

# Ioannis Konstas

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## PERSONAL PROFILE

I am a postdoctoral researcher in the department of Computer Science & Engineering, working with Prof. Luke Zettlemoyer. My main research interests focus on the area of Natural Language Generation (NLG) with an emphasis on data-driven deep learning methods. In particular, I am investigating generating text from meaning representations, programming language code, as well as generating stories from sequences of generic events, or other educational domains such as Math word problems. I continuously enjoy investigating new research fields, hence I have also acquired skills in Psycholinguistically-Motivated Parsing and Semantics, as well as Information Retrieval from my past employments.

## GRANTS

NVIDIA Academic Research Program 2016  
Yahoo! Faculty Research and Engagement Program Gift 2013

## EDUCATION

**PhD in Informatics**, University of Edinburgh 2014  
Thesis: Joint Models for Concept-to-Text Generation.  
Supervisor: Prof. Mirella Lapata

**MSc in Artificial Intelligence**, University of Edinburgh 2008  
Thesis: Dialogue Context-Based Speech Recognition using User Simulation.  
Supervisor: Prof. Oliver Lemon

**BSc in Computer Science**, Athens University of Economics and Business. 2007

## EMPLOYMENT

**Research Associate**, University of Washington 2015-now  
Supervisor: Prof. Luke Zettlemoyer  
Key Interests: *Natural Language Generation, Meaning Representations, Deep Learning, Large scale generation systems.*

**Research Associate**, University of Edinburgh 2013-2015  
Project Title: An Integrated Model of Syntactic and Semantic Prediction in Human Language Processing. (EPSRC-funded)  
Supervisor: Prof. Frank Keller  
Key Interests: *Incremental parsing, Integration of syntax and semantics, Incremental Semantic Role Labelling, Distributional Models of Semantics, Psycholinguistics.*

**Principal Investigator**, University of Edinburgh, Yahoo! Research 2013-2015  
Project Title: Summarising Answers from Multiple Sources for Community-based Question Answering Services.

**Research Assistant**, University of Glasgow 2008-2009  
Supervisor: Prof. Joemon Jose  
Key Interests: *Adaptive Information Retrieval, Video Retrieval, and Social Media-Networks.*

**INVITED  
TALKS**

- NNLG: Neural Natural Language Generation**  
Uphill Battles in Lang. Proces. Workshop, EMNLP-16 – Invited Speaker Nov 2016
- NeuGen: Text Generation from Meaning Representations**  
Microsoft Research May 2016  
University of Washington - Microsoft Research, NLP Symposium Feb 2016
- Concept-to-text generation using machine learning**  
Aberdeen NLG Summer School, Seminar July 2015
- Incremental Semantic Role Labeling with Tree Adjoining Grammar**  
University of Edinburgh Oct 2014
- Integrating Syntax–Semantics using a Psycholinguistically motivated TAG**  
University of York Mar 2014
- Joint models for Concept-to-Text Generation**  
Saarland University Jan 2014  
University of Potsdam Jan 2014  
University of Washington Oct 2013
- Data-driven approaches to Concept-to-Text Generation**  
Heriot-Watt University Sep 2012

**TEACHING**

- Tutor** 2nd Semester 2011, 2012  
INF1 - Object Oriented Programming (1st year undergraduate course)  
Professor: Ewan Klein
- Tutor** 1st Semester 2012  
INF2A - Processing Formal and Natural Languages (2nd year undergraduate course)  
Professors: John Longley, Mirella Lapata
- Demonstrator** 1st Semester 2011, 2012  
Introduction to Java Programming (MSc course)  
Professor: Paul Anderson.

**REVIEWING**

- Program Committee Member** ACL, EACL, EMNLP, NAACL, AAI, INLG, ECAI, SIGIR, CIKM.
- Journal Reviewing** Journal of Artificial Intelligence Research, Transactions of ACL.

**PUBLICATIONS**

- Rik Koncel-Kedziorski, Ioannis Konstas, Luke Zettlemoyer and Hannaneh Hajishirzi. A Theme-Rewriting Approach for Generating Algebra Word Problems. Austin, TX, USA, EMNLP 2016.
- Srinivasan Iyer, Ioannis Konstas, Alvin Cheung, Luke Zettlemoyer. Summarizing Source Code using a Neural Attention Model. Berlin, Germany, ACL 2016.
- Ioannis Konstas and Frank Keller. Semantic Role Labeling improves incremental parsing. Beijing, China, ACL 2015.
- Ioannis Konstas, Frank Keller, Vera Demberg, and Mirella Lapata. Incremental semantic role labeling with tree adjoining grammar. Doha, Qatar, EMNLP 2014.

- Ioannis Konstas. Joint Models for Concept-to-Text Generation. *PhD Thesis*, University of Edinburgh, 2014.
- Ioannis Konstas and Mirella Lapata. A Global Model for Concept-to-Text Generation. *Journal of Artificial Intelligence Research*, Volume 48, pages 305–346, 2013.
- Ioannis Konstas and Mirella Lapata. Inducing document plans for concept-to-text generation. Seattle, WA, USA, EMNLP 2013.
- Silvia Pareti, Tim O’Keefe, Ioannis Konstas, James R. Curran, and Irena Koprinska. Automatically detecting and attributing indirect quotations. Seattle, Washington, USA, EMNLP 2013.
- Ioannis Konstas and Mirella Lapata. Concept-to-text generation via discriminative reranking. Jeju Island, Korea, ACL 2012.
- Ioannis Konstas and Mirella Lapata. Unsupervised concept-to-text generation with hypergraphs. Montréal, Canada, NAACL 2012.
- Ivan Cantador, Ioannis Konstas, and Joemon M. Jose. Categorising social tags to improve folksonomy-based recommendations. *Web Semantics: Science, Services and Agents on the World Wide Web*, 9(1):1 – 15, 2011.
- Ioannis Arapakis, Ioannis Konstas, and Joemon M. Jose. Using facial expressions and peripheral physiological signals as implicit indicators of topical relevance. Beijing, China, ACM Multimedia 2009.
- Ioannis Konstas, Vassilios Stathopoulos, and Joemon M. Jose. On social networks and collaborative recommendation. Boston, MA, USA, SIGIR 2009.
- Ioannis Arapakis, Ioannis Konstas, Joemon M. Jose, and Ioannis Kompatsiaris. Modeling facial expressions and peripheral physiological signals to predict topical relevance. Boston, MA, USA, SIGIR 2009.
- Oliver Lemon and Ioannis Konstas. User simulations for context-sensitive speech recognition in spoken dialogue systems. Athens, Greece, EACL 2009.