

# 3rd International Workshop on News Recommendation and Analytics (INRA 2015)

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## ABSTRACT

The 3rd International Workshop on News Recommendation and Analytics (INRA 2015) is held in conjunction with RecSys 2015 Conference in Vienna, Austria. This paper presents a brief summary of the INRA 2015. This workshop aims to create an interdisciplinary community that addresses design issues in news recommender systems and news analytics, and promote fruitful collaboration opportunities between researchers, media companies and practitioners. We have a keynote speaker and an invited demo presentation in addition to 4 papers accepted in this workshop.

## Categories and Subject Descriptors

H.0 [Information Systems]: General

## Keywords

Recommender systems; news recommendation; analytics

## 1. INTRODUCTION

The motivation for news recommender systems is the tremendous amount of news articles available online and the dynamic nature of news domain. For a user it is getting harder to reach the relevant news items according to her personal interests and preferences. News recommender systems aim to bring the most relevant news items to the users.

Each domain in recommender systems has different characteristics and requires different approaches to make successful recommendations. Compared to other recommender system domains like books, music and movies, news recom-

mender systems have particular challenges which requires a deeper analysis of both the user, content and their relationships. The news domain is characterized by a constant flow of unstructured, fragmentary, and unreliable news stories from numerous sources and different perspectives. Some important challenges of news domain are:

- Dynamic environment: Every hour hundreds of new articles is published by different sources,
- Faster changing user interests compared to other domains. User interests in movies, music or books change much slower than news,
- Willingness to read news articles that are independent from user interests like breaking news,
- Recency issues of news articles (people tend to read recent news, not the old ones),
- Unstructured subjective content that create content analysis problems and may turn recommendations unreliable.

This workshop addresses primarily news recommender systems and news analytics, with a particular focus on user profiling and techniques for dealing with and extracting knowledge from large-scale news streams. The news streams may originate in large media companies, but may also come from social sites, where user models are needed to decide how user-generated content is to be taken into account. As part of news recommendation and analytics, Big Data architectures and large-scale statistical and linguistic techniques are used to extract aggregated knowledge from large news streams and prepare for personalized access to news.

## 2. TOPICS OF INTEREST

Topics of interests for this workshop include but are not limited to:

- News semantics and ontologies,
- News summarization, classification and sentiment analysis,

- Recommender systems and news personalization,
- Group recommendation for news,
- User profiling and news context modeling,
- News evolution and trends,
- Large-scale news mining and analytics,
- Evaluation methods,
- News from social media,
- Big Data technologies for news streams,
- News recommendation and analytics on mobile platforms.

### 3. WORKSHOP DETAILS

In INRA 2015 we have received 6 submissions, of which 4 were accepted for presentation. The submissions to our workshop includes good quality of works for user profiling, social network analysis, hybrid methods and deep learning for news recommendation. This year we have the acceptance rate of 66%. In INRA 2015 we have a keynote speaker who has a very good background of industrial and academic work on data analytics and news research. INRA also includes a demo session with a full-fledged news recommender system that has been developed as part of the SmartMedia program at NTNU in Trondheim. This system integrates numerous Norwegian news sources and demonstrates how the use of context can improve the quality of personalized mobile news aggregators.

#### 3.1 Keynote Speaker

Dr. Bahareh Heravi is the keynote speaker of INRA 2015. She is a Research Fellow at Insight Centre for Data Analytics @ NUI Galway and the founder and Leader of the Insight News Lab <sup>1</sup> (Digital Humanities and Journalism). She is an Adjunct Lecturer and a programme board member of Journalism Studies at the National University of Ireland, Galway. Dr Heravi's research and teaching are at the nexus of data, technology and journalism. She has worked with and within various news organizations. Her main research interests are in the areas of Data and Computational Journalism, Information Science, Social Media & Citizen Sensing, Semantic Web and Linked Data. She leads a number of projects at the Insight News Lab, including RTE News360, Newswire 2.0, VeritaWire, Social Semantic Journalism and the Social Repository of Ireland. Dr Heravi is the founder of Irish Times Data <sup>2</sup> and also the founder and organizer of Hacks/Hackers Dublin. She is the former Lead Data Scientist at The Irish Times, where she lead the Irish Times'R&D programme and pioneered data innovation in the newsroom. Dr. Heravi's talk is about data journalism as a practice, the new directions and challenges in news organizations.

#### 3.2 Previous Workshops

3rd International Workshop on News Recommendation and Analytics (INRA 2015) is based on the following previous workshops:

<sup>1</sup><http://newslab.insight-centre.org/>

<sup>2</sup><http://irishtimes.com/data>

- International News Recommender Systems Workshop and Challenge (NRS)<sup>3</sup> held in conjunction with the 7th ACM Recommender Systems Conference in 2013. This workshop had a very limited scope, which restricted the number of submissions and led to an acceptance rate of 75%.
- International Workshop on News Recommendation and Analytics (NRA) 2014 <sup>4</sup> held in conjunction with 22nd Conference on User Modelling, Adaptation and Personalization (UMAP) in 2014. The workshop scope was extended with news analytics, which is closely lined with the field of news recommendation. The acceptance rate was 50%.

## 4. ORGANIZERS

### 4.1 Workshop Chairs

**Jon Atle Gulla**, Professor at Department of Computer and Information Science, Norwegian University of Science and Technology (NTNU), Norway

**Bei Yu**, Assistant Professor at School of Information Studies, Syracuse University, USA

### 4.2 Organizing Committee Co-Chairs

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**Xiaomeng Su**, Department of Informatics and eLearning, Sør-Trøndelag University College, Norway

### 4.3 Program Committee Co-Chairs

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**Jon Espen Ingvaldsen**, Norwegian University of Science and Technology (NTNU), Department of Computer and Information Science, Norway

<sup>3</sup><http://recsys.acm.org/recsys13/nrs>

<sup>4</sup><http://research.idi.ntnu.no/nra2014>