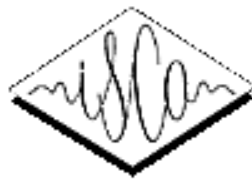
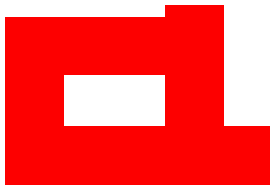


SIGDIAL 2017



**18th Annual Meeting of the  
Special Interest Group on Discourse and  
Dialogue**



**Proceedings of the Conference**

**15-17 August 2017  
Saarbrücken, Germany**

**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 18th Annual Meeting of the Special Interest Group on Discourse and Dialogue. We are pleased to hold the conference in Saarbrücken on August 15-17th, co-located with SemDial 2017, and in close proximity to both INTERSPEECH 2017 and YRRSDS 2017, the Young Researchers' Roundtable on Spoken Dialog Systems.

The SIGdial conference remains a premier publication venue for research in discourse and dialogue. This year, the program includes oral presentations, poster sessions, and one demo session. SIGdial 2017 also hosts three special sessions, two joint with SemDial 2017.

We received 115 submissions this year. In only one previous year has there been a greater number of submissions to SIGdial. All long and short papers received at least 3 reviews. We carefully considered both the numeric ratings and the tenor of the comments in making our selections for the program. Overall, the members of the Program Committee did an excellent job in reviewing the submitted papers. We thank them for their important role in selecting the accepted papers and for helping to come up with a high quality program for the conference. We also thank Pierre Lison, Mentoring Chair for SIGdial 2017, for his dedicated work on the mentoring process. The goal of mentoring is to assist authors of papers that contain important ideas but lack clarity. In line with the SIGdial tradition, our aim has been to create a balanced program that accommodates as many favorably rated papers as possible. We accepted 29 long papers, 11 short papers and 7 demo presentations. Of the long papers, 18 were presented as oral presentations. The remaining 11 long papers and all the short papers were presented as posters, split into two poster sessions.

This year SIGdial has three special sessions on topics of growing interest. The chosen sessions were (i) the Special Session on Negotiation Dialog organized by Amanda Stent, Aasish Pappu, Diane Litman and Marilyn Walker; (ii) the Second WOCHAT Special Session on Chatbots and Conversational Agents organized by Ryuichiro Higashinaka, Ron Artstein, Rafael E. Banchs, and Wolfgang Minker; and (iii) Special Session on Natural Language Generation for Dialog Systems organized by Marilyn Walker, Verena Rieser, Vera Demberg, Dietrich Klakow, Dilek Hakkani-Tur, David M. Howcroft and Shereen Oraby. These specialized topics brought diverse paper submissions to our technical program. At the conference, the special sessions also featured panel discussions and position talks, allowing for active engagement of the conference participants. This year, two of these special sessions, the one on negotiation and on conversational agents, are part of the joint SIGdial/SemDial program at the conference bringing both communities to participate in them.

This year's SIGdial conference runs 3 full days compared to previous years where it was 2.5 days. We have designed our program to be balanced and inviting to SIGdial and SemDial participants alike. One keynote and one special session is held each day with remaining time given to oral and poster presentations. Two of the special sessions were run as joint sessions with SemDial and the poster/demo sessions contained presentations from both venues. We hope that we achieved a tighter bond between the two communities this year, and we hope the two communities will continue to foster their common interests and research ideas.

A conference of this scale requires advice, help and enthusiastic participation of many parties and we have a big 'thank you' to say to all of them.

We thank our three keynote speakers, Elisabeth André (Augsburg University, Germany), Andrew Kehler (UC San Diego, USA) and Oliver Lemon (Heriot-Watt University, Edinburgh, UK) for their inspiring talks and views on the many modern aspects of research in discourse and dialog.

We are incredibly grateful to the Program co-Chairs of SemDial 2017, Volha Petukhova and Ye Tian who

tirelessly worked with us throughout all stages of planning for SIGdial, from deadlines to submissions and acceptance decisions, conference scheduling, special session organization, and local arrangements. We also thank the organizers of the three special sessions who handled reviewers for their papers, designed the schedule for their accepted papers, and organized the session at the venue. We are grateful for their smooth and efficient coordination with the main conference. We also extend special thanks to our Local co-Chairs, Volha Petukhova and Ivana Kruijff-Korabayova, and their local organizing team and student volunteers. SIGdial 2017 would not have been possible without their effort in arranging the conference venue and accommodations, handling registration, making banquet arrangements, and numerous preparations for the conference. The student volunteers for on-site assistance also deserve our sincere appreciation.

Ethan Selfridge, our Sponsorships Chair, has conducted the massive task of 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. We thank him for his dedicated work and coordination in conference planning. We gratefully acknowledge the support of our sponsors: (Platinum level) Interactions, Microsoft, and Maluuba: A Microsoft Company, (Gold level) Adobe Research, Amazon, DFKI, Facebook, Honda Research Institute and PARC, (Silver level) ETS, (Bronze level) Charamel GmbH and SemVox. We also thank Universität des Saarlandes and the Spoken Languages Systems Group at the Universität des Saarlandes for their generous sponsorship.

We also thank the SIGdial board, especially officers Amanda Stent, Jason Williams and Kristiina Jokinen for their advice and support from beginning to end. We also thank Priscilla Rasmussen at the ACL for tirelessly handling the financial aspects of sponsorship for SIGdial 2017, and for securing our ISBN.

We once again thank our program committee members for committing their time to help us select a superb technical program. Finally, we thank all the authors who submitted to the conference and all the conference participants for making SIGdial 2017 a grand success and for growing the research areas of discourse and dialogue with their fine work.

Kristiina Jokinen and Manfred Stede  
General Co-Chairs

David DeVault and Annie Louis  
Program Co-Chairs



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**Invited Speakers:**

Elisabeth André, Augsburg University, Germany  
Andrew Kehler, UC San Diego, USA  
Oliver Lemon, Heriot-Watt University, Edinburgh, UK

**Student Volunteers:**

Christophe Biver  
Margarita Chikobava  
Xiaoyu Shen  
Anna Welker

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# Conference Program

**Tuesday 15th August 2017**

**10:30-11:45 Oral Session 1: Task-Oriented Dialogue Systems**

10:30-10:55 *Key-Value Retrieval Networks for Task-Oriented Dialogue*

Mihail Eric and Christopher D. Manning

10:55-11:20 *Generative Encoder-Decoder Models for Task-Oriented Spoken Dialog Systems with Chatting Capability*

Tiancheng Zhao, Allen Lu, Kyusong Lee and Maxine Eskenazi

11:20-11:45 *Sample-efficient Actor-Critic Reinforcement Learning with Supervised Data for Dialogue Management*

Pei-Hao Su, Paweł Budzianowski, Stefan Ultes, Milica Gasic and Steve Young

**13:00-15:00 Joint Special Session on Negotiation Dialog**

13:30-13:55 *Automatic Measures to Characterise Verbal Alignment in Human-Agent Interaction*

Guillaume Dubuisson Duplessis, Chloé Clavel and Frédéric Landragin

**15:30-17:00 Poster Session 1**

*Beyond On-hold Messages: Conversational Time-buying in Task-oriented Dialogue*  
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*Reward-Balancing for Statistical Spoken Dialogue Systems using Multi-objective Reinforcement Learning*

Stefan Ultes, Paweł Budzianowski, Iñigo Casanueva, Nikola Mrkšić, Lina M. Rojas Barahona, Pei-Hao Su, Tsung-Hsien Wen, Milica Gasic and Steve Young

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**Wednesday 16th August 2017**

**10:30-11:45 Oral Session 2: Turn-Taking and Real-Time Interaction**

10:30-10:55 *Towards a General, Continuous Model of Turn-taking in Spoken Dialogue using LSTM Recurrent Neural Networks*

Gabriel Skantze

10:55-11:20 *Attentive listening system with backchanneling, response generation and flexible turn-taking*

Divesh Lala, Pierrick Milhorat, Koji Inoue, Masanari Ishida, Katsuya Takanashi and Tatsuya Kawahara

11:20-11:45 *Using Reinforcement Learning to Model Incrementality in a Fast-Paced Dialogue Game*

Ramesh Manuvinakurike, David DeVault and Kallirroi Georgila

**13:00-15:00 Special Session: Natural Language Generation for Dialogue Systems**

13:10-13:35 *Redundancy Localization for the Conversationalization of Unstructured Responses*

Sebastian Krause, Mikhail Kozhevnikov, Eric Malmi and Daniele Pighin

13:35-14:00 *Neural-based Natural Language Generation in Dialogue using RNN Encoder-Decoder with Semantic Aggregation*

Van-Khanh Tran and Le-Minh Nguyen

**15:30-17:30 Poster Session 2**

*A surprisingly effective out-of-the-box char2char model on the E2E NLG Challenge dataset*

Shubham Agarwal and Marc Dymetman

*Adversarial evaluation for open-domain dialogue generation*

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**Wednesday 16th August 2017 (continued)**

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*The E2E Dataset: New Challenges For End-to-End Generation*

Jekaterina Novikova, Ondřej Dušek and Verena Rieser

**15:30-17:30 Demo Session**

*A Multimodal Dialogue System for Medical Decision Support inside Virtual Reality*

Alexander Prange, Margarita Chikobava, Peter Poller, Michael Barz and Daniel Sonntag

*Demonstration of interactive teaching for end-to-end dialog control with hybrid code networks*

Jason D Williams and Lars Liden

*DialPort, Gone Live: An Update After A Year of Development*

Kyusong Lee, Tiancheng Zhao, Yulun Du, Edward Cai, Allen Lu, Eli Pincus, David Traum, Stefan Ultes, Lina M. Rojas Barahona, Milica Gasic, Steve Young and Maxine Eskenazi

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Koichiro Yoshino, Yu Suzuki and Satoshi Nakamura

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Jacqueline Brixey, Rens Hoegen, Wei Lan, Joshua Rusow, Karan Singla, Xusen Yin, Ron Artstein and Anton Leuski

**Thursday 17th August 2017**

**10:30-11:45 Oral Session 3: Modeling Semantics and Pragmatics**

- 10:30-10:55 *Frames: a corpus for adding memory to goal-oriented dialogue systems*  
Layla El Asri, Hannes Schulz, Shikhar Sharma, Jeremie Zumer, Justin Harris,  
Emery Fine, Rahul Mehrotra and Kaheer Suleman
- 10:55-11:20 *Modelling Protagonist Goals and Desires in First-Person Narrative*  
Elahe Rahimtoroghi, Jiaqi Wu, Ruimin Wang, Pranav Anand and Marilyn Walker
- 11:20-11:45 *The Role of Conversation Context for Sarcasm Detection in Online Interactions*  
Debanjan Ghosh, Alexander Richard Fabbri and Smaranda Muresan

**13:00-15:00 Special Session: Second WOCHAT Special Session on Chatbots and Conversational Agents**

- 13:10-13:35 *Lexical Acquisition through Implicit Confirmations over Multiple Dialogues*  
Kohei Ono, Ryu Takeda, Eric Nichols, Mikio Nakano and Kazunori Komatani
- 13:35-14:00 *Evaluating Natural Language Understanding Services for Conversational Question Answering Systems*  
Daniel Braun, Adrian Hernandez-Mendez, Florian Matthes and Manfred Langen
- 14:00-14:25 *A data-driven model of explanations for a chatbot that helps to practice conversation in a foreign language*  
Sviatlana Höhn

**15:30-16:50 Oral Session 4: Context in Discourse and Dialogue**

- 15:30-15:55 *Towards Full Text Shallow Discourse Relation Annotation: Experiments with Cross-Paragraph Implicit Relations in the PDTB*  
Rashmi Prasad, Katherine Forbes-Riley and Alan Lee
- 15:55-16:20 *Sequential Dialogue Context Modeling for Spoken Language Understanding*  
Ankur Bapna, Gokhan Tur, Dilek Hakkani-Tur and Larry Heck
- 16:20-16:50 *Not All Dialogues are Created Equal: Instance Weighting for Neural Conversational Models*  
Pierre Lison and Serge Bibauw

