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# José David Lopes

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## Interests

Conversational AI, Computer-Aided Language Learning and Adaptive Human-Machine Interaction.

## Education

Instituto Superior Técnico, Lisboa Feb 2009 – Dec 2013  
PhD, Electrical and Computer Engineering

University of Coimbra Oct 2007 – Oct 2008  
MS, Electrical and Computer Engineering

University of Coimbra Sep 2002 – Sep 2007  
Licenciatura, Electrical and Computer Engineering

## Research Experience

**Heriot-Watt University** April 2018 – Now  
*Interaction Lab, Research Fellow.* Development of conversational systems for interaction with Remote Autonomous Robots operating in off-shore energy platforms.

**KTH** March 2014 – March 2018  
*Speech, Music and Hearing, Researcher.* Development of miscommunication detection models for spoken dialogue systems using real data. Investigating turn taking in human dialogues. Robot-aided Language Learning.

**University of the Basque Country** Oct 2013 – Feb 2014  
*Pattern Recognition & Speech Group, Research Assistant.* Development of bus schedule information spoken dialog system for urban buses in Bilbao.

**INESC-ID Lisboa** Sep 2008– Aug 2013  
*Spoken Language Laboratory, Research Assistant.* Incorporated multimedia materials in a language learning platform (REAP.PT). Development and test of

Spoken Dialog Systems that can perform lexical entrainment during live interaction.

**Carnegie Mellon University**

Fall 2010, 2011 and 2012

*Language Technologies Institute, Visiting Scholar.* Worked on models for confidence scoring in Spoken Dialog Systems, developed and tested of on-the-fly rules for lexical entrainment in the Let's Go system.

**Instituto de Telecomunicações**

Oct 2007 – Sep 2008

*Signal Processing Laboratory, Junior Researcher.* Worked on acoustic models for robust speech recognition in the Tecnovoz Project.

## **Selected Publications**

**Automatic Detection of Miscommunication in Spoken Dialogue Systems.** R.

Meena, **J. Lopes**, G. Skantze and J. Gustafson. In proceedings Annual Meeting of the Special Interest Group on Discourse and Dialogue (SIGDial). 2015, Prague, Czech Republic, 2015.

**Crowdsourcing a self-evolving dialog graph.** P. Jonell, P. Fallgren, F. I. Doğan, **J.**

**Lopes**, U. Wennberg and G. Skantze. In proceedings of the 1st International Conference on Conversational User Interfaces. Dublin, Ireland, 2019. (Honourable mention)

**Symptoms of cognitive load in interactions with a dialogue system.** **J. Lopes**,

K. Lohan and H. Hastie. In proceedings of the Workshop on Modeling Cognitive Processes from Multi-Modal Data. Boulder, Colorado, USA, 2018.

**How Generic Can Breakdown Detection Be? The KTH entry to the DBDC 3.** **J.**

**Lopes**. In proceedings Dialogue Systems Technology Challenge 6 (DSTC6) workshop, Long Beach, USA, 2017.

**Towards a Conversational Agent for Remote Robot-Human Teaming.** **J.**

**Lopes**, D. A. Robb, M. Ahmad, X. Liu, K. Lohan and H. Hastie. In proceedings of the ACM/IEEE conference on Human-Robot Interaction, Daegu, South Korea, 2019.

## **Technical Skills**

System design and development: Python, C++, Java, Perl, Shell Script.

Statistical tools: Matlab, R, SPSS.

Machine Learning tools: TensorFlow Keras and Scikit-learn.

## **Languages**

Portuguese (Native), English (C1), French (B2), Spanish (Oral and written), Swedish (Advanced) and Italian (Basic oral).