Goa University

Goa Business School

Report on

15th Forum for Information Retrieval Evaluation 2023 -

(15th to 18th December 2023)

1. Title of the Event/Activity/program	15th Forum for Information Retrieval Evaluation 2023 - (FIRE-2023)
2. Date and Time	15th to 18th December 2023
3. Mode of conduct	Physical
4. School	Goa Business School, Goa University
5. Collaborating Agency/School/Directorate	Dhirubhai Ambani Institute of Information and Communication Technology (DA-IICT), Gandhinagar, Gujarat (https://www.daiict.ac.in/) and
6. Detail of the Resource Person	**Keynote addresses:** • How (un)important is complex NLP in transformers for text ranking? by Jaap Kamps • Evaluation Challenges and Current Limit in IR and NLP: Experiences at the CLEF SimpleText and JOKER Tracks by Liana Ermakova • Broken Telephone by Evangelos Kanaulas • Disinformation and relevance in search: Open Issues and Challenges by Gabreilla Pasi • Quantum Computing for Information Access: Is It That Scary? by Nicola Ferro • Experimentation and Reproducibility in Information Retrieval: Then and Now by Iadh Ounis **Organising Committee** • *Overall Co-ordinator* Prasenjit Majumder, DA-IICT, Gandhinagar, India & TCG-CREST, Kolkata, India • *Organizing Co-ordinator* Jyoti D Pawar, Goa University, India • *Local Organization Co-ordinator* Ramrao S. Wagh, Goa University, India

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	• *Overall Track Co-ordinators* Kripabandhu Ghosh, IISER Kolkata, India Thomas Mandl, Universitat Hildesheim, Germany • *Conference Track Co-ordinator* Debasis Ganguly, University of Glasgow, UK • *Doctoral Consortium Co-ordinator* Srijoni Majumdar, University of Leeds, UK • *Industry Day Co-ordinator* Bhaskar Mitra, Microsoft Research, Canada • *Tutorial Co-ordinator* Parth Gupta, Amazon • *Sponsorship Co-ordinator* Pabitra Mitra, IIT Kharagpur, Indi
7. Number of Faculty attended/participated	10+ Faculty members
8. Number of Student attended / participated	150+ Students and Research Scholars 05+ Volunteers
9. No. of external students/faculty/other participants	5+ personnels from Industry
10. The objectives of the Program/activity/event	1. This conference was conducted with an aim of building a South Asian counterpart for TREC, CLEF, and NTCIR, and has since evolved continuously to support and encourage research within the information retrieval community. 2. To meet the new challenges in multilingual information access and frameworks for large-scale evaluation of information retrieval methods, primarily text
11. Description of the Program/activity/event	The Forum for Information Retrieval and Evaluation (FIRE) 2023 was held in Goa University, Goa, India from 15th to 18th December 2023. This was the 15th edition of FIRE. The peer-reviewed conference track at the Forum has now continued for the ninth time this year. This year this forum has broadened the scope of the peer reviewed conference track beyond that of information retrieval to include more general topics on text processing, knowledge management and recommender systems. The conference track in FIRE exhibited a fair overlap with the ACM SIGIR conference (and other IR conferences) only, this year we expected to extend this overlap with the research topics of other conferences such as ACL, AAAI etc. Moreover, this year FIRE 2023 accommodated the provision of submitting papers with a variable content length, ranging from 2 to 9 pages (without the bibliography), extended abstracts, and resource & demo paper. The rationale behind this decision was to make it convenient for the authors to possibly recycle content from other conferences without spending significant efforts in compressing or extending the content to fit a given page limit. This year FIRE has started the doctoral consortium to enable an interaction between PhD students and senior researchers which provides a fillip to the research of the PhD students. Further FIRE has started the Industry track which acted as a bridge between academia and industry and provided an exposure to the participants on the research problems of the

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	industry. Finally, FIRE has also started the Tutorial track to provide the participants with access to understanding cutting edge concepts in the field of IR and NLP A special workshop on "Portuguese presence in Goa in digital perspective" by SofiaRibeiro and Paulo Quaresma, Évora University, Portugal is organized on 16/12/2023 from 2 pm to 4 pm at Chemistry Auditorium, SCS, Block E, Goa University with following aims. Historical research on the Portuguese presence in India and in Goa, as the capital state of the Portuguese Estado da Índia has been renewed in recent years. Issues concerning its administration, hybrid religious and social dynamics, and economic specificities have been approached in an increasingly decolonized perspective, considering processes of violence and negotiation or the mandatory political, economic, and social relationships between the colonizers and the people, States and institutions that already existed before the arrival of Vasco da Gama to Calicut in 1498. This new historical perspective which seeks to escape the traditional eurocentrism has enabled to comprehend the uniqueness of Goa society in India In the present, fostered within a multi-secular network of relational ties between different visions of the world, between Portugal and India. This year the conference track had 23 submissions – 16 regular papers, 4 resource & demo papers, 3 extended abstracts. Based on the reviews, we have accepted 7 regular papers, 3 resource & demo papers and 1 extended abstract to be presented during the conference track, which makes the overall acceptance rate around 48%. The doctoral consortium had 9 submissions, industry day track had 3 submissions and tutorial track had 4 submissions. In all these tracks all the submissions were accepted and thus had an overall acceptance rate of 100%. The prime sponsors for FIRE2023 were ACM SIGIR, Department of Higher Education - Govt. Of Goa and AI4ICPS – IIT Kharagpur while ACM ICPS has published the proceedings.
12. Benefit/Key outcomes of the Program/activity/event	• This conference had participants from across the globe having research interests in the fields of NLP, AI, ML, IR, IE, etc. • This international conference helped students, researchers, faculty, and language and linguistic professionals (especially locals and Konkani language enthusiasts in Goa) to gain knowledge and insights into the research areas and latest trends in the areas of AI, ML, IR, IE, and NLP • This conference benefitted students and faculty members of Goa University and other affiliated colleges as well.
13. Enclosures with report	Website Screenshot; Photos, Attendance sheets, Link to proceedings of FIRE 2023 (https://dl.acm.org/doi/proceedings/10.1145/3632754)

Name with Signature of coordinator(s):

Ramrao Wagh

Designation: Associate Professor, CST, GBS

Signature :

Dean

Seal of the School

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Schedule

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All time written are in IST

Day 1 : Friday 15 December

Venue-Theatre Style Lecture Hall 3, Goa Business School, Goa University

8:30 - 9:00	Registration
9:00 - 9:15	Opening Remarks
9:15 - 10:00	**Keynote address:** • How (un)important is complex NLP in transformers for text ranking? - Jaap Kamps
10:00-11:45	**Track overview** (~15 minutes each) **Session Chair: Kripabandhu Ghosh** • Artificial Intelligence on Social Media (AISoMe) - Kripabandhu Ghosh • Cross-Lingual Information Retrieval for African Languages (CIRAL) - Mofetoluwa Adeyemi Tea Break • Uncovering Truth in Social Media through Claim Detection and Identification of Claim Spans (CLAIMSCAN) - Megha Sundriyal • Hate Speech and Offensive Content Identification in English and Indo-Aryan Languages (HASOC) - TBD • Information Retrieval in Software Engineering (IRSE) - Srijoni Majumdar
11:45-12:30	**Keynote address:** • Evaluation Challenges and Current Limits in IR and NLP: Experiences at the CLEF SimpleText and JOKER Tracks: Liana Ermakova
12:30-13:15	**Lunch Break & Doctoral Consortium Poster Presentations**

13:15-14:30 **Track overview** (~15 minutes each)
Session Chair: Kripabandhu Ghosh

- Scarcasm Identification of Dravidian Languages (Malayalam and Tamil) in DravidianCodeMix 202 (DravidianCodeMix) - Kishore Kumar Ponnusamy
- Word-level Language Identification in Code-mixed Tulu Texts (CoLI-Tunglish) - Asha Hegde
- Indian Language Summarization (ILSUM) - Parth Mehta
- Machine Translation for Indian Languages (MTIL) - Surupendu Gangopadhyay

14:30-15:00 **Conference Track : Resource and Demo Paper** (~10 minutes each)
Session Chair: Debasis Ganguly

- Financial Argument Analysis in Bengali - Rima Roy / Sohom Ghosh
- L3Cube-MahaSocialNER: A Social Media based Marathi Named Entity Recognition Dataset and BERT models - TBD
- Helping Hands - An AI based Real Time System for Effective Flood Relief Operations in Indian Cities - TBD

15:00-15:15 **Tea Break**

15:15-16:30 **Conference Track : Regular Paper** (~15 minutes each)
Session Chair: Debasis Ganguly

- The Mask One At a Time Framework for Detecting the Relationship between Financial Entities - Sachin Umrao / Sohom Ghosh
- Harnessing the Power of Prompt-based Techniques for Generating School-Level Questions using Large Language Models - Subhankar Maity
- CricGPT: A GPT-aided Question-Answering system for Cricket - Kripabandhu Ghosh
- Keyword Driven Language-Independent Low-Resource Graph-Based Automatic Text Summarization of Konkani Texts - Chaitali More
- Are we describing the same sound? An analysis of word embedding spaces of expressive piano performance - Silvan David Peter

17:00-18:00 **Steering Committee Meeting**

19:00 **Banquet**

Day 2 : Saturday 16 December

Venue-Theatre Style Lecture Hall 3, Goa Business School, Goa University

9:00-9:45 **Keynote address:**

- Broken Telephone: Evangelos Kanoulas

9:45-10:45 **Information Retrieval in Software Engineering (IRSE) Presentation** (~5 minutes each)

- Software Metadata Classification based on Generative Artificial Intelligence- Seetharam Killivalavan
- Source Code Comment Classification using Naive Bayes and Support Vector Machine- Raj Shah
- A ML-LLM pairing for better code comment classification- Hanna Abi Akl (Online)
- Binary Classification of Source Code Comments using Machine Learning Models- Lisa Sarkar
- Source Code Comment Classification using machine learning algorithms- Trisha Datta
- A study of the impact of generative AI-based data augmentation on software metadata classification - Tripti Kumari
- Leveraging Language Models for Code Comment Classification- Jagrat T Patel
- On the Impact of Synthetic Data on Code Comment Usefulness Prediction - Vishesh Agarwal
- Software Metadata Classification based on Generative Artificial Intelligence- Seetharam Killivalavan

Tea Break

11:00-11:45

Cross-Lingual Information Retrieval for African Languages (CIRAL) Presentation (~5 minutes each)
Session Chair: TBD

- Extending Translate-Train for ColBERT-X to African Language CLIR-Eugene Yang

Uncovering Truth in Social Media through Claim Detection and Identification of Claim Spans (CLAIMSCAN) (~5 minutes each)
Session Chair: Megha Sundriyal

11:45-12:30

Keynote address:

- Disinformation and relevance in search: Open Issues and Challenges: Gabriella Pasi

12:30-13:15

Lunch Break & Doctoral Consortium Poster Presentations

13:15-14:00

Word-level Language Identification in Code-mixed Tulu Texts (CoLI-Tunglish) Presentation (~5 minutes each)
Session Chair: H. L. Shashirekha

- Word-Level Language Identification of Code-Mixed Tulu-English Data - Poorvi Shetty (Online)
- Word-level Language Identification in Code-mixed Tulu Texts(CoLI-Tunglish) - Asha Hegde
- Advancing Language Identification in Code-Mixed Tulu Texts:Harnessing Deep Learning Techniques -Anshika Mishra
- BFCAI at CoLI-Tunglish@FIRE 2023: Machine Learning Based Model for Word-level Language Identification in Code-mixed Tulu Texts - Hamada Nayel (Online)

14:00-14:45

Scarcasm Identification of Dravidian Languages (Malayalam and Tamil) in DravidianCodeMix 2023 (DravidianCodeMix) Presentation (~5 minutes each)
Session Chair: B Bharathi

- Sarcasm Identification in Dravidian Languages Tamil and Malayalam-Poorvi Shetty (Online)
- Cross-Linguistic Sarcasm Detection in Tamil and Malayalam: A Multilingual Approach-Dhanya Krishnan (Online)
- Identifying the type of sarcasm in Dravidian Languages using Deep-Learning Models-Ramya Sivakumar (Online)
- Learning Models with Text Augmentation for Sarcasm Detection in Malayalam and Tamil Code-mixed Texts-Asha Hegde
- A Few Shot Learning to Detect Sarcasm in Tamil and Malayalam Code Mixed Data-Shanmitha Thirumoorthy(Online)
- Sarcasm Detection in Dravidian Languages using Transformer Models-Madhumitha M(Online)
- Sarcasm Identification In Codemix Dravidian Languages-Kanisha V (Online)
- Sarcasm Identification of Dravidian Languages (Malayalam and Tamil) - Indirakanth V (Online)
- Sarcasm Detection in Tamil and Malayalam Dravidian Code-Mixed Tex- Anshika Mishra

Workshop:
Portuguese presence in Goa in digital perspective (Parallel Session)

- Project Monsoon: how to use digital techniques to understand the Portuguese presence in Asia Ana Sofia Ribeiro (CIDEHUS – Évora University)
- Digital Humanities in the understanding of Goan Vernacular Architecture Victor Mestre and Sofia Aleixo (Escola de Artes – Évora University)

14:45-15:00

Tea Break

15:00-15:45 **Industry Day Keynote address:**
Session Chair: Parth Mehta

- Saving Languages with AI: The Challenge of Fair and Inclusive Large Language Models - Kalika Bali

Coffee break

15:20

Roundtable – using digital techniques to remember Goa history

- Delfim Correia (Instituto Camões, Goa University)
- Goa Historical Archive
- Paulo Quaresma (Évora University)

15:45-16:15 **Industry Track Paper (~15 min each)**
Session Chair: Parth Mehta

- Future of Workplace Conversational AI-driven Personal Assistants: Promises and Perils - Koustuv Saha
- On Gradient Boosted Decision Trees and Neural Rankers: A Case-Study on Short-Video Recommendations at ShareChat - Olivier Jeunen

Day 3 : Sunday 17 December

Venue-Theatre Style Lecture Hall 3, Goa Business School, Goa University

9:00-9:45 **Keynote address:**

- Quantum Computing for Information Access: Is It That Scary?: Nicola Ferro

9:45-10:45 **Hate Speech and Offensive Content Identification in English and Indo-Aryan Languages (HASOC) Presentation (~5 minutes each)**
Session Chair: Sandip Modha

- Hate and Offensive Content Identification in Indo-Aryan Languages using Transformer-based Models- Ojo Olumide Ebenezer (Online)
- Multilingual Hate Speech and Offensive Language Detection of Low Resource Languages -Abhinav Reddy Gutha
- Harnessing Pre-Trained Sentence Transformers for Offensive Language Detection in Indian Languages-Ananya Joshi (Online)
- Hate Speech Classification for Sinhalese and Gujarati-Madhuri Sawant
- Addressing Hate Speech: ATLANTIS for Efficient Hate Span Detection-Yashraj Poddar
- Crossing Borders: Multilingual Hate Speech Detection-Abhishek Dhaka
- Hate Speech Detection in Low Resource Indo-Aryan Languages-Sougata Saha
- Hate Speech and Offensive Content Detection in Indo-Aryan Languages: A Battle of LSTM and Transformers.-Nikhil Narayan
- Sinhala and Gujarati Hate Speech Detection-Krithik Sathya M
- Enhancing Hate Speech Detection in Sinhala and Gujarati: Leveraging BERT Models and Linguistic Constraints-GNANA SAI G (Online)
- Bengali Hate Speech Detection Using Deep Learning Technique-Chandan Senapati (Online)
- Taming Toxicity: Learning Models for Hate Speech and Offensive Language Detection in Social Media Text-Sharal Coelho

10:45-11:00 **Tea Break**

11:00-11:45 **Indian Language Summarization (ILSUM) Presentation (~5 minutes each)**
Session Chair: Sandip Modha

- Prompted Zero-Shot Multi-label Classification of Factual Incorrectness in Machine-Generated Summaries- Aniket Deroy
- Named Entity-Aware Abstractive Text Summarization for Hindi Language-Saumay Gupta
- Advancing Human-Like Summarization: Approaches to Text Summarization-Saliq Gowhar(Online)
- Text Summarization for Indian Languages: Finetuned Transformer Model Application-Ilanchezhiyan V (Online)

Machine Translation for Indian Languages (MTIL) Presentation (~5 minutes each)

- Hindi-Odia Machine Translation System-Rakesh Chandra Balabantaray
- Bidirectional Hindi-Punjabi Machine Translation-Karunesh Kumar Arora
- Fine tuning based Domain Adaptation for Machine Translation of Low Resource Indic Languages- Harpreet Singh Anand (Online)

11:45-12:30 **Keynote address:**

- Experimentation and Reproducibility in Information Retrieval: Then and Now: Iadh Ounis

12:30-13:15 **Lunch Break**

13:15-14:15 **Artificial Intelligence on Social Media (AISoMe) Presentation (~5 minutes each)**
Session Chair: Kripabandhu Ghosh

- BERT-Powered Multi-label Classifier: Analyzing Public COVID Vaccination Discourse - Ranjit Patro
- Analyzing crowd-sourced vaccine data : Uncovering Concerns and Insights- Lakshmi S Gopal
- Multi-Label Classification of COVID-Tweets Using Large Language Models- Aniket Deroy
- Multi-label Classification of Covid-19 Vaccine Tweet- Sumit as
- VaxTweetClassifier: BERT for Dealing with Vaccination Tweets-Shankha Shubhra Das (Online)
- VaxVedict : A roBERTa based multilabel classifier-Aditya Onkar Patil(Online)
- VaxiBERT: A BERT-Based Classifier for Vaccine Tweets with Multi-Label Annotations - Shivangi Bithel (Online)
- Tweet Classifier: Advancements in Multi-Label Analysis - Swastik Anupam (Online)

14:15-15:00 **Conference Track : Regular Paper (~15 minutes each)**
Session Chair: Debasis Ganguly

- A Comparative Analysis of Retrievability and PageRank Measures - TBDs
- Expressivity-aware Music Performance Retrieval using Mid-level Perceptual Features and Emotion Word Embeddings - Silvan David Peter

Conference Track : Extended Abstract (~10 minutes each)

- Fact-based Court Judgment Prediction - Shubham Kumar Nigam

15:00-15:15 **Tea Break**

15:00-16:00 **Industry Day Keynote address**

- Search, Recommenders and Co-pilots: Evolution of Evaluation Strategies in the Industry - Rishabh Mehrotra

16:00-16:15 **Industry Track Paper (~15 min each)**

- Recommendation Systems in the Era of LLMs - Ipsita Mohanty

Day 4 : Monday 18 December (Tutorial Day)

	Track 1	Track 2	Workshop:
9:30-11:00	**Tutorial 1:** Unleashing the Power of Large Language Models: A Hands-On Tutorial - TBD	**Tutorial 2:** Explainability of Text Processing and Retrieval Methods - TBD	A hands-on workshop by NVIDIA (Live online)
11:15-12:45	**Tutorial 3:** Recent Advancements in Unbiased Learning to Rank - Shashank Gupta, Philipp Hager, and Harrie Oosterhuis	**Tutorial 4:** AI and Data-driven Approaches for Agriculture - TBD	

- **Sponsors**

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- **Publications**

To be announced soon.

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INFORMATION RETRIEVAL SOCIETY OF INDIA IRSI

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14,869 Visitors

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FIRE 2023

Proceedings of the 15th annual meeting of the
Forum for Information Retrieval Evaluation

Goa University, Panjim, India, December 15-18, 2023

Edited By: Debasis Ganguly
Srijoni Majumdar
Bhaskar Mitra
Parth Gupta
Surupendu Gangopadhyay
Prasenjit Majumder

Invited Papers, Regular Papers, Resource & Demo Papers, Extended Abstracts, Doctoral Consortium, Industry Day and Tutorial Proposals

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Contents

FIRE 2023 Organization

Invited Papers

Overview of the FIRE 2023 Track: Artificial Intelligence on Social Media (AISoMe) 1-3
Soham Poddar, Moumita Basu, Kripabandhu Ghosh, Saptarshi Ghosh

CIRAL at FIRE 2023: Cross-Lingual Information Retrieval for African Languages 4-6
Mofetoluwa Adeyemi, Akintunde Oladipo, Xinyu Zhang, David Alfonso-Hermelo, Mehdi Rezagholizadeh, Boxing Chen, Jimmy Lin

Overview of the CLAIMSCAN-2023: Uncovering Truth in Social Media through Claim Detection and Identification of Claim Spans 7-9
Megha Sundriyal, Md Shad Akhtar, Tanmoy Chakraborty

Overview of the HASOC Subtracks at FIRE 2023: Detection of Hate Spans and Conversational Hate Speech 10-12
Shrey Satapara, Sarah Masud, Hiren Madhu, Mohammad Aflah Khan, Md. Shad Akhtar, Tanmoy Chakraborty, Sandip Modha, Thomas Mandl

Overview of the HASOC Subtracks at FIRE 2023: Hate Speech and Offensive Content Identification in Assamese, Bengali, Bodo, Gujarati and Sinhala 13-15
Tharindu Ranasinghe, Koyel Ghosh, Aditya Shankar Pal, Apurbalal Senapati, Alphaeus Eric Dmonte, Marcos Zampieri, Sandip Modha, Shrey Satapara

Efficiency of Large Language Models to Scale up Ground Truth: Overview of the IRSE Track at Forum for Information Retrieval 2023 16-18
Soumen Paul, Srijoni Majumdar, Ayan Bandyopadhyay, Bhargav Dave, Samiran Chattopadhyay, Partha Pratim Das, Paul D Clough, Prasenjit Majumder

Overview of MTIL Track at FIRE 2023: Machine Translation for Indian Languages 19-21
Surupendu Gangopadhyay, Prasenjit Majumder, Baban Gain, Ramakrishna Appicharla, Asif Ekbal, Arafat Ahsan, Dipti Sharma

Findings of Shared Task on Sarcasm Identification in Code-Mixed Dravidian Languages 22-24
Sripriya N, Thenmozhi Durairaj, Nandhini K, Bharathi B, Kishore Kumar Ponnusamy, Charmathi Rajkumar, Prasanna Kumar Kumaresan, Rahul Ponnusamy, Subalalitha CN, Bharathi Raja Chakravarthi

CoLI@FIRE2023: Findings of Word-level Language Identification in Code-mixed Tulu Text 25-26
Asha Hegde, F. Balouchzahi, Sharal Coelho, H.L. Shashirekha, Hamada A. Nayel, Sabur Butt

Indian Language Summarization at FIRE 2023 27-29
Shrey Satapara, Parth Mehta, Sandip Modha, Debasis Ganguly

Regular Papers

Harnessing the Power of Prompt-based Techniques for Generating School-Level Questions using Large Language Models 30-39
Subhankar Maity, Aniket Deroy, Sudeshna Sarkar

The Mask One At a Time Framework for Detecting the Relationship between Financial Entities 40-43
Sohom Ghosh, Sachin Umrao, Chung-Chi Chen, Sudip Kumar Naskar

CricGPT: A GPT-aided Question-Answering System for Cricket 44-50
Shriyank Tatawat, Kripabandhu Ghosh

Keyword Driven Language-Independent Low-Resource Graph-Based Automatic Text Summarization of Konkani Texts 51-57
Chaitali, More, Jovi, D'Silva

Are We Describing the Same Sound? An Analysis of Word Embedding Spaces of Expressive Piano Performance 58-66
Silvan David Peter, Shreyan Chowdhury, Carlos Eduardo Cancino-Chacón, Gerhard Widmer

A Comparative Analysis of Retrievability and PageRank Measures 67-72
Aman Sinha, Priyanshu Raj Mall, Dwaipayan Roy, Kripabandhu Ghosh

Expressivity-aware Music Performance Retrieval using Mid-level Perceptual Features and Emotion Word Embeddings 73-77
Shreyan Chowdhury, Gerhard Widmer

Extended Abstracts

Fact-based Court Judgment Prediction 78-82
Shubham Kumar Nigam, Aniket Deroy

Resource and Demo Papers

Helping Hands – An AI based Real Time System for Effective Flood Relief Operations in Indian Cities 83-87
Abhay Banerjee, Faizan Ahmed, Sourav Manna, Mayur Mallav Saikia, Moumita Basu, Saptarshi Ghosh

Financial Argument Analysis in Bengali 88-92
Rima Roy, Sohom Ghosh, Sudip Kumar Naskar

L3Cube-MahaSocialNER: A Social Media based Marathi NER Dataset and BERT Models 93-100
Harsh Chaudhari, Anuja Patil, Dhanashree Lavekar, Pranav Khairnar, Raviraj Joshi

Doctoral Consortium

Relative Relation Representation Aware Link Prediction in Heterogeneous Information Network 101-104
Debasis Maji, Krishanu Mondal, Debaditya Barman

A Study on the Effect of 2-Approximate Shortest-Path Integration in Extracting Context-Sensitive Dense Structures 105-108
Ajaharul Hoque, Debaditya Barman, Paramartha Dutta, Subhrangsu Mandal

Towards Semantic Role Labeling of Legal Documents for Improving NLP/IR Tasks in the Law Domain 109-111
Subinay Adhikary

Drug Uniformity and Content Detection for Pharmaceutical Formulations: The Deep Learning Approach 112-114
Abhishek Patel, Amit Thakkar

Student Behavior Detection in the Classroom Based on Human-Object Interaction Model 115-117
Dharmendrasinh Rathod, Amit Thakkar

Towards Development of an Effective AI-based System for Relevant Comment Generation 118-120
Tripti Kumari, Ayan Das

Abstractive Summarization of Scientific Documents: Models and Evaluation Techniques 121-124
Tohida Rehman, Samiran Chattopadhyay, Debarshi Kumar Sanyal

A Keyphrase-Centric Search Engine for Scientific Papers 125-128
Avishek Lahiri, Debarshi Kumar Sanyal, Imon Mukherjee

A Personal Knowledge Graph for Researchers 129-132
Prantika Chakraborty, Debarshi Kumar Sanyal

Industry Day

Future of Workplace Conversational AI-driven Personal Assistants: Promises and Perils 133-135
Koustuv Saha, Eshwar Chandrasekharan

On Gradient Boosted Decision Trees and Neural Rankers: A Case-Study on Short-Video Recommendations at ShareChat 136-141
Olivier Jeunen, Hitesh Sagtani, Himanshu Doi, Rasul Karimov, Neeti Pokharna, Danish Kalim, Aleksei Ustimenko, Christopher Green, Wenzhe Shi, Rishabh Mehrotra

Recommendation Systems in the Era of LLMs 142-144
Ipsita Mohanty

Tutorial Proposals

Recent Advancements in Unbiased Learning to Rank 145-148
Shashank Gupta, Philipp Hager, Harrie Oosterhuis

Unleashing the Power of Large Language Models: A Hands-On Tutorial 149-152
Payel Santra, Madhusudan Ghosh, Shrimon Mukherjee,
Debasis Ganguly, Partha Basuchowdhuri, Sudip Kumar Naskar

Explainability of Text Processing and Retrieval Methods 153-157
Avishek Anand, Sourav Saha, Procheta Sen, Mandar Mitra

AI and Data-driven Approaches for Agriculture 158-159
Manjira Sinha, Tirthankar Dasgupta, Adway Mitra

Preface

The Forum for Information Retrieval and Evaluation (FIRE) 2023 was held in Goa University, Goa, India. This was the 15th edition of FIRE. The peer-reviewed conference track at the Forum has now continued for the ninth time this year. This year we made an attempt to broaden the scope of the peer reviewed conference track beyond that of information retrieval to include more general topics on text processing, knowledge management and recommender systems. The conference track in FIRE exhibited a fair overlap with the ACM SIGIR conference (and other IR conferences) only, this year we expected to extend this overlap with the research topics of other conferences such as ACL, AAAI etc.

Moreover, this year we accommodated the provision of submitting papers with a variable content length, ranging from 2 to 9 pages (without the bibliography), extended abstracts, and resource & demo paper. The rationale behind this decision was to make it convenient for the authors to possibly recycle content from other conferences without spending significant efforts in compressing or extending the content to fit a given page limit. This year FIRE has started the doctoral consortium to enable an interaction between PhD students and senior researchers which provides a fillip to the research of the PhD students. Further FIRE has started the Industry track which acted as a bridge between academia and industry and provided an exposure to the participants on the research problems of the industry. Finally, FIRE has also started the Tutorial track to provide the participants with access to understanding cutting edge concepts in the field of IR and NLP

This year the conference track had 23 submissions – 16 regular papers, 4 resource & demo papers, 3 extended abstracts. Based on the reviews, we have accepted 7 regular papers, 3 resource & demo papers and 1 extended abstract to be presented during the conference track, which makes the overall acceptance rate around 48%. The doctoral consortium had 9 submissions, industry day track had 3 submissions and tutorial track had 4 submissions. In all these tracks all the submission were accepted and thus had an overall acceptance rate of 100%.

We, as the organizers, consider ourselves to be very fortunate as many prominent and active researchers who are a part of the SIGIR program committee kindly agreed to review papers of all the tracks in FIRE 2023. We would like to take this opportunity to thank all the reviewers for submitting reviews on time despite their very busy schedule. We hope that the authors found the reviews constructive and helpful.

Finally, a big thanks to our sponsors ACM SIGIR, Department of Higher Education - Govt. Of Goa and AI4ICPS – IIT Kharagpur for sponsoring the event and ACM ICPS for publishing the proceedings. We positively hope to continue this event next year as well.

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