) [dinner]

Cuisine: Mexican

274 Main Street, Northampton, MA - 413-586-0400

Daily 4-19pm

Mulino's (.2 mile from hotel) [dinner]

Cuisine: Italian

41 Strong Ave., Northampton, MA – 413-586-8900 Sun. – Thurs.: 4pm – 10pm; Fri. & Sat.: 4pm – 11pm

Northampton Brewery Bar and Grille (.3 mile from hotel) [lunch,

dinner]

11 Brewster Ct., Northampton, MA 01060 - 413-584-9903

Daily 11:30am to 12:30 am

Paul and Elizabeth's (.2 mile from hotel) [lunch, dinner]

Cuisine: Natural foods specializing in fresh fish and tempura

Thornes Marketplace, 150 Main St #5 Northampton, MA - 413-584-

4832

Daily 11:30am - 9:30pm

**The Roost** (.2 mile from hotel) [breakfast, lunch, dinner]

Cuisine: American

Market Street, Northampton - 413-587-2625

Daily 8am – 11pm

Sam's Pizzeria and Café (.3 mile from hotel) [lunch, dinner]

Main Street, Northampton, MA - 413-587-2677

Daily 11am - 10pm

#### Local Restaurants (continued)

Restaurant websites available at ictir2015.org/dining

**The Sierra Grille** (.2 mile from hotel) [dinner] Cuisine: Eclectic mix of Seafood and American 41 Strong Avenue, Northampton - 413-584-1150 Daily 3pm – 10pm

**Spoleto Restaurant** (.2 miles from hotel) [dinner] Cuisine: Italian 1 Bridge Street, Northampton, MA - 413-586-6313 Dinner daily at 4:30 p.m.

**Starbucks** (.2 mile from hotel) 211 Main Street, Northampton, MA 6am – 10pm

**Subway** (.1 mile from hotel) [fast food breakfast, lunch, dinner] 90 King Street, Northampton, MA Daily 7am to 10pm

**Sylvester's Restaurant** (.2 miles from hotel) [breakfast, lunch] 111 Pleasant St., Northampton, MA - 413-586-5343 Daily 7am - 3pm

**Teapot Restaurant** (.1 mile from hotel) [lunch, dinner] Cuisine: Chinese and Japanese 116 Main Street, Northampton MA - 413-585-9308 Daily 11am – 11pm

Wiggins Tavern Restaurant [dinner] (within Hotel Northampton) - 413-584-3100 Tuesday – Saturday 5-10pm

Additional Dining Options in Northampton, MA: http://visitnoho.com/Dining/

# Thank you for attending ICTIR 2015



# See you next year in Delaware

#### **ICTIR 2016**

September 11 – 15, 2016 at the University of Delaware Newark, Delaware, USA sigir.org/ictir2016

Ben Carterette and Hui Fang,
General Co-chairs

Mounia Lalmas and Jian-Yun Nie,
PC Chairs, Long Papers
Fernando Diaz and Stefano Mizzaro,
PC Chairs, Short Papers