

NAACL HLT 2016

**The 2016 Conference of the
North American Chapter of the
Association for Computational Linguistics:
Human Language Technologies**

**Proceedings of the Workshop on
Human-Computer Question Answering**

June 16, 2016

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Preface

Welcome to the first Workshop on Human-Computer Question Answering (HCQA)! Question answering is a central task in natural language processing (NLP). Unlike other NLP tasks, it also is easy for non-experts to understand when question answering systems perform well (or fail). The goal of this workshop is to bring the community together to discuss the state of the art of question answering and interactively compete with top human trivia masters.

This workshop highlights question answering on the real-world task of quiz bowl, a trivia game in which competitors are asked to identify entities such as battles, novels, and scientific terms. In quiz bowl, a moderator reads a paragraph-long question to two teams, and players are permitted to interrupt the moderator (or “buzz in”) with a guess if they feel confident. This setting is especially interesting because acquiring more features (clues) comes with an added cost (the other team may buzz in before you). While computerized question answering systems have previously had success against humans, this workshop will be the first to pit different systems against each other and then have that winner face off against a top human team.

Question answering is a task interesting to both academia and industry. This workshop brings people from both sides to discuss recent progress in QA. We will have a presentation from the IBM Watson team talking about their new Watson Discovery Advisor and the challenges of QA in the industrial setting. Peter Clark will talk about new types of question answering problems that he and his team are solving at the Allen Institute for AI. We also have Zhengdong Lu, Jason Weston, and Richard Socher talking about recent neural network approaches to QA.

This year we have nine papers covering a variety of approaches to QA, including neural networks, crowdsourcing, knowledge graph search, and paraphrasing. Besides common QA tasks such as machine comprehension, (open-domain) factoid QA, we are also excited to see new topics on error analysis of QA systems by crowdsourcing and alignment between text description and paintings for art questions.

At the end of the workshop, we will have a dual computer-human tournament to test entrants’ question answering systems against each other and against the top human trivia masters. Enjoy the match!

Finally, we invite you to enjoy this volume and we are looking forward to seeing you in San Diego!

Mohit Iyyer, He He, Jordan Boyd-Graber and Hal Daumé III

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Tomek Strzalkowski, SUNY Albany
Richard Socher, Salesforce
Christina Unger, Bielefeld University
Yi Yang, Georgia Institute of Technology
Wen-Tau Yih, Microsoft Research
Luke Zettlemoyer, University of Washington

Invited Speakers:

Ray Mooney, University of Texas at Austin
Jason Weston, Facebook AI Research
Peter Clark, Allen Institute for AI
Zhengdong Lu, Noah's Ark Lab, Huawei Technologies
Richard Socher, Salesforce
Eunsol Choi, University of Washington

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Conference Program

Thursday, June 16, 2016

9:00–9:15 *Welcome*

Invited Talks I

9:15–9:50 *Invited Talk by Ray Mooney*

9:50–10:25 *Invited Talk by Jason Weston*

10:25–10:40 *Coffee Break*

Talks by Authors of Accepted Papers

10:40-11:00 *Watson Discovery Advisor: Question-answering in an industrial setting*
Charley Beller, Graham Katz, Allen Ginsberg, Chris Phipps, Sean Bethard, Paul Chase, Elinna Shek and Kristen Summers

11:00–11:20 *Crowdsourcing for (almost) Real-time Question Answering*
Denis Savenkov, Scott Weitzner and Eugene Agichtein

11:20–11:40 *Attention-Based Convolutional Neural Network for Machine Comprehension*
Wenpeng Yin, Sebastian Ebert and Hinrich Schütze

11:40–12:00 *Invited Talk by Eunsol Choi*

12:00–1:15 *Lunch*

Thursday, June 16, 2016 (continued)

Invited Talks II

13:15–13:50 *Invited Talk by Peter Clark*

13:50–14:25 *Invited Talk by Zhengdong Lu*

14:25–15:00 *Invited Talk by Richard Socher*

Poster Session

15:00–15:15 *Coffee Break*

15:15–16:00 *Open-domain Factoid Question Answering via Knowledge Graph Search*
Ahmad Aghaebrahimian

15:15–16:00 *Neural Enquirer: Learning to Query Tables in Natural Language*
Pengcheng Yin, Zhengdong Lu, Hang Li and kao Ben

15:15–16:00 *Neural Generative Question Answering*
Jun Yin, Xin Jiang, Zhengdong Lu, Lifeng Shang, Hang Li and Xiaoming Li

15:15–16:00 *"A Distorted Skull Lies in the Bottom Center..." Identifying Paintings from Text Descriptions*
Anupam Guha, Mohit Iyyer and Jordan Boyd-Graber

15:15–16:00 *Using Confusion Graphs to Understand Classifier Error*
Davis Yoshida and Jordan Boyd-Graber

15:15–16:00 *Paraphrase for Open Question Answering: New Dataset and Methods*
Ying Xu, Pascual Martínez-Gómez, Yusuke Miyao and Randy Goebel

Thursday, June 16, 2016 (continued)

Exhibition Match

16:00–17:15 *Best Shared Task System vs. Human Quiz Bowl Team*

