Francis Michael Ostrowski Ferraro

CONTACT INFORMATION

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RESEARCH INTERESTS

Language Understanding: event semantics, topic modeling, probabilistic modeling, latent syntactic and semantic induction, multi-modal modeling, cross-disciplinary models

Machine Learning: approximate inference, unsupervised learning, large-scale (parallel and distributed) inference

EDUCATION

The Johns Hopkins University, Baltimore, MD, USA
Ph.D. Student, Department of Computer Science, in progress (expected 2016)
- Thesis Proposal: *Probabilistic Computational Event Semantics*
- Adviser: Benjamin Van Durme

M.S.E., Department of Computer Science, December 2013

The University of Rochester, Rochester, NY, USA
Summa cum Laude, with Highest Distinction
Honors B.S., Department of Computer Science, June 2011
B.S., Department of Mathematics, June 2011
Minor, Linguistics

SELECT PROFESSIONAL EXPERIENCE

Microsoft Research Redmond, WA, USA

Research Intern **Summer 2015**

Pursued multimodal research, establishing competitive baselines and curating a tiered dataset [P6, *under review*]

Johns Hopkins University Baltimore, MD, USA

Graduate researcher, SCALE Workshop **Summer 2013**

Wrote automated data extraction pipelines used as a primary processing step by nearly all participants (∼ 35)

Implemented state-of-the-art models for event induction, and helped design a user interface to facilitate downstream exploration of these models

Graduate research assistant, HLTCOE **Spring 2012**

Developed a novel approach to learn syntactic formalisms [P3], obtaining state-of-the-art performance with significantly less complexity [P2]

Undergraduate researcher, CLSP Workshop **Summer 2010**

Obtained domain-specific action verbs and objects in a scalable and robust way for use in an automatic video-annotation system [P1]

Select Publications

P10. Francis Ferraro and Benjamin Van Durme. A Unified Bayesian Model of Scripts, Frames and Language. In *AAAI*, 2016

P9. Drew Reisinger, Rachel Rudinger, Francis Ferraro, Craig Harman, Kyle Rawlins, and Benjamin Van Durme. Semantic proto-roles. *Transactions of the Association for Computational Linguistics*, 3:475–488, 2015

P8. Rachel Rudinger, Pushpendre Rastogi, Francis Ferraro, and Benjamin Van Durme. Script induction as language modeling. In *EMNLP*, 2015

P7. Chandler May, Francis Ferraro, Alan McCree, Jonathan Wintrode, Daniel Garcia-Romero, and Benjamin Van Durme. Topic identification and discovery on text and speech. In *EMNLP*, 2015

P6. Francis Ferraro, Nasrin Mostafazadeh, Ting-Hao Kenneth Huang, Lucy Vanderwende, Jacob Devlin, Michel Galley, and Margaret Mitchell. A survey of current datasets for vision and language research. 2015

P5. Francis Ferraro, Max Thomas, Matthew R. Gormley, Travis Wolfe, Craig Harman, and Benjamin Van Durme. Concretely Annotated Corpora. In *AKBC*, 2014

P4. David Etter, Francis Ferraro, Ryan Cotterell, Olivia Buzek, and Benjamin Van Durme. Nerit:named entity recognition for informal text. Technical Report 11, HLTCOE, JHU, 2013

P3. Francis Ferraro, Matt Post, and Benjamin Van Durme. Toward tree substitution grammars with latent annotations. In *WILS*, 2012

P2. Francis Ferraro, Matt Post, and Benjamin Van Durme. Judging grammaticality with count-induced tree substitution grammars. In *BEA*, 2012

P1. Benjamin Sapp, Rizwan Chaudhry, Xiaodong Yu, Gautam Singh, Ian Perera, Francis Ferraro, Evelyne Tzoukermann, Jana Kosecka, and Jan Neumann. Recognizing manipulation actions in arts and crafts shows using domain specific visual and textual cues. In *VECTaR2011*, 2011

Select Awards

NSF Graduate Research Fellowship; Awarded 2011, On Tenure 2013 – present
Outstanding Teaching Award, Computer Science, JHU; 2013
Finalist, CRA Outstanding Undergraduate Researchers; 2011

Select Skills, and Online

C++, Java, C, Python, Bash, Linux, LaTeX, PowerPoint
Full C.V.: http://cs.jhu.edu/~ferraro/Ferraro_CV.pdf
LinkedIn: https://www.linkedin.com/in/francisferraro
GitHub: https://github.com/fmof