22nd International Conference on Natural Language & Information Systems

HEC Liège, University of Liège, Liège (Belgium)

21-23 June 2017

http://nldb.org

Conference Program
Location and venues

The conference venue of NLDB 2017 is HEC Liège, 14 rue Louvrex, 4000 Liège. The building is located in the city centre. It is a 10-minute walk from the two recommended hotels. Busses 20, 21, 22, and 23 can also drive you in front of the entrance (stop HEC).

All conference rooms are located in HEC building. The two keynote speeches will be held in Amphitheatre 50 on the ground floor. The oral and poster sessions will be held in rooms 120, 126, and 130 located on the first floor.

Social events

21st June: Welcome reception (meeting point 18:00 hrs – Place Cathédrale, Liège 4000)

The welcome reception will be held in the beautiful gardens of Brasserie C, located in the historical heart of the city. A short tour of the city of Liège and its historical/cultural centre will guide the participants towards the reception venue. The meeting point is fixed on Place Cathédrale (near the fountain) at 18:00 hrs. For those who want to join us directly at the Brasserie C, the reception will begin at 18:30 hrs (Impasse des Ursulines 14, 4000 Liège).

22nd June: Boat trip and conference dinner (meeting point 18:15 hrs – Quai Van Beneden)

The conference dinner will begin with a boat trip/city visit on La Meuse river. The meeting point is fixed at 18:15 hrs on the quay located at Quai Van Beneden, 4020 Liège (in front of Aquarium-Museum).

The conference dinner will be held at Labo 4 restaurant (located in a former university laboratory) at 19:30 hrs.
Committees

General Organization Committee

General Chairs: Ashwin Ittoo, University of Liège, Belgium and Elisabeth Métais, Conservatoire National des Arts et Métiers (CNAM), France

Program Chairs: Flavius Frasincar, Erasmus University Rotterdam, Rotterdam, The Netherlands and Nguyen Le Minh, Japan Advanced Institute of Science and Technology, Japan

Organization Chairs:
Gosse Bouma, University of Groningen, The Netherlands
Antal van den Bosch, Radboud University Nijmegen, The Netherlands
Michael Schyns, University of Liège, Belgium
Pierre Geurts, University of Liège, Belgium
Farid Meziane, University of Salford-Manchester, UK
Pierre Dupont, Université Catholique de Louvain, Belgium

Website Chairs: Manon Crélot, University of Liège, Belgium and Kim Schouten, Erasmus University Rotterdam, The Netherlands

Program Committee

See: http://nldb2017.conferences.hec.ulg.ac.be/organization/program-committee/
## Day 1 – Wednesday, June 21st 2017

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
</tr>
</thead>
<tbody>
<tr>
<td>8:00 – 9:00</td>
<td>Registration (Ground Floor)</td>
</tr>
<tr>
<td></td>
<td><strong>Opening Speech</strong>, Hall: 050, 9:00-9:15</td>
</tr>
<tr>
<td></td>
<td><strong>Keynote Speech</strong>, Hall: 050, 9:15-10:30</td>
</tr>
<tr>
<td></td>
<td>“Linguistic Musicology”, by Prof. Satoshi Tojo, Japan Advanced Institute of Science and Technology, Japan</td>
</tr>
<tr>
<td></td>
<td>Chair: Le Minh Nguyen</td>
</tr>
<tr>
<td>10:30 - 11:00</td>
<td>Coffee Break (Ground Floor)</td>
</tr>
<tr>
<td></td>
<td><strong>Session 1.1a, Hall: 130, 11:00 – 12:00</strong></td>
</tr>
<tr>
<td></td>
<td><strong>Topic</strong>: Feature Engineering, Chair: <em>Linda Oro</em></td>
</tr>
<tr>
<td>11:00-11:30</td>
<td>Fine-grained Opinion Mining from Mobile App Reviews with Word Embedding Features <em>Mario Sänger</em>, <em>Ulf Leser</em>, and <em>Roman Klinger</em></td>
</tr>
<tr>
<td>11:30-12:00</td>
<td>Feature Selection Using Multi-objective Optimization for Aspect Based Sentiment Analysis <em>Mohammed Shad Akhtar</em>, <em>Sarah Kohail</em>, <em>Amit Kumar</em>, <em>Asif Ekbal</em>, and <em>Chris Biemann</em></td>
</tr>
<tr>
<td>12:00-12:15</td>
<td>Feature Selection and Class-Weight Tuning Using Genetic Algorithm for Biomolecular Event Extraction <em>Amit Majumder</em>, <em>Asif Ekbal</em>, and <em>Sudip Kumar Naskar</em></td>
</tr>
<tr>
<td>12:15-12:30</td>
<td>A Feature Based Simple Machine Learning Approach with Word Embeddings to Named Entity Recognition on Tweets <em>Mete Taspinar</em>, <em>Murat Can Ganiz</em>, and <em>Tankut Acarman</em></td>
</tr>
</tbody>
</table>

|               | **Session 1.1b, Hall: 126, 11:00 – 12:30**                                                      |
|               | **Topic**: Information Extraction, Chair: *Chenghua Lin*                                     |
| 11:00-11:30   | WikiTrends: Unstructured Wikipedia-Based Text Analytics Framework *Michel Naim Gerguis*, *Cherif Salama*, and *M. Watheq El-Kharashi* |
| 11:30-12:00   | An Improved PLDA Model for Short Text *Chaotao Chen* and *Jiangtao Ren*                       |
| 12:00-12:15   | Twitter User Profiling Model Based on Temporal Analysis of Hashtags and Social Interactions *Abir Gorrab*, *Ferihane Kboubi*, *Ali Jaffal*, *Bénédicte Le Grand*, and *Henda Ben Ghezala* |
| 12:15-12:30   | Extracting Causal Relations among Complex Events in Natural Science Literature *Biswa Nath Barik*, *Erwin Marsi*, and *Pinar Öztürk* |
Session 1.2a, Hall: 130, 14:00 – 15:00
Topic: Semantics-based Models and Applications, Chair: Lanting Fang

14:00-14:30 Vector Space Representation of Concepts Using Wikipedia Graph Structure Armin Sajadi, Evangelos E. Milios, and Vlado Keselj

14:30-15:00 Composite Semantic Relation Classification Siamak Barzegar, Andre Freitas, Siegfried Handschuh, and Brian Davis

15:00-15:30 Vector Embedding of Wikipedia Concepts and Entities Ehsan Sherkat and Evangelos E. Milios

Session 1.2b, Hall: 126, 14:00-15:30
Topic: Text Summarization, Chair: Hadhémi Achour

14:00-14:30 Document Aboutness via Sophisticated Syntactic and Semantic Features Marco Ponza, Paolo Ferragina, and Francesco Piccinno

14:30-15:00 Summarizing Web Documents Using Sequence Labeling with User-generated Content and Third-party Sources Minh-Tien Nguyen, Duc-Vu Tran, Chien-Xuan Tran, and Minh-Le Nguyen

15:00-15:30 "What Does My Classifier Learn?" A Visual Approach to Understanding Natural Language Text Classifiers Jonas Paul Winkler and Andreas Vogelsang

Session 1.3a (Posters), Hall: 126, 16:00-17:30

A Convolutional Neural Network Based Sentiment Classification and the Convolutional Kernel Representation Gao Shen, Hua-Ping Zhang and Kai Gao

A Method for Querying Touristic Information Extracted from the Web Ermelinda Oro and Massimo Ruffolo

Applications of Natural Language Techniques in Solving SmartHome Use-cases Parnab Kumar Chanda, Nitish Varshney, and Ashok Subash

Authorship Attribution System Oleksandr Marchenko, Anatoly Anisimov, Andrii Nykonenko, Tetiana Rossada, and Egor Melnikov

Automated Lexicon and Feature Construction using Word Embedding and Clustering for EHR Classification Gondy Leroy, Yang Gu, Sydney Pettygrove, and Margaret Kurzius-Spence

Combination of Neural Networks for Multi-label Document Classification Ladislav Lenc and Pavel Král

Constructing Technical Knowledge Organizations from Document Structures Sebastian Furth and Joachim Baumeister

Detecting Non-covered Questions in FAQ Databases Mladen Karan and Jan Šnajder

Employing Word Embeddings for Authorship Attribution of Small Texts Armin Hoenen
Improving Document Classification Effectiveness Using Knowledge Exploited by Ontologies  
Zenun Kastrati and Sule Yildirim-Yayilgan

Multi-objective Optimisation based Feature Selection Technique for Multi-Label Sentiment Analysis  
Mohammed Arif Khan, Eneldo Loza Mencia, Asif Ekbal, and Johannes Fünkranz

Named Entity Classification Based on Profiles: A Domain Independent Approach  
Isabel Moreno, M. Teresa Romá-Ferri, and Paloma Moreda

Quotology - Reading between the Lines of Quotations  
Dwijen Rudrapal, Amitava Das, and Baby Bhattacharya

Supporting Experts to Handle Tweet Collections about Significant Events  
Ali Hürriyetoğlu, Nelleke Oostdijk, Antal van Den Bosch, and Mustafa Erkan Basar

Supporting Business Process Modeling Using RNNs for Label Classification  
Philip Hake, Manuel Zapp, Peter Fettke, and Peter Loos

Towards Generating Object-Oriented Programs Automatically from Natural Language Texts for Solving Mathematical Word Problems  
Sourav Mandal and Sudip Kumar Naskar

Using Word Embeddings for Computing Distances between Texts and for Authorship Attribution  
Armin Hoenen

Social Event 1
Day 2 – Thursday, June 22\textsuperscript{nd} 2017

8:00 – 9:00  Registration (Ground Floor)

Keynote Speech, Hall: 050, 9:00-10:30
“Using Machine Reading to Aid Cancer Understanding and Treatment”, by Assoc. Prof. Mihai Surdeanu, University of Arizona, USA

Chair: Flavius Fransicar

10:30 – 11:00  Coffee Break (Ground Floor)

Session 2.1a, Hall: 126, 11:00-12:30
Topic: Information Extraction, Chair: Kevin Zhang

11:00-11:30  Enriching Argumentative Texts with Implicit Knowledge Maria Becker, Michael Staniek, Vivi Nastase, and Anette Frank

11:30-12:00  Technical Aspect Extraction from Customer Reviews Based on Seeded Word Clustering Jean-Marc Davril, Tony Leclercq, Maxime Cordy, and Patrick Heymans

12:00-12:30  Event Detection for Heterogeneous News Streams Ida Mele and Fabio Crestani

Session 2.1b, Hall: 130, 11:00-12:30
Topic: Natural Language Processing Applications, Chair: Gondy Leroy

11:00-11:30  Mining Incoherent Requirements in Technical Specifications Patrick Saint-Dizier

11:30-12:00  Simplified Text-to-Pictograph Translation for People with Intellectual Disabilities Leen Sevens, Vincent Vandeghinste, Ineke Schuurman, and Frank Van Eynde

12:00-12:30  What You Use, Not What You Do: Automatic Classification of Recipes Hanna Kicherer, Marcel Dittrich, Lukas Grebe, Christian Scheible, and Roman Klinger

12:30 – 14:00  Lunch (Ground floor)

Session 2.2a, Hall: 126, 14:00-15:30
Topic: Neural Language Models and Applications, Chair: Ashwin Ittoo

14:00-14:30  Estimating Distributed Representations of Compound Words Using Recurrent Neural Networks Nathawut Kertkeidkachorn and Ryutaro Ichise

14:30-14:45  A Large-Scale CNN Ensemble for Medication Safety Analysis Liliya Akhtyamova, Andrey Ignatov, and John Cardiff

14:45-15:00  Challenges and Solutions with Alignment and Enrichment of Word Embedding Models Cem Şafak Şahin, Rajmonda S. Caceres, Brandon Oselio, and William M. Campbell

15:00-15:15  Legalbot: a Deep Learning-Based Conversational Agent in the Legal Domain Adebayo Kolawole John, Luigi di Caro, Guido Boella, and Livio Robaldo
15:15-15-30  Quality of Word Embeddings on Sentiment Analysis Tasks Erion Çano and Maurizio Morisio

Session 2.2b, Hall: 130, 14:00-15:30
Topic: Information Extraction from Resource-Scarce Language, Chair: Oleksandr Marchenko

14:00-14:15  Does the Strength of Sentiment Matter? A Regression Based Approach on Turkish Social Media Ali Mert Ertugrul, Itir Onal, and Cengiz Acarturk


14:30-14:45  A Morphological Approach for Measuring Pair-wise Semantic Similarity of Sanskrit Sentences Vaishakh Keshava, Mounica Sanapala, Akshay Chowdhu Dinesh, and Sowmya Kamath Shevgoor

14:45-15:00  Word-Level Identification of Romanized Tunisian Dialect Chaima Aridhi, Hadhémi Achour, Emna Souissi, and Jihene Younes

15:00-15:15  Named Entity Recognition in Turkish: Approaches and Issues Dogan Küçük, Nursal Arıcı, and Dilek Küçük

15:15-15:30  Building TALAA-AFAQ, a Corpus of Arabic Factoid Question-Answers for a Question Answering System Asma Aouichat and Ahmed Guessoum

15:30 – 16:00 Coffee Break (Ground Floor)

Session 2.3a, Hall: 126, 16:00-17:30
Topic: Question Answering Systems and Applications, Chair: Jiangtao Ren

16:00-16:30  A Hierarchical Iterative Attention Model for Machine Comprehension Zhuang Liu, Degen Huang, Yunxia Zhang, and Chuan Zhang

16:30-17:00  A Syntactic Parse-Key Tree-Based Approach for English Grammar Question Retrieval Lanting Fang, Anh Tuan Luu, Siu Cheung Hui, and Lenan Wu

17:30-17:30  A Discriminative Possibilistic Approach for Query Translation Disambiguation Wiem Ben Romdhane, Bilel Elayeb, and Narjès Bellamine Ben Saoud

Session 2.3b, Hall: 130, 16:00-17:30
Topic: Opinion Mining and Sentiment Analysis, Chair: Ryutaro Ichise

16:00-16:30  Automatically Labelling Sentiment-bearing Topics with Descriptive Sentence Labels Mohamad Hardyman Barawi, Chenghua Lin, and Advaith Siddharthan

16:30-16:45  Does Optical Character Recognition and Caption Generation Improve Emotion Detection in Microblog Posts? Roman Klinger
16:45-17:00  An Approach for Defining the Author Reputation of Comments on Products Carlos A. de Sa, Roney L. de S. Santos, and Raimundo, S. Moura

17:00-17:15  Identifying Right-Wing Extremism in German Twitter Profiles: a Classification Approach Matthias Hartung, Roman Klinger, Franziska Schmidtke, and Lars Vogel

Day 3 – Friday June 23rd 2017

10:00 – 11:00  Registration (Ground Floor)

Session 3.1, Hall: 050, 11:00-12:00
Topic: Natural Language Processing Applications, Chair: Roman Klinger

11:00-11:30  A Gated Neural Network for Sentence Compression Using Linguistic Knowledge Yang Zhao, Hajime Senuma, Xiaoyu Shen, and Akiko Aizawa

11:30-11:45  A Study on Flexibility in Natural Language Generation through a Statistical Approach to Story Generation Marta Vicente, Cristina Barros, and Elena Lloret

11:45-12:00  TEKNO: Preparing Legacy Technical Documents for Semantic Information Systems Sebastian Furth, Maximilian Schirm, Volker Belli, and Joachim Baumeister

Session 3.2: Closing, Hall: 050, 12:00-12:45

- Wrap up/conclusion

- Best Paper Award Presentation, Sponsored by Springer

12:45 – 14:00  Lunch (Ground Floor)

Contact

Ashwin Ittoo, University of Liège, Belgium
ashwin.ittoo@ulg.ac.be (Phone: +32 489 99 26 01)
Sponsors

Computational Intelligence and Learning
Doctoral school