

# Publications

## Proceedings/Book Names

RecSys '16: Proceedings of the 10th ACM Conference on Recommender Systems (3)

RecSys '17: Proceedings of the Eleventh ACM Conference on Recommender Systems (3)

RecSys '18: Proceedings of the 12th ACM Conference on Recommender Systems (3)

RecSys '15: Proceedings of the 9th ACM Conference on Recommender Systems (2)

SIGIR '18: The 41st International ACM SIGIR Conference on Research & Development in Information Retrieval

# More (15) ∨

# Content Type

Research Article (47) Abstract (3) Extended Abstract (1) Section (1)

# Media Formats

PDF (58) Image (15) HTML (5) Video (4)

## **Abstract**

This tutorial introduces multimedia recommender systems (MMRS), in particular, recommender systems that leverage multimedia content to recommend different media types.

The target recommendation domains of the tutorial are movies, music and images. We present state-of-the-art approaches for multimedia feature extraction (text, audio, visual), including deep learning methods, and recommendation approaches tailored to the multimedia domain.

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#### **Full Text**

This tutorial therefore aims at bridging the gap between the multimedia, machine learning, and recommender systems communities.

His research interests include recommender systems and personalization, multimedia, and machine learning.

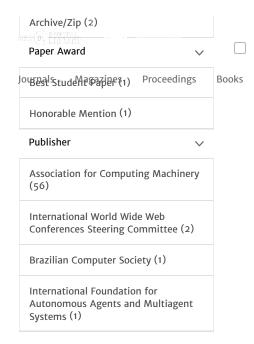
His main research areas are deep learning for recommender systems, matrix and tensor factorization, session-based and context- aware recommendations.

## Subject

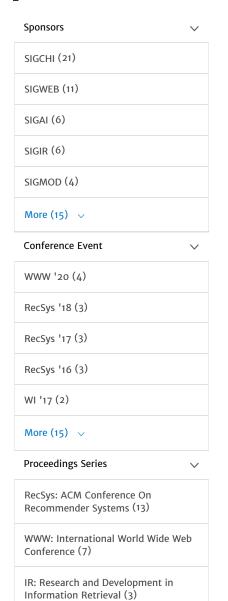
RecSys: ACM Conference On Recommender Systems

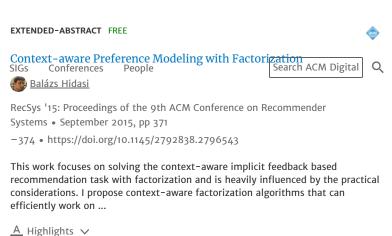
RecSys: Recommender Systems





# Conferences





#### Abstract

This work focuses on solving the context- aware implicit feedback based recommendation task with factorization and is heavily influenced by the practical considerations. I propose context- aware factorization algorithms that can efficiently work on implicit data. I generalize these algorithms and propose the General Factorization Framework (GFF) in which experimentation with novel preference models is possible. This practically useful, yet neglected feature results in models that are more appropriate for contextaware recommendations than the ones used by the state-of-the-art.

Context- aware Preference Modeling with Factorization Balázs Hidasi balazs.hidasi@gravityrd.com Gravity Research and Development Inc. INTRODUCTION Recommender systems are more and more widely used in e-commerce and on multimedia sites.

Context- aware recommender systems (CARS) consider additional information (termed context) besides user-item interactions.

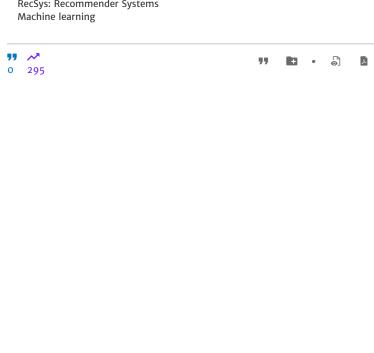
## Keywords

recommender systems

# Subject

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RecSys: Recommender Systems





# Publication Date



## RESEARCH-ARTICLE FREE



Adversarial tensor factorization for context-aware recommendation SIGs Conferences People Search ACM Digital

Huiyuan Chen, Iing Li

RecSys '19: Proceedings of the 13th ACM Conference on Recommender Systems • September 2019, pp 363

-367 • https://doi.org/10.1145/3298689.3346987

Contextual factors such as time, location, or tag, can affect user preferences for a particular item. Context-aware recommendations are thus critical to improve both quality and explainability of recommender systems, compared to traditional ...

A Highlights V

#### **Abstract**

Context- aware recommendations are thus critical to improve both quality and explainability of recommender systems, compared to traditional recommendations that are solely based on user-item interactions. However, few work has focused on the robustness of a context- aware recommender system. Improving the robustness of a tensor-based model is challenging due to the sparsity of the observed tensor and the multi-linear nature of tensor factorization. In this paper, we propose ATF, a model that combines tensor factorization and adversarial learning for context- aware recommendations.

#### **Full Text**

Context- aware recommendations are thus critical to improve both quality and explainability of recommender systems, compared to traditional recommendations that are solely based on user-item interactions.

Adversarial Tensor Factorization for Context- aware Recommendation. In Thirteenth ACM Conference on Recommender Systems ( RecSys '19), September 16-20, 2019, Copenhagen, Denmark.

RecSys '19, September 16-20, 2019, Copenhagen, Denmark 363 RecSys '19, September 16-20, 2019, Copenhagen, Denmark Huiyuan Chen and Jing Li 364 Adversarial Tensor Factorization for Context- aware Recommendation RecSys '19, September 16-20, 2019, Copenhagen, Denmark 365 RecSys '19, September 16-20, 2019, Copenhagen, Denmark Huiyuan Chen and Jing Li 366 Adversarial Tensor Factorization for Context- aware Recommendation RecSys '19, September 16-20, 2019, Copenhagen, Denmark 367

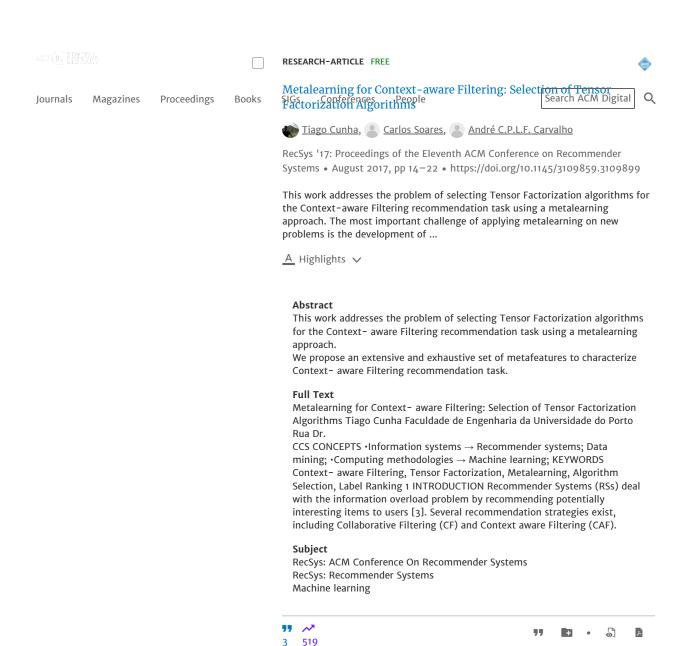
## Subject

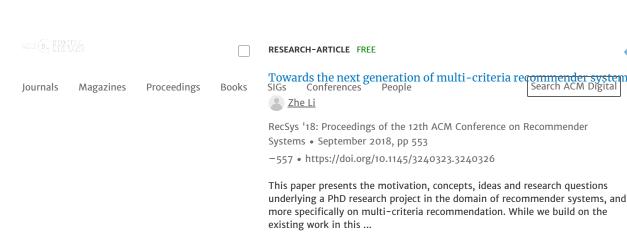
RecSys: ACM Conference On Recommender Systems

RecSys: Recommender Systems

Machine learning







A Highlights V

## Abstract

This paper presents the motivation, concepts, ideas and research questions underlying a PhD research project in the domain of recommender systems, and more specifically on multi-criteria recommendation.

#### **Full Text**

Towards the Next Generation of Multi-Criteria Recommender Systems. In Twelfth ACM Conference on Recommender Systems (RecSys '18), October 2-7, 2018, Vancouver, BC, Canada.

To generalize context inclusion and model higher-order interactions among users, items and context, Factorization Machines (FM) [30] were proposed and widely applied in context- aware recommendations [34, 44]. Julián Urbano for their supervision and valuable feedback on this paper. 553 RecSys '18, October 2-7, 2018, Vancouver, BC, Canada Zhe Li 554 Towards the Next Generation of Multi-Criteria Recommender Systems RecSys '18, October 2-7, 2018, Vancouver, BC, Canada 555 RecSys '18, October 2-7, 2018, Vancouver, BC, Canada Zhe Li 556 Towards the Next Generation of Multi-Criteria Recommender Systems RecSys '18, October 2-7, 2018, Vancouver, BC, Canada 557

# Keywords

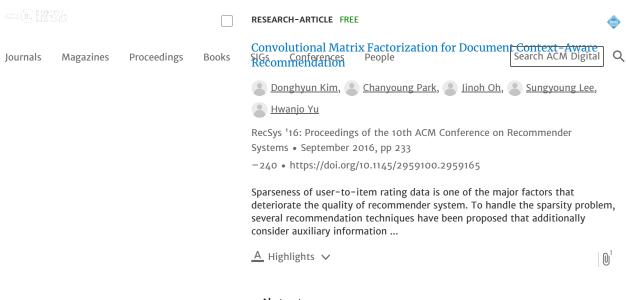
recommender systems

# Subject

RecSys: ACM Conference On Recommender Systems

RecSys: Recommender Systems Recommender systems





#### **Abstract**

This paper proposes a novel context- aware recommendation model, convolutional matrix factorization (ConvMF) that integrates convolutional neural network (CNN) into probabilistic matrix factorization (PMF).

#### Full Text

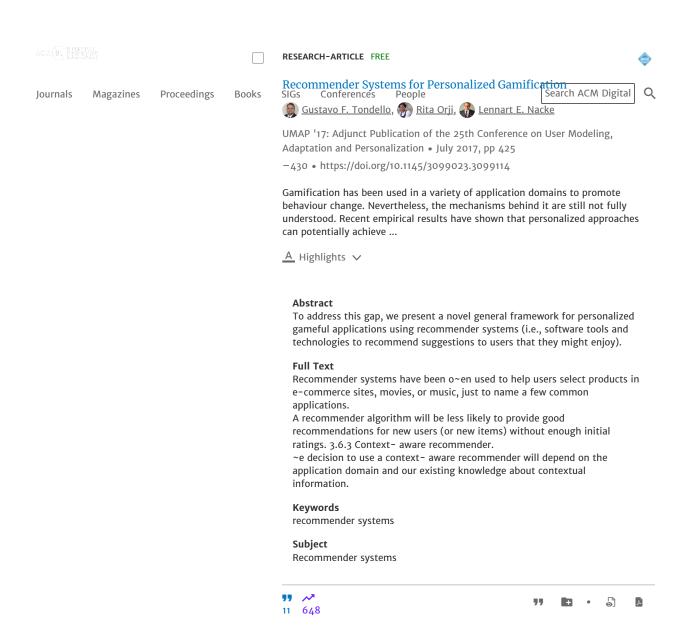
This paper proposes a novel context- aware recommendation model, convolutional matrix factorization (ConvMF) that integrates convolutional neural network (CNN) into probabilistic matrix factorization (PMF). To address the aforementioned issue, we utilize convolutional neural network (CNN), which is the state-of-the-art machine learning methodology that shows high performance for various domains such as computer vision [13], natural language processing (NLP) [2, 10, 11], and information retrieval [4, 21].

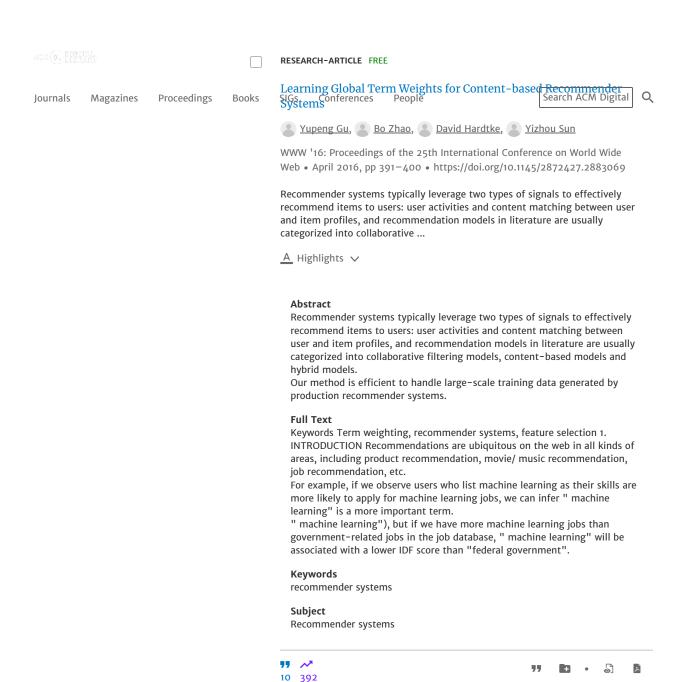
ACKNOWLEDGMENTS This research was supported by Next-Generation Information Computing Development Program through the National Research Foundation of Korea(NRF) funded by the Ministry of Education, Science and Technology (No. 2012M3C4A7033344) and the ICT R&D program of MSIP/IITP [B0101-15-0307, Basic Software Research in Human-level Lifelong Machine Learning ( Machine Learning Center)] and the Industrial Core Technology Development Program (10049079, Development of Mining core technology exploiting personal big data) funded by the Ministry of Trade, Industry and Energy (MOTIE, Korea)

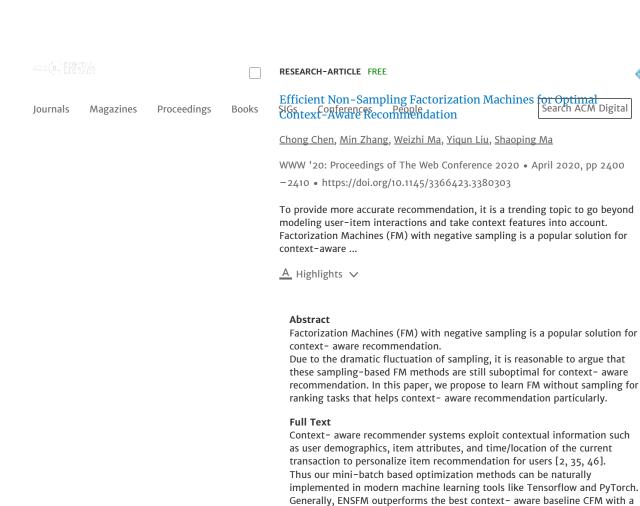
## Subject

RecSys: ACM Conference On Recommender Systems RecSys: Recommender Systems Machine learning





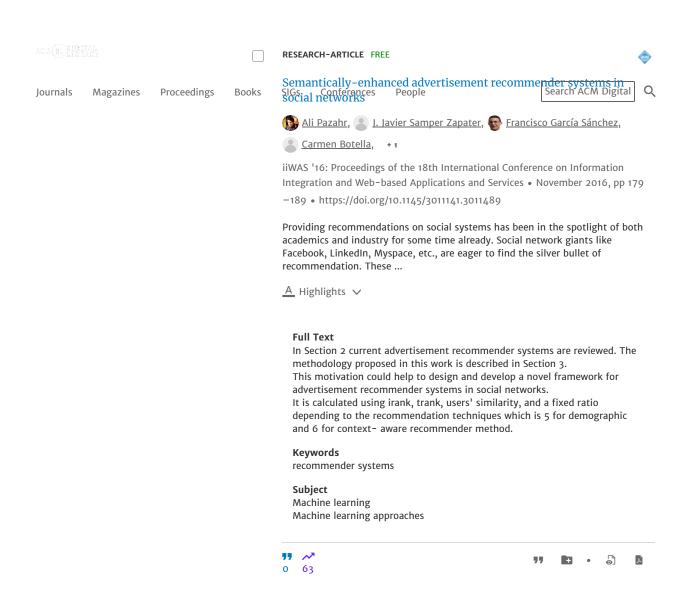




context-aware



wide range of co on the three datasets (e.g., co between 0.1 to 1 on Movielens). 5 RELATED WORK 5.1 Context- aware Recommendation Context- aware recommendation aims to leverage rich context information such as user demographics, item attributes, and time/location of the current



#### Abstract

A Highlights V

News recommender systems are aimed to personalize users experiences and help them discover relevant articles from a large and dynamic search space. Therefore, it became a mainstream approach in Recommender Systems research only since 2016. The main objective of this research is the investigation, design, implementation and evaluation of a Meta-Architecture for personalized news recommendations using deep neural networks.

#### **Full Text**

Recommender systems have been researched and applied in online services from different domains, like music [10] [60] [64] (e.g., Spotify, Pandora, Last.fm), videos (e.g.

Online news recommendations have also been addressed by researchers in the last years, either using Content-Based Filtering [36] [11] [49] [30] [45], Collaborative Filtering [13] [15], and Hybrid approaches [12] [39] [36] [48] [38] [37] [59] [18]. 1.2 Deep Learning on Recommender Systems Deep Learning (DL) [27] [28] [8] [7] is a hot area in machine learning communities. The uptake of deep learning by RS community was relatively slow, as the topic became popular only in 2016, with the first Deep Learning for Recommender Systems workshop at the ACM RecSys 2016 [25].

## Keywords

recommender systems

## Subject

RecSys: ACM Conference On Recommender Systems

RecSys: Recommender Systems

Machine learning





This paper aims to bridge these two debates working through the case of music recommender systems. Whilst not conventionally regarded as 'big data,' the enormous volume, variety and velocity of digital music available on the Web has seen the growth of recommender systems, which are increasingly embedded in our everyday music consumption through their attempts to help us identify the music we might want to consume. Combining Bourdieu's concept of cultural intermediaries with Actor-Network Theory's insistence on the relational ontology of human and non-human actors, we draw on empirical evidence from the computational and social science literature on recommender systems to argue that music recommender systems should be approached as a new form of sociotechnical cultural intermediary.

## **Full Text**

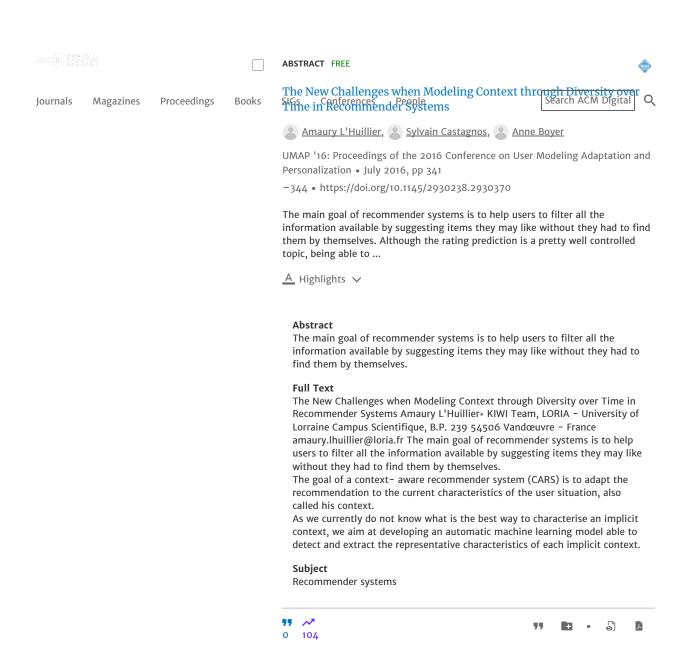
For example by tracing the associations formed and the contributions made by different human and non-human actors, such as the decisions made by designers and engineers, the statistical models and the machine learning classification approaches, and the information filtering algorithms used, we can explain how the cultural intermediation performed by music recommender systems is more 'organisational' and in what specific ways. Alternatively, we could examine how music recommender systems are shaping the role of music in everyday life [13].

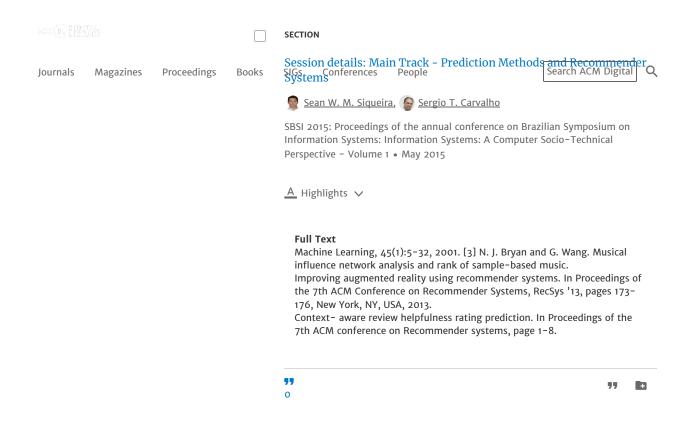
This is of particular relevance given digital music services' innovation in the use of context- aware recommendation and the curation of content around specific moods and activities, such as exercising, studying and entertaining.

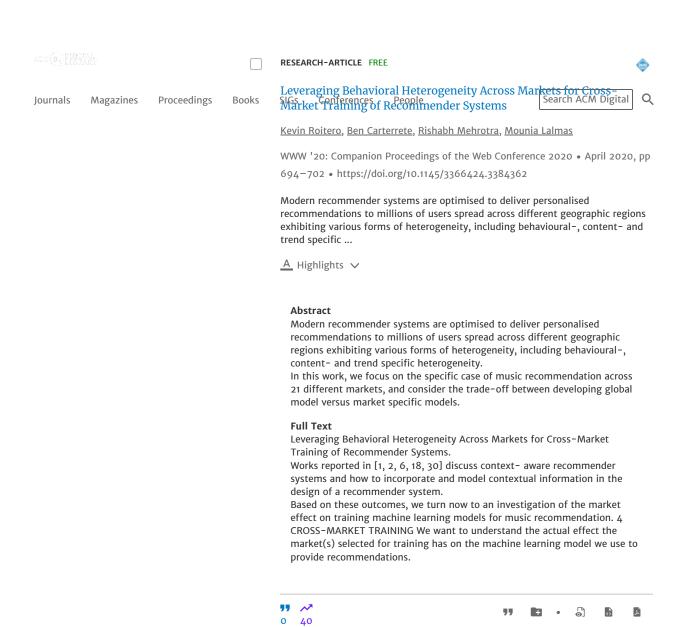
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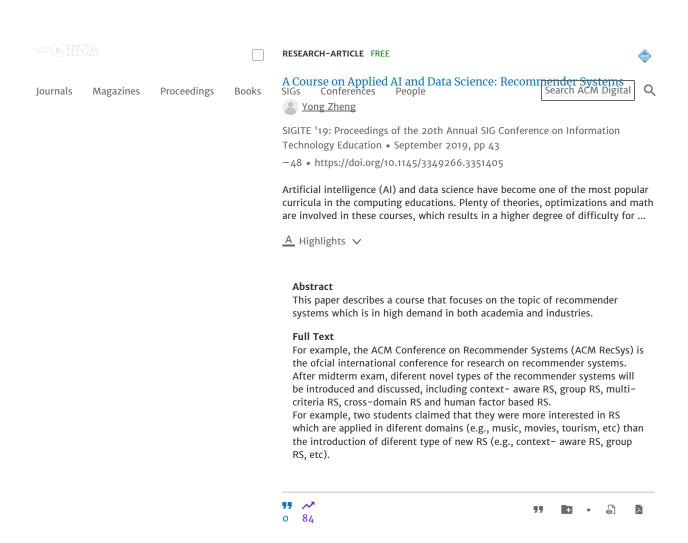
recommender systems

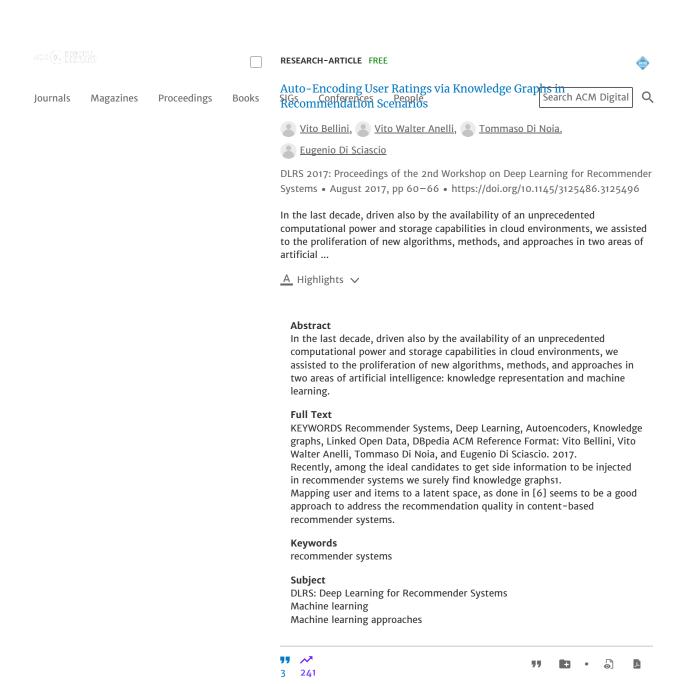


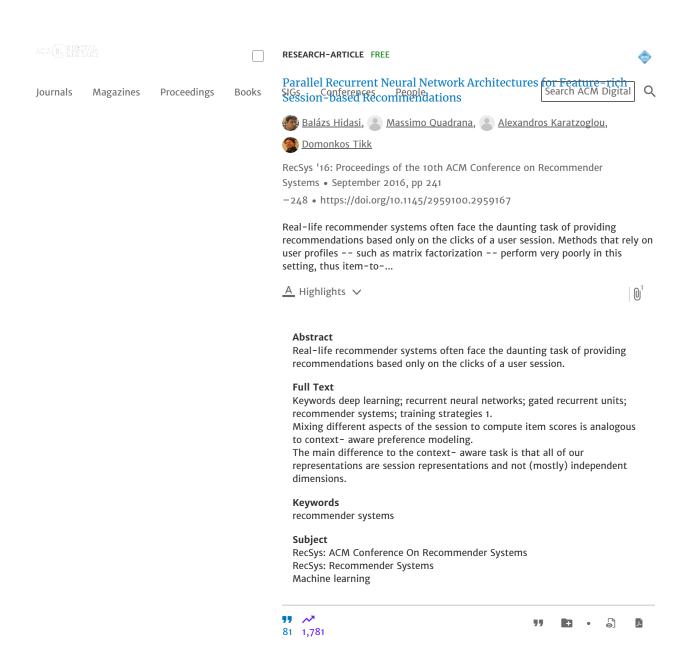


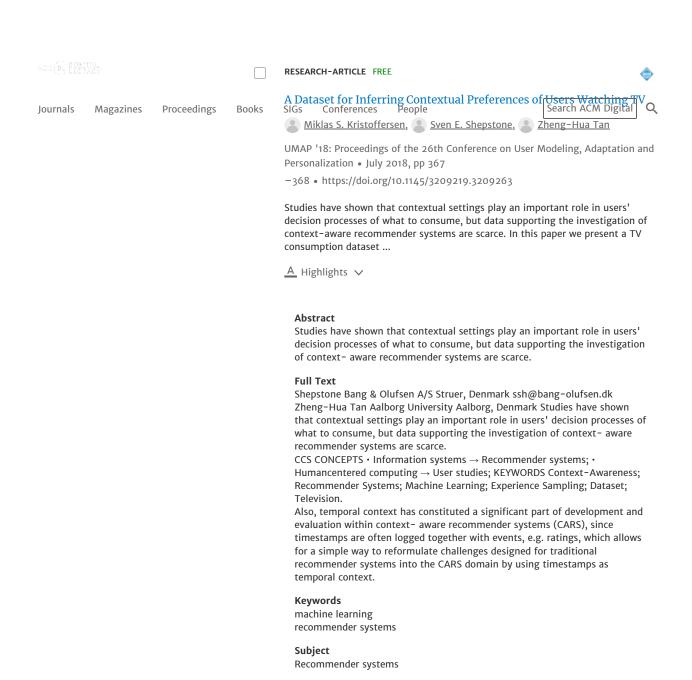




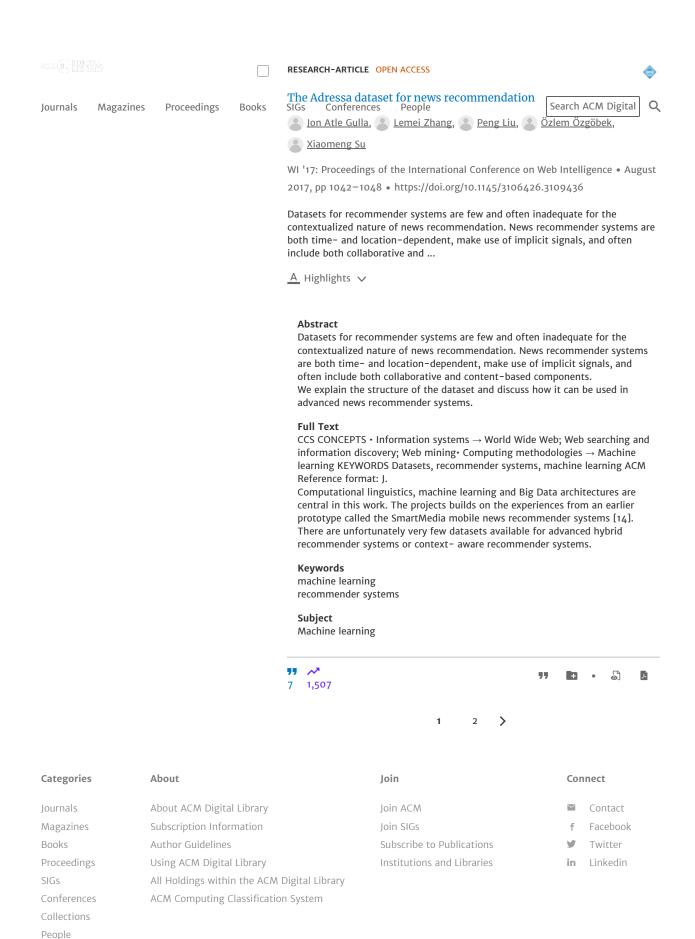








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[[All: 'recsys'] OR [All: 'recommender systems']] AND [All: 'machine learning'] A... Page 22 of 22



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