

EMNLP 2019



**Fact Extraction and VERification**

**Proceedings of the Second Workshop**

November 3, 2019

Hong Kong

We thank our sponsor Amazon for their generous support.



©2019 The Association for Computational Linguistics

Order copies of this and other ACL proceedings from:

Association for Computational Linguistics (ACL)  
209 N. Eighth Street  
Stroudsburg, PA 18360  
USA  
Tel: +1-570-476-8006  
Fax: +1-570-476-0860  
[acl@aclweb.org](mailto:acl@aclweb.org)

ISBN 978-1-950737-73-4

## Introduction

With billions of individual pages on the web providing information on almost every conceivable topic, we should have the ability to collect facts that answer almost every conceivable question. However, only a small fraction of this information is contained in structured sources (Wikidata, Freebase, etc.) – we are therefore limited by our ability to transform free-form text to structured knowledge. There is, however, another problem that has become the focus of a lot of recent research and media coverage: false information coming from unreliable sources.

In an effort to jointly address both problems, herein we proposed this workshop to promote research in joint Fact Extraction and VERification (FEVER). We aim for FEVER to be a long-term venue for work in verifiable knowledge extraction.

The Second Workshop on Fact Extraction and VERification is held at EMNLP 2019. It received 25 submissions of which five were system descriptions from teams participating in an adversarial attacks shared task. 18 papers and talks were accepted. A further 59 teams have participated in the ongoing FEVER shared task: the updated leaderboard will be presented at the second workshop.



**Organizers:**

James Thorne (University of Cambridge)  
Andreas Vlachos (University of Cambridge)  
Oana Cocarascu (Imperial College London)  
Christos Christodoulopoulos (Amazon)  
Arpit Mittal (Amazon)

**Invited Speakers:**

David Corney (Full Fact)  
Hoifung Poon (Microsoft Research)  
Sameer Singh (University of California, Irvine)  
William Wang (University of California, Santa Barbara)  
Emine Yilmaz (University College London)

**Program Committee:**

Nikolaos Aletras (University of Sheffield) Isabelle Augenstein (University of Copenhagen) Matko Bošnjak (University College London) Tuhin Chakrabarty (Columbia University) Weiwei Cheng (Amazon) Frédéric Godin (ELIS - IDLab, Ghent University) Ivan Habernal (UKP Lab, Technische Universität Darmstadt) Andreas Hanselowski (UKP lab, Technische Universität Darmstadt) Christopher Hidey (Columbia University) Alexandre Klementiev (Amazon) Jan Kowollik (University of Duisburg-Essen) Anjishnu Kumar (Amazon) Pranava Swaroop Madhyastha (University of Sheffield) Christopher Malon (NEC Laboratories America) Stephen Mayhew (University of Pennsylvania) Paul Mithun (University Of Arizona) Marie-Francine Moens (KU Leuven) Jason Naradowsky (Preferred Networks) Yixin Nie (UNC) Farhad Nooralahzadeh (University of Oslo) Wolfgang Otto (GESIS – Leibniz-Institute for the Social Sciences in Cologne) Ankur Padia (University of Maryland, Baltimore County) Tamara Polajnar (University of Cambridge) Hoifung Poon (Microsoft Research) Preethi Raghavan (IBM Research TJ Watson) Marek Rei (University of Cambridge) Laura Rimell (DeepMind) Jodi Schneider (UIUC) Diarmuid Ó Séaghdha (Apple) Sameer Singh (University of California, Irvine) Kevin Small (Amazon) Christian Stab (UKP Lab, Technische Universität Darmstadt) Motoki Taniguchi (Fuji Xerox) Paolo Torrioni (Alma Mater - Università di Bologna) Serena Villata (Université Côte d’Azur, CNRS, Inria, I3S) Zeerak Waseem (University of Sheffield) Noah Weber (Stony Brook University) Johannes Welbl (University College London) Menglin Xia (Amazon)



## Table of Contents

<i>The FEVER2.0 Shared Task</i>	
James Thorne, Andreas Vlachos, Oana Cocarascu, Christos Christodoulopoulos and Arpit Mittal	1
<i>Fact Checking or Psycholinguistics: How to Distinguish Fake and True Claims?</i>	
Aleksander Wawer, Grzegorz Wojdyga and Justyna Sarzyńska-Wawer	7
<i>Neural Multi-Task Learning for Stance Prediction</i>	
Wei Fang, Moin Nadeem, Mitra Mohtarami and James Glass	13
<i>GEM: Generative Enhanced Model for adversarial attacks</i>	
Piotr Niewinski, Maria Pszona and Maria Janicka	20
<i>Aligning Multilingual Word Embeddings for Cross-Modal Retrieval Task</i>	
Alireza Mohammadshahi, Rémi Lebret and Karl Aberer	27
<i>Unsupervised Natural Question Answering with a Small Model</i>	
Martin Andrews and Sam Witteveen	34
<i>Scalable Knowledge Graph Construction from Text Collections</i>	
Ryan Clancy, Ihab F. Ilyas and Jimmy Lin	39
<i>Relation Extraction among Multiple Entities Using a Dual Pointer Network with a Multi-Head Attention Mechanism</i>	
Seong Sik Park and Harksoo Kim	47
<i>Question Answering for Fact-Checking</i>	
Mayank Jobanputra	52
<i>Improving Evidence Detection by Leveraging Warrants</i>	
Keshav Singh, Paul Reisert, Naoya Inoue, Pride Kavumba and Kentaro Inui	57
<i>Hybrid Models for Aspects Extraction without Labelled Dataset</i>	
Wai-Howe Khong, Lay-Ki Soon and Hui-Ngo Goh	63
<i>Extract and Aggregate: A Novel Domain-Independent Approach to Factual Data Verification</i>	
Anton Chernyavskiy and Dmitry Ilvovsky	69
<i>Interactive Evidence Detection: train state-of-the-art model out-of-domain or simple model interactively?</i>	
Chris Stahlhut	79
<i>Veritas Annotator: Discovering the Origin of a Rumour</i>	
Lucas Azevedo and Mohamed Moustafa	90
<i>FEVER Breaker's Run of Team NbAuzDrLqg</i>	
Youngwoo Kim and James Allan	99
<i>Team DOMLIN: Exploiting Evidence Enhancement for the FEVER Shared Task</i>	
Dominik Stambach and Guenter Neumann	105
<i>Team GPLSI. Approach for automated fact checking</i>	
Aimée Alonso-Reina, Robiert Sepúlveda-Torres, Estela Saquete and Manuel Palomar	110





# Conference Program

## 3rd November

0900–0915 *Opening Remarks*  
FEVER Organizers

0915–1000 *Invited Talk*  
Sameer Singh

### 1000–1030 **Research Talks**

1000–1015 *Fact Checking or Psycholinguistics: How to Distinguish Fake and True Claims?*  
Aleksander Wawer, Grzegorz Wojdyga and Justyna Sarzyńska-Wawer

1015–1030 *Neural Multi-Task Learning for Stance Prediction*  
Wei Fang, Moin Nadeem, Mitra Mohtarami and James Glass

### 1030–1100 **Coffee Break**

1100–1145 *Invited Talk*  
Emine Yilmaz

### 1145–1200 **Research Talks**

1145–1200 *Towards a Positive Feedback between the Wikimedia Ecosystem and Machine Learning Fact Verification*  
Diego Saez-Trumper and Jonathan Morgan

**3rd November (continued)**

**1200–1230      FEVER2.0 Shared Task Talks**

1200–1210      *The FEVER2.0 Shared Task*

James Thorne, Andreas Vlachos, Oana Cocarascu, Christos Christodoulopoulos and Arpit Mittal

1210–1220      *GEM: Generative Enhanced Model for adversarial attacks*

Piotr Niewinski, Maria Pszona and Maria Janicka

1220–1230      *Cure My FEVER : Building, Breaking and Fixing Models for Fact-Checking*

Christopher Hidey, Tuhin Chakrabarty, Tariq Alhindi, Siddharth Varia, Kriste Krstovski, Mona Diab and Smaranda Muresan

**1230–1400      *Lunch Break***

1400–1445      *Invited Talk*

William Wang

1445–1530      *Invited Talk*

David Corney

**1530–1630      Research Poster Session + Coffee**

*Aligning Multilingual Word Embeddings for Cross-Modal Retrieval Task*

Alireza Mohammadshahi, Rémi Lebret and Karl Aberer

*Unsupervised Natural Question Answering with a Small Model*

Martin Andrews and Sam Witteveen

*Scalable Knowledge Graph Construction from Text Collections*

Ryan Clancy, Ihab F. Ilyas and Jimmy Lin

*Relation Extraction among Multiple Entities Using a Dual Pointer Network with a Multi-Head Attention Mechanism*

Seong Sik Park and Harksoo Kim

*Question Answering for Fact-Checking*

Mayank Jobanputra

**3rd November (continued)**

*Improving Evidence Detection by Leveraging Warrants*

Keshav Singh, Paul Reisert, Naoya Inoue, Pride Kavumba and Kentaro Inui

*Hybrid Models for Aspects Extraction without Labelled Dataset*

Wai-Howe Khong, Lay-Ki Soon and Hui-Ngo Goh

*Extract and Aggregate: A Novel Domain-Independent Approach to Factual Data Verification*

Anton Chernyavskiy and Dmitry Ilvovsky

*Interactive Evidence Detection: train state-of-the-art model out-of-domain or simple model interactively?*

Chris Stahlhut

*Veritas Annotator: Discovering the Origin of a Rumour*

Lucas Azevedo and Mohamed Moustafa

**1530–1630 Shared Task Poster Session + Coffee**

*FEVER Breaker's Run of Team NbAuzDrLqg*

Youngwoo Kim and James Allan

*Team DOMLIN: Exploiting Evidence Enhancement for the FEVER Shared Task*

Dominik Stammach and Guenter Neumann

*Team GPLSI. Approach for automated fact checking*

Aimée Alonso-Reina, Robiert Sepúlveda-Torres, Estela Saquete and Manuel Palomar

**1630–1715 Invited Talk**

Hoifung Poon

**1715–1730 Closing Remarks**

FEVER Organizers

