

## ECONLP 2020 – 3<sup>rd</sup> Workshop on Economics and Natural Language Processing

### Description:

After the successful launch of the *Workshop on Economics and Natural Language Processing* (ECONLP) at ACL 2018 in Melbourne, Australia (<http://aclweb.org/anthology/W18-31>), and the coming follow-up event at EMNLP-IJCNLP 2019 in Hong Kong, China (<https://sites.google.com/view/econlp-2019>) we here propose to run the third edition of ECONLP in 2020 at one of our major conference events.

ECONLP addresses the increasing relevance of NLP for regional, national and international economy, both in terms of already operational language technology products and systems, and newly emerging methodologies and techniques reflecting the requirements at the intersection of economics and NLP. The focus of the workshop will be on how NLP influences business relations and procedures, economic transactions, and the roles of human and computational actors involved in commercial activities. Papers submitted to this workshop should address:

- NLP-based (stock) market analytics, e.g., prediction of economic performance indicators (trend prediction, performance forecasting, etc.), by analyzing verbal statements of enterprises, businesses, companies, and associated legal or administrative actors
- NLP-based product analytics, e.g., based on social and mass media monitoring, summarizing reviews, classifying and mining complaint messages and other (non)verbal types of customer reactions to products or services
- NLP-based customer analytics, e.g., client profiling, tracking product/company preferences, screening customer reviews or complaints, identifying high-influentials in economy-related communication networks
- NLP-based organization/enterprise analytics (e.g., tracing and altering social images of organizational actors, risk prediction, fraud analysis, predictive analysis of annual business, sustainability and auditing reports)
- Market sentiments and emotions as evident from consumers' and enterprises' verbal behavior and their communication strategies about products and services
- Competitive intelligence services based on NLP tooling
- Relationship and interaction between quantitative (structured) economic data (e.g., contained sales databases and associated time series data) and qualitative (unstructured verbal) economic data (press releases, newswire streams, social media contents, etc.)
- Information management based on the content-based organization, packaging and archiving of verbal communication streams of organizations and enterprises (emails, meeting minutes, business letters, internal reporting, etc.)
- Credibility and trust models for business agents involved in the economic process (e.g., as traders, sellers, advertisers) extracted from text/opinion mining their current communication as well as historic legacy data
- Deceptive or fake information recognition related to economic objects (such as products, advertisements, etc.) or economic actors (such as industries, companies, etc.), including opinion spam targeting or emanating from economic actors and processes
- Verbally fluent software agents (chat bots for sales and marketing) as reliable actors in economic processes serving business interests, e.g., embodying models of persuasion, information biases, fair trading

- Enterprise search engines (e-commerce, e-marketing)
- Consumer search engines, market monitors, product/service recommender systems
- Client-supplier interaction platforms (e.g., portals, help desks, newsgroups) and transaction support systems based on written or spoken natural language communication
- Multi-media and multi-modality interaction platforms, including written/spoken language channels, supporting economic processes
- Specialized modes of information extraction and text mining in economic domains, e.g., temporal event or transaction mining
- Information aggregation from single sources (e.g., review summaries, automatic threading)
- Text generation in economic domains, e.g., review generation, complaint response generation
- Ontologies for economics and adaptation of general-domain lexicons for economic NLP
- Corpora and annotations policies (guidelines, metadata schemata, etc.) for economic NLP
- Economy-specific text genres (business reports, sustainability reports, auditing documents, product reviews, economic newswire, business letters, etc.) and their usage for NLP
- Dedicated software resources for economic NLP (e.g., NER taggers, sublanguage parsers, pipelines for processing economic discourse)

**Efforts made to ensure demographic diversity of the organizers:**

- Gender variety: 1 female organizer (VH), 2 males (UH, ZZ)
- Geographic variety: 2 organizers from Europe (UH, VH), 1 from the US (ZZ)
- Educational variety: 2 organizers from NLP (UH, VH), 1 from economics (ZZ)

**Estimated number of attendees:** 30-50 attendees

**Shared Task:** negotiations will be made @ ECONLP 2019 with people who have already signaled interest in organizing a ST

**Preferred venue:**

- (1) EMNLP 2020
- (2) COLING 2020
- (3) ACL 2020
- (4) AACL/IJCNLP 2020

**Previous ECONLP workshops:**

1<sup>st</sup> ECONLP 2018 Workshop @ ACL 2018, Melbourne, Australia

(<http://aclweb.org/anthology/W18-31>)

- a. Submissions received: 16
- b. Papers accepted: 8 [2 long, 6 short]
- c. Number of attendees: 40

2<sup>nd</sup> ECONLP 2019 Workshop @ EMNLP-IJCNLP 2019, Hong Kong, China

(<https://sites.google.com/view/econlp-2019>)

- a. Submissions received: 17
- b. Papers accepted: 8 [5 long, 3 short]
- c. Number of attendees: 30-50

## Organizers:

- Udo Hahn                      Friedrich-Schiller-Universität Jena, Germany      [udo.hahn@uni-jena.de](mailto:udo.hahn@uni-jena.de)
- Véronique Hoste              Ghent University, Belgium      [veronique.hoste@ugent.be](mailto:veronique.hoste@ugent.be)
- Zhu (Drew) Zhang              Iowa State University, USA      [zhuzhang@iastate.edu](mailto:zhuzhang@iastate.edu)

## Organizers' Research Interests, Areas of Expertise, and Experience in Organizing Workshops:

- **Udo Hahn** – Jena University Language & Information Engineering (JULIE) Lab, Friedrich-Schiller-Universität Jena, Germany (chair)  
<https://julielab.de/Staff/Hahn>

Udo Hahn is a full professor for Computational Linguistics at FSU Jena (Germany) where he heads the Jena University Language & Information Engineering (JULIE) Lab ([www.julielab.de](http://www.julielab.de)). He holds a PhD from the Information Science Department at the University of Konstanz (Germany). His research interests focus on NLP applications for the life and natural sciences, mainly information extraction and text mining, emotion analysis, knowledge integration and aggregation from structured and unstructured data (incl. text summarization), annotation science, ontology and multilingual terminology engineering, as well as software engineering for NLP. He has been co-organizing 11 workshops in total. Among them five workshops for ACL (the 1<sup>st</sup> ECONLP workshop @ ACL 2018 and 2<sup>nd</sup> ECONLP workshop @ EMNLP-IJCNLP 2019, workshops on Automatic Summarization @ ANLP-NAACL 2000 and ACL 2002, and the BioNLP 2002 workshop @ ACL 2002), and the “UIMA for NLP” workshops @ LREC 2008 and LREC 2010.

- **Véronique Hoste** – LT3 Language and Translation Technology Group, Ghent University, Belgium  
<https://research.flw.ugent.be/en/veronique.hoste>

Prof. Veronique Hoste is Full Professor of Computational Linguistics and director of the LT3 Language and Translation Technology Team at Ghent University ([www.lt3.ugent.be](http://www.lt3.ugent.be)). She holds a PhD in computational linguistics from the University of Antwerp on optimization issues in machine learning of coreference resolution (2005). She has a strong expertise in machine learning of natural language, and more specifically in coreference resolution, word sense disambiguation, terminology extraction, text classification, classifier optimization, readability prediction, sentiment mining, economic event extraction and (implicit) sentiment analysis. She co-organized different workshops, including the 1<sup>st</sup> ECONLP workshop @ ACL 2018 and 2<sup>nd</sup> ECONLP workshop @ EMNLP-IJCNLP 2019, as well as shared tasks on coreference resolution (2010), cross-lingual word sense disambiguation (2010 and 2013), L2 writing (2014), and multilingual aspect-based sentiment analysis (2016).

- **Zhu (Drew) Zhang** – Iowa State University, USA  
<https://www.business.iastate.edu/directory/zhuzhang/>

Zhu Zhang is currently a Kingland Faculty Fellow in Business Analytics and an associate professor of Information Systems and Computer Science at Iowa State University (USA), where he heads the ISU NLP group. He holds a Ph.D. in Information and Computer Science from the University of Michigan (USA). His research interests focus on the intersection of NLP and machine learning, as well as various business applications of AI. He co-organized the 2<sup>nd</sup> ECONLP workshop @ EMNLP-IJCNLP 2019.

**Program Committee (invited: 27; accepted: 23 (= 85%); pending: 4 (= 15%))**

- Sven Büchel Friedrich-Schiller-Universität Jena, Jena, Germany
- Hsin-Hsi Chen National Taiwan University, Taipei City, Taiwan
- Paulo Cortez University of Minho, Guimarães, Portugal
- Sanjiv Ranjan Das Santa Clara University, Santa Clara, CA, USA
- Brian Davis Maynooth University, Maynooth, Ireland
- Stefan Feuerriegel ETH Zürich, Switzerland (pending)
- Flavius Frasincar Erasmus University, Rotterdam, Netherlands
- Petr Hájek University of Pardubice, Pardubice, Czech Republic
- Allan Hanbury Technische Universität Wien, Wien, Austria
- Qing Li Southwestern University of Finance and Economics, Sichuan, Chengdu, China
- Pekka Malo Aalto University, Aalto, Finland
- Gideon Mann Bloomberg LP, New York City, NY, USA (pending)
- Julian J. McAuley University of California at San Diego, San Diego, CA, USA
- Igor Mozetič Jožef Stefan Institute, Ljubljana, Slovenia
- Viktor Pekar Aston University, Birmingham, UK
- Nicolas Pröllochs University of Oxford, Oxford, UK (pending)
- Paul Rayson Lancaster University, Lancaster, UK
- Samuel Rönqvist University of Turku, Turku, Finland
- Sameena Shah S&P Global Ratings, New York City, NY, USA
- Kiyoaki Shirai Japan Advanced Institute of Science and Technology (JAIST), Nomi, Japan
- Padmini Srinivasan University of Iowa, Iowa City, IA, USA
- Amanda Stent Bloomberg LP, New York City, NY, USA
- Heiner Stuckenschmidt Universität Mannheim, Mannheim, Germany
- Chuan-Ju Wang Academia Sinica, Taipei City, Taiwan
- Wlodek W. Zadrozny University of North Carolina at Charlotte, Charlotte, NC, USA
- Yue Zhang Westlake University, China (pending)
- Ming Zhou Microsoft Asia Research, Beijing, China

**Estimated number of submissions:** 30 papers