SIGDIAL 2016



17th Annual Meeting of the Special Interest Group on Discourse and Dialogue



Proceedings of the Conference

13-15 September 2016 Los Angeles, USA In cooperation with: Association for Computational Linguistics (ACL) International Speech Communication Association (ISCA) Association for the Advancement of Artificial Intelligence (AAAI)

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Introduction

We are excited to welcome you to this year's SIGDIAL Conference, the 17th Annual Meeting of the Special Interest Group on Discourse and Dialogue. We are pleased to hold the conference this year in Los Angeles, USA, on September 13-15th, in close proximity to both INTERSPEECH 2016 and YRRSDS 2016, the Young Researchers' Roundtable on Spoken Dialog Systems.

The SIGDIAL conference remains positioned as a premier publication venue for research under the broad umbrella of discourse and dialogue. This year, the program includes oral presentations, poster sessions, and one demo session. SIGDIAL 2016 also hosts a special session entitled "The Future Directions of Dialogue-Based Intelligent Personal Assistants", organized by Yoichi Matsuyama and Alexandros Papangelis.

We received 100 complete submissions this year, which included 65 long papers, 30 short papers and 5 demo descriptions—from a broad, international set of authors. Additionally, 5 papers were submitted and then withdrawn. All papers received at least 3 reviews. We carefully considered both the numeric ratings and the tenor of the comments, both as written in the reviews, and as submitted in the discussion period, in making our selection for the program. Overall, the members of the Program Committee did an excellent job in reviewing the submitted papers. We thank them for the important role their reviews have played in selecting the accepted papers and for helping to maintain the high quality of the program. In line with the SIGDIAL tradition, our aim has been to create a balanced program that accommodates as many favorably rated papers as possible.

This year's SIGDIAL conference runs 2.5 days as it did in 2015, with the special session being held on the first day. Of the 65 long paper submissions: 19 were accepted as oral presentations and 15 were accepted for poster presentations. Of the 30 short paper submissions, 7 were accepted for poster presentation, for a total of 22 accepted posters. All 5 demonstration papers were accepted.

We enthusiastically thank the two keynote speakers, Susan Brennan (NSF/Stony Brook, USA) and Louis-Philippe Morency (CMU, USA), for their inspiring talks on cognitive science and human communication dynamics.

We offer our thanks to Pierre Lison, Mentoring Chair for SIGDIAL 2016, for his dedicated work on coordinating the mentoring process. The goal of mentoring is to assist authors of papers that contain important ideas but lack clarity. Mentors work with the authors to improve English language usage or paper organization. This year, 3 of the accepted papers were mentored. We thank the Program Committee members who served as mentors: Kristina Striegnitz, Helena Moniz and Stefan Ultes.

We extend special thanks to our Local co-Chairs, Ron Artstein and Alesia Gainer, and their team of student volunteers. We know SIGDIAL 2016 would not have been possible without Ron and Alesia, who invested so much effort in arranging the conference venue and accommodations, handling registration, making banquet arrangements, and handling numerous other preparations for the conference. The student volunteers for on-site assistance also deserve our appreciation.

Ethan Selfridge, Sponsorships Chair, has earned our appreciation for recruiting and liaising with our conference sponsors, many of whom continue to contribute year after year. Sponsorships support valuable aspects of the program, such as the invited speakers and conference banquet. In recognition of this, we gratefully acknowledge the support of our sponsors: (Platinum level) Microsoft Research, Xerox and PARC, Intel, (Gold level) Facebook, (Silver level) Amazon Alexa, Interactions, Educational Testing Service, Honda Research Institute, and Yahoo!. At the same time, we thank Priscilla Rasmussen at the ACL for tirelessly handling the financial aspects of sponsorship for SIGDIAL 2016, and for securing our ISBN.

We also thank the SIGdial board, especially officers Amanda Stent, Jason Williams and Kristiina Jokinen for their advice and support from beginning to end.

Finally, we thank all the authors of the papers in this volume, and all the conference participants for making this stimulating event a valuable opportunity for growth in the research areas of discourse and dialogue.

Raquel Fernández and Wolfgang Minker General Co-Chairs

Giuseppe Carenini and Ryuichiro Higashinaka Program Co-Chairs

SIGDIAL 2016

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Invited Speakers:

Susan Brennan, NSF-Stony Brook University, United States Louis-Philippe Morency, Carnegie Mellon University, United States

Student Volunteers:

Jacqueline Brixey Carla Gordon Anya Hee Cassidy Henry Siddharth Jain Ramesh Manuvinakurike Setareh Nasihati Gilani Maike Paetzel Eli Pincus Satheesh Prabu Ravi

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- 13:45–14:10 Towards End-to-End Learning for Dialog State Tracking and Management using Deep Reinforcement Learning Tiancheng Zhao and Maxine Eskenazi
- 14:10–14:35 *Task Lineages: Dialog State Tracking for Flexible Interaction* Sungjin Lee and Amanda Stent
- 14:35–15:00 Joint Online Spoken Language Understanding and Language Modeling With Recurrent Neural Networks Bing Liu and Ian Lane
- 15:30–16:20 Oral Session 2: Corpus creation
- 15:30–15:55 *Creating and Characterizing a Diverse Corpus of Sarcasm in Dialogue* Shereen Oraby, Vrindavan Harrison, Lena Reed, Ernesto Hernandez, Ellen Riloff and Marilyn Walker
- 15:55–16:20 The SENSEI Annotated Corpus: Human Summaries of Reader Comment Conversations in On-line News Emma Barker, Monica Lestari Paramita, Ahmet Aker, Emina Kurtic, Mark Hepple and Robert Gaizauskas
- 16:50–18:20 Special Session: The Future Directions of Dialogue-Based Intelligent Personal Assistants

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Wednesday September 14, 2016

09:00-10:00 Keynote I

Keynote - More than meets the ear: Processes that shape dialogue Susan Brennan

10:10–11:10 Poster Session 1

A Wizard-of-Oz Study on A Non-Task-Oriented Dialog Systems That Reacts to User Engagement Zhou Yu, Leah Nicolich-Henkin, Alan W Black and Alexander Rudnicky

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Language Portability for Dialogue Systems: Translating a Question-Answering System from English into Tamil Satheesh Ravi and Ron Artstein

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11:10–12:25 Oral Session 3: Discourse processing

- 11:10–11:35 *Extracting PDTB Discourse Relations from Student Essays* Kate Forbes-Riley, Fan Zhang and Diane Litman
- 11:35–12:00 *Empirical comparison of dependency conversions for RST discourse trees* Katsuhiko Hayashi, Tsutomu Hirao and Masaaki Nagata
- 12:00–12:25 *The Role of Discourse Units in Near-Extractive Summarization* Junyi Jessy Li, Kapil Thadani and Amanda Stent

14:20–15:20 Poster Session 2

Initiations and Interruptions in a Spoken Dialog System Leah Nicolich-Henkin, Carolyn Rose and Alan W Black

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A framework for the automatic inference of stochastic turn-taking styles Kornel Laskowski

Wednesday September 14, 2016 (continued)

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Talking with ERICA, an autonomous android Koji Inoue, Pierrick Milhorat, Divesh Lala, Tianyu Zhao and Tatsuya Kawahara

Rapid Prototyping of Form-driven Dialogue Systems Using an Open-source Frame-work

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Selection method of an appropriate response in chat-oriented dialogue systems Hideaki Mori and Masahiro Araki

16:20–17:35 Oral session 4: Incremental processing

- 16:20–16:45 *Real-Time Understanding of Complex Discriminative Scene Descriptions* Ramesh Manuvinakurike, Casey Kennington, David DeVault and David Schlangen
- 16:45–17:10 Supporting Spoken Assistant Systems with a Graphical User Interface that Signals Incremental Understanding and Prediction State Casey Kennington and David Schlangen
- 17:10–17:35 Toward incremental dialogue act segmentation in fast-paced interactive dialogue systems
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Thursday September 15, 2016

09:00-10:00 Keynote II

Keynote - Modeling Human Communication Dynamics Louis-Philippe Morency

10:10–11:10 Poster Session 3

On the Evaluation of Dialogue Systems with Next Utterance Classification Ryan Lowe, Iulian Vlad Serban, Michael Noseworthy, Laurent Charlin and Joelle Pineau

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Chiaki Miyazaki, Toru Hirano, Ryuichiro Higashinaka and Yoshihiro Matsuo

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11:10–12:25 Oral Session 5: Semantics: Learning and Inference

- 11:10–11:35 *Reference Resolution in Situated Dialogue with Learned Semantics* Xiaolong Li and Kristy Boyer
- 11:35–12:00 Training an adaptive dialogue policy for interactive learning of visually grounded word meanings Yanchao Yu, Arash Eshghi and Oliver Lemon
- 12:00–12:25 *Learning Fine-Grained Knowledge about Contingent Relations between Everyday Events* Elahe Rahimtoroghi, Ernesto Hernandez and Marilyn Walker

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- 14:00–14:25 *When do we laugh?* Ye Tian, Chiara Mazzocconi and Jonathan Ginzburg
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- 15:45–16:10 *Neural Utterance Ranking Model for Conversational Dialogue Systems* Michimasa Inaba and Kenichi Takahashi
- 16:10–16:35 *Strategy and Policy Learning for Non-Task-Oriented Conversational Systems* Zhou Yu, Ziyu Xu, Alan W Black and Alexander Rudnicky