Any challenge in the scope of KEYSTONE project is welcome.
- What open issues do you see?
- What unresolved keyword search problems are you facing?

Fully interactive session on open issues and research challenges in development of keyword search.
GOAL

- Foster joint research ideas and proposals which are needed in the KEYSTONE COST action
  - STSM networking
  - Joint publications
  - New project proposals

- To identify interesting (i.e. open) research issues

CONSTRAINT

- At least 2 members from different countries
Challenge Track

Submissions
- **2 page abstracts** (LNCS format, Springer)
- authors will express their choice of preference
  - published at the web page of KEYSTONE Conference

Presentations @ Challenge Track
- 5 minute talks +
- 10 minutes of feedback and in-depth discussion from the audience
- expected to accept **6 talks**

Track chairs
- Sanda Martincic - Ipsic, University of Rijeka, HR
- Marko Horvat, Polytechnics of Zagreb, HR
Interactive part
Challenge Track

2 Posters
- Knowledge Representation Models / Linked Data
- Natural Language Processing / Information Retrieval
- not exhaustive list

Each participant
- please write
  - one open issue (research question) regarding keyword search in structured data sources) and
  - your name
Tomorrow

- presentation of open issues – grouped together

- encourage participants to start working on abstracts / submissions to Track Challenge
Challenge Track Interactive Part Results

Sanda Martinčić-Ipšić
University of Rijeka
Challenge Track

Interactive Part Results

- 40+ participants
- 40+ ideas
- grouped around 4 main topics on posters
  - Linked Data
  - Knowledge Representation Models
  - Information Retrieval
  - Natural Language Processing
  - .....
Javier Fernandez
- Modelling Keywords in Standard Query languages (SPARQL)
- Modeling Archives of Linked Data – general architecture

Gilles Falquet
- Keyword search over multiple SPARQL endpoints

Raquell Trillo Lado
- Translating Keyword Queries without knowing all Instances stored in the dataset

Antonio Farina
- generic Architecture for handling RDF stores (incompact/plain forms) and supporting SPARQL querying
- Raquell Trillo Lado
  - Discovering the most relevant Data Sources for a Keyword Query

- Francesco Guerra
  - finding the best source according to the users keywords (NLP & IR techniques adopted)

- Omar Boucelma
  - keyword search on linked data
  - APPLICATION – keyword search as an efficient alternative to matchmaking

- John Breslin
  - keyword search on linked data from social media and/or sensors
Knowledge Representation Models

- Gorgon Dorian
  - combination of Keyword based search and
  - Visual human analytics (visual assisted keyword based)

- Peter Butka
  - How to use concept lattices for representation of query results for structured input datasets?
  - How to use such representations for visualization of results?

- Teodor Stefanut
  - Keyword based search results visualization
  - User expertise based search assistance

- Costantin Nadra
  - representing/indexing effectively multiple types of relevant information

- Julian Szymansky
  - sub symbolic representation s of a text
Alexandre Miguel Pinto
- Unsupervised learning of semantic topic models

Gjorgji Madjarov
- Knowledge based query expansion (domain knowledge)

Tomche Delev
- Knowledge based query expansion on known domain

Marina Ivasic Kos
- Knowledge based query expansion on domain knowledge

Miran Pobar
- Knowledge based query expansion on domain knowledge
Julian Szymanski
- Language models based on neural networks

Marius Sajgalik & Maria Bielikova
- Vector-based representation of words/documents in form of latent features
- Semantic resolution

Hussain Mahdi
- How to combine bag-of-words and bag-of-concepts to achieve optimal text representation model

Yaakov Hacohen-Kerner
- Text classification and clustering using key phrases
Information Retrieval

- Victor Bacu
  - Big data challenges – distributed approaches in IR
- Atanas Hristov
  - Keyword search over social media data
- Hubert Zarzycki
  - Identifying familiar strangers in social ne
- Sanda Martincic-Ipšić
  - Graph enabled keyword extraction
- Yannis Velegrakis
  - Keyword queries on graphs
Nicola Ferro
- Correlation between online/offline evaluation
- Information Unit to be retained for evaluating keyword search

Wouter Addink
- Aging of data: combining data and assessing fitness for use difficult

Sergio Ilarri
- Design and evaluation of context aware recommendation systems

Andreas Nurnberger
- Interactive structuring and exploration
Information Retrieval / NLP

- Mihai Lupu
  - How to extract facts from scientific and technological publications?
  - Distributional semantics as a tool to support human annotations and information extraction

- Raquel Amaro
  - Explore ontologies, semantics and syntactic knowledge already in lexical resources in a specific semantic keyword-based search
Natural Language Processing

- Elena Demidova
  - Alignment of multilingual information to support retrieval in multilingual data collection

- Javier Lacasta
  - Multilingual data/keyword integration for IR
  - alignment/translation of keywords for multilingual search system
  - Language dependent vs. language independent data collections

- Ranka Stanković
  - multilingual search and summarization

- Hussain Mahdi
  - How to best approach the problem of keyword disambiguity as applied to different languages

- Yaakov Hacohen-Kerner
  - POS (part-of-speech) characterization of words in keyphrases
Dragan Ivanovic
- Adaptive user profiling for personalized keyword search on structured data sources
- Resolving ambiguity of queries

Francesco Guerra
- User profiling based on keywords

Georgia Kapitsaki
- Utilizing linked data (and various sources of information) to create context profiles (for users, devices, applications) extending user modelling concepts

Olivera Kitanovic
- Geotaging of textual resources
Challenge Track @ International KEYSTONE Conference

Challenge Track
Košice 11 – 12 May 2015

Sanda Martinčić-Ipšić
University of Rijeka