

ICON-2021: 18th International Conference on Natural Language Processing

December 16-19, 2021

National Institute of Technology, Silchar, India

Technical Programme Schedule of Main Conference (17-18 Dec 2021)

(All Timings are in IST)

Day 1: Friday, December 17, 2021

10:00AM-11:00AM

Inaugural Ceremony

11:30AM-12:30PM

Keynote Lecture 1: Phrases and Self-Supervision in Neural Machine Translation : Prof. Josef van Genabith

12:30PM-02:30PM

Session Chair: Sivaji Bandyopadhyay

BREAK

02:30PM-06:00PM

Technical Session I: Machine Translation Session Chair: Partha Pakray Co-Chair: Badal Soni

Technical Session II: Natural Language Text Generation Session Chair: Vasudeva Varma Co-Chair: Pinki Roy

Technical Session III: Speech/Multimodality Session Chair: Kalika Bali Co-Chair: Rabul Hussain Laskar

Constrained Decoding for Technical Term Retention in English-Hindi MT [Niyati Bafna, Martin Vastl and Ondřej Bojar (Charles University)] **Presenter: Martin Vastl**

Generating Slogans with Linguistic Features using Sequence-to-Sequence Transformer [Yeoun Yi, Hyopil Shin(Seoul National University)] **Presenter: Yeoun Yi**

An End-to-End Speech Recognition for the Nepali Language [Sunil Regmi(Kathmandu University), Dr. Bal Krishna Bal(Kathmandu University)] **Presenter: Sunil Regmi**

Named Entity-Factored Transformer for Proper Noun Translation (Kohichi Takai, Gen Hattori, Akio Yoneyama, Keiji Yasuda, Katsuhito Sudoh and Satoshi Nakamura)

Using Integrated Gradients and Constituency Parse Trees to explain Linguistic Acceptability learnt by BERT [Anmol Nayak and Hari Prasad Timmapathini (Arise labs at Bosch)] **Presenter: Hari Prasad Timmapathini**

Impact of Microphone position Measurement Error on Multi Channel Distant Speech Recognition & Intelligibility [Karan Nathwani and Sunil Kumar Koppurapu (IIT, Jammu)] **Presenter: Karan Nathwani**

Multi-Task Learning for Improving Gender Accuracy in Neural Machine Translation [Carlos Escolano (UPC), Graciela Ojeda (UPC), Christine Basta (UPC), Marta R. Costa-jussà (UPC)] **Presenter: Graciela Ojeda**

The Importance of Context in Very Low Resource Language Modeling [Lukas Edman (University of Groningen), Antonio Toral (University of Groningen), Gertjan van Noord (University of Groningen)] **Presenter: Lukas Edman**

IE-CPS Lexicon: An Automatic Speech Recognition Oriented Indian-English Pronunciation Dictionary [Shelly Jain (IIIT Hyderabad), Aditya Yadavalli (IIIT Hyderabad), Ganesh S Mirishkar (IIIT Hyderabad), Chiranjeevi Yarra (IIIT Hyderabad), Anil Kumar Vuppala (IIIT Hyderabad)] **Presenter: Shelly Jain**

Small Batch Sizes Improve Training of Low-Resource Neural MT [Álex R. Atrio and Andrei Popescu-Belis (HEIG-VD & EPFL)] **Presenter: Álex R. Atrio**

Stylistic MR-to-Text Generation Using Pre-trained Language Models [Kunal Pagarey, Kanika Kalra, Abhay Garg, Saumajit Saha, Mayur Patidar and Shirish Karande (TCS Research)] **Presenter: Kunal Pagarey**

An Investigation of Hybrid architectures for Low Resource Multilingual Speech Recognition system in Indian context [Ganesh S Mirishkar, Aditya Yadavalli and Anil Kumar Vuppala] **Presenter: Ganesh S Mirishkar**

lakṣyārtha (Indicated Meaning) of Śabdavyāpāra (Function of a Word) framework from kāvyāśāstra (The Science of Literary Studies) in Samskr̥tam : Its application to Literary Machine Translation and other NLP tasks [Sripathi Sripathi, Anupama Ryali and Raghuram Sheshadri (MIT ADT University)] **Presenter: Sripathi Sripathi**

Deep Learning Based Approach For Detecting Suicidal Ideation in Hindi-English Code-Mixed Text: Baseline and Corpus [Kaustubh Agarwal, Bhavya Dhingra (Netaji Subhas University of Technology)] **Presenter: Kaustubh Agarwal**

Improve Sinhala Speech Recognition Through e2e LF-MMI Model [Buddhi Gamage, Randil Pushpananda, Thilini Nadungodage and Ruwan Weerasinghe (University of Colombo School of Computing, Sri Lanka)] **Presenter: Buddhi Gamage**

Diformer: Directional Transformer for Neural Machine Translation [Minghan Wang, Jiaxin GUO, Yuxia Wang, Daimeng Wei, Hengchao Shang, Chang Su, Yimeng Chen, Yinglu Li, Min Zhang, shimin tao and Hao Yang (Huawei Co. Ltd)] **Presenter: Minghan Wang**

On the Universality of Deep Contextual Language Models [Shaily Bhatt (BITS Pilani), Poonam Goyal (BITS Pilani), Sandipan Dandapat (Microsoft R&D), Monojit Choudhary (MSR India), Sunayana Sitaram (MSR India)] **Presenter: Shaily Bhatt**

Towards Multimodal Vision-Language Models Generating Non-Generic Text [Wes Robbins (Montana State University), Zanyar Zohourianshahzadi (University of Colorado Colorado Springs), Jugal Kalita (University of Colorado Colorado Springs)] **Presenter: Wes Robbins**

Self-Distillation Mixup Training for Non-autoregressive Neural Machine Translation [Jiaxin GUO(Huawei Co. Ltd), Minghan Wang(Huawei Co. Ltd), Daimeng Wei(Huawei Co. Ltd), Hengchao Shang(Huawei Co. Ltd), Yuxia Wang(The University of Melbourne), Zongyao Li(Huawei Co. Ltd), Zhengzhe Yu(Huawei Co. Ltd), Zhanglin Wu(Huawei Co. Ltd), Yimeng Chen(Huawei Co. Ltd), Chang Su(Huawei Co. Ltd), Min Zhang(Huawei Co. Ltd), Lizhi Lei(Huawei Co. Ltd), shimin tao(Huawei Co. Ltd), Hao Yang(Huawei Co. Ltd)] **Presenter: Jiaxin GUO**

Towards Explainable Dialogue System: Explaining Intent Classification using Saliency Techniques [Ratnesh Kumar Joshi(Dept. of CSE, IIT Patna), Arindam Chatterjee(Wipro AI Research Lab/Dept. of CSE, IIT Patna), Asif Ekbal(Dept. of CSE, IIT Patna)] **Presenter: Ratnesh Kumar Joshi**

Encoder-Decoder Based Image Caption Generation Framework for Assamese [Ringki Das and Thoudam Doren Singh (NIT, Silchar)] **Presenter: Ringki Das**

Joint-training on Symbiosis Networks for Deep Nueral Machine Translation models [Zhengzhe Yu (Huawei Co. Ltd), Jiaxin GUO(Huawei Co. Ltd), Minghan Wang(Huawei Co. Ltd), Daimeng Wei(Huawei Co. Ltd), Hengchao Shang(Huawei Co. Ltd), Zongyao Li(Huawei Co. Ltd), Zhanglin Wu(Huawei Co. Ltd), Yuxia Wang(The University of Melbourne), Yimeng Chen(Huawei Co. Ltd), Chang Su(Huawei Co. Ltd), Min Zhang(Huawei Co. Ltd), Lizhi Lei(Huawei Co. Ltd), shimin tao(Huawei Co. Ltd), Hao Yang (Huawei Co. Ltd)] **Presenter: Jiaxin GUO**

Comparing in context: Improving cosine similarity measures with a metric tensor [Isa M. Apallius de Vos, Ghislaine Lex van den Boogerd, Mara Fennema and Adriana A. D. Correia (Utrecht University)] **Presenter: Isa M. Apallius de Vos**

An Efficient Keyframes Selection Based Framework for Video Captioning [Alok Singh, Loitongbam Sanayai Meetei, Salam Michael Singh, Thoudam Doren Singh and Sivaji Bandyopadhyay (NIT, Silchar)] **Presenter: Alok Singh**

EduMT: Developing Machine Translation System for Educational Content in Indian Languages [Ramakrishna Appicharla (IIT Patna), Asif Ekbal (IIT Patna), Pushpak Bhattacharyya (IIT Bombay)] **Presenter: Ramakrishna Appicharla**

Context Matters in Semantically Controlled Language Generation for Task-oriented Dialogue Systems [Ye Liu(Mercedes-Benz AG), Wolfgang Maier(Mercedes-Benz AG), Wolfgang Minker(Ulm University), Stefan Ultes(Mercedes-Benz AG)] **Presenter: Ye Liu**

A Scaled Encoder Decoder Network for Image Captioning in Hindi [Santosh Kumar Mishra (IIT Patna), Sripama Saha (IIT Patna) and Pushpak Bhattacharyya (IIT Bombay)] **Presenter: Santosh Kumar Mishra**

Assessing Post-editing Effort in the English-Hindi Direction [Arafat Ahsan, Vandan Mujadia and Dipti Misra Sharma (IIIT-Hyderabad)] **Presenter: Arafat Ahsan**

Data Augmentation for Mental Health Classification on Social Media [Gunjan Ansari (JSS Academy of Technical Education, Noida), Muskan Garg (Thapar Institute of Engineering & Technology, Punjab), Chandni Saxena (The Chinese University of Hong Kong, Hong Kong)] **Presenter: Muskan Garg**

Co-attention based Multimodal Factorized Bilinear Pooling for Internet Memes Analysis [Gitanjali Kumari (Indian Institute of Technology Patna, India), Amitava Das (Wipro AI Labs, Bangalore, India) Asif Ekbal(Indian Institute of Technology Patna, India)] **Presenter: Gitanjali Kumari**

An Experiment on Speech-to-Text Translation Systems for Manipuri to English on Low Resource Setting [Loitongbam Sanayai Meetei (NIT Silchar), Laishram Rahul (SIT Tumkur), Alok Singh (NIT Silchar), Salam Michael Singh (NIT Silchar), Thoudam Doren Singh (NIT Silchar) and Sivaji Bandyopadhyay (NIT Silchar)] **Presenter: Loitongbam Sanayai Meetei**

VAE based Text Style Transfer with Pivot Words Enhancement Learning [Haoran Xu (Johns Hopkins University), Sixing Lu (Amazon Alexa AI), Zhongkai Sun (Amazon Alexa AI), Chengyuan Ma (Amazon Alexa AI), Chenlei Guo (Amazon Alexa AI)] **Presenter Sixing Lu**

On the Transferability of Massively Multilingual Pretrained Models in the Pretext of the Indo-Aryan and Tibeto-Burman Languages [Salam Michael Singh, Loitongbam Sanayai Meetei, Alok Singh, Thoudam Doren Singh and Sivaji Bandyopadhyay (NIT, Silchar)] **Presenter: Salam Michael Singh**

MRE : Multi Relationship Extractor for Persona based Empathetic Conversational Model [Bharatram Natarajan and Abhijit A Nargund (Samsung R&D Institute India - Bangalore)] **Presenter: Abhijit A Nargund**

06:00PM-06:30PM

TEA BREAK

06:30PM-07:30PM

Keynote Lecture 2: Mental Health as an Application Area for Natural Language Processing: Prospects and Challenges: Prof. Philip Resnik

Session Chair: Dipti Misra Sharma

07:30PM-07:45PM

BUFFER

07:45PM-08:45PM

Keynote Lecture 3: Multimodal AI: Understanding Human Behaviors : Associate Prof. Louis-Philippe Morency

Session Chair: Sivaji Bandyopadhyay

Day 2: Saturday, December 18, 2021

Technical Session IV: Machine Learning in NLP Session Chair: Sudeshna Sarkar Co-Chair: Anupam Biswas

Technical Session V: Syntax and Semantics Session Chair: Dipti Misra Sharma Co-Chair: Samir Kumar Borgohain

Technical Session VI: NLP Applications Session Chair: Amitava Das Co-Chair: Sajor Kumar Biswas

How effective is incongruity? Implications for code-mixed sarcasm detection [Aditya Shah (Virginia Tech USA), Chandresh Maurya (IIT Indore)]

Resolving Prepositional Phrase Attachment Ambiguities with Contextualized Word Embeddings [Adwait Ratnaparkhi (University of California Santa Cruz), Atul Kumar (Roku)] **Presenter: Adwait Ratnaparkhi**

Temporal Question Generation from History Text [Harsimran Bedi, Sangameshwar Patil, Girish Palshikar (TCS Research, India)] **Presenter: Harsimran Bedi**

Contrastive Learning of Sentence Representations [Hefei Qiu, Wei Ding and Ping Chen (University of Massachusetts Boston)] **Presenter: Hefei Qiu**

Multi-Source Cross-Lingual Constituency Parsing [Hour Kaing (NICT, NAIST), Chenchen Ding (NICT), Katsuhito Sudoh (NAIST), Masao Utiyama (NICT), Eiichiro Sumita (NICT), Satoshi Nakamura (NAIST)] **Presenter: Hour Kaing**

CAWESumm: A Contextual and Anonymous Walk Embedding Based Extractive Summarization of Legal Bills [Deepali Jain(NIT Silchar), Malaya Dutta Borah (NIT Silchar), Anupam Biswas (NIT Silchar)] **Presenter: Deepali Jain**

Classifying Verses of the Quran using Doc2vec [Menwa Alshammeri(University of Leeds), Eric Atwell (University of Leeds), Mohammad Ammar Alsalka(University of Leeds)] **Presenter: Menwa Alshammeri**

Kannada Sandhi Generator for Lopa and Adesha Sandhi [Musica Supriya, Dinesh Acharya U, Ashalatha Nayak, Arjuna S. R (Manipal Academy of Higher Education, Karnataka)] **Presenter: Musica Supriya**

Multi-document Text Summarization using Semantic Word and Sentence Similarity: A Combined Approach [Rajendra Kumar Roul (Thapar Institute of Engineering and Technology, Patiala)] **Presenter: Rajendra Kumar Roul**

ABB-BERT: A BERT model for disambiguating abbreviations and contractions [Prateek Kacker(Novartis Pharmaceuticals), Andi Cupallari(Novartis Pharmaceuticals), Aswin Giridhar Subramanian(School of Informatics, University of Edinburgh) and Nimit Jain(Novartis Pharmaceuticals)] **Presenter: Aswin Giridhar Subramanian**

Data Augmentation for Low-Resource Named Entity Recognition Using Backtranslation [Usama Yaseen and Stefan Langer (University of Munich (LMU))] **Presenter: Usama Yaseen**

#covid is war and #vaccine is weapon? COVID-19 metaphors in India [Mohammed Abdul Khaliq, Rohan Joseph and Sunny Rai (Mahindra University)] **Presenter: Mohammed Abdul Khaliq**

Training data reduction for multilingual Spoken Language Understanding systems [Anmol Bansal (IIT Kharagpur), Anjali Shenoy (Amazon Alexa AI), Chaitanya K. P. (Amazon Alexa AI), Kay Rottmann (Amazon Alexa AI), Anurag Dwarakanath (Amazon Alexa AI)] **Presenter: Anmol Bansal & Chaitanya K. P.**

Semantics of Spatio-Directional Geometric Terms of Indian Languages [Sukhada (IIT (BHU), Varanasi,), Soma Paul (IIIT-Hyderabad), Rahul Kumar (University of Delhi), Karthik Puranik (IIIT Tiruchirappalli)] **Presenter: Soma Paul**

Studies Towards Language Independent Fake News Detection [Soumayan Bandhu Majumder (Jadavpur University), Dipankar Das (Jadavpur University)] **Presenter: Soumayan Bandhu Majumder**

Leveraging Expectation Maximization for Identifying Claims in Low Resource Indian Languages [Rudra Dhar and Dipankar Das (Jadavpur university)] **Presenter: Rudra Dhar**

Morpheme boundary Detection & Grammatical feature Prediction for Gujarati : Dataset & Model [Jatayu Baxi (Dharmsinh Desai University, Nadiad (Gujarat)), Dr. Brijesh Bhatt (Dharmsinh Desai University, Nadiad (Gujarat))] **Presenter: Jatayu Baxi**

Wikipedia Current Events Summarization using Particle Swarm Optimization [Santosh Kumar Mishra, Darsh Kaushik, Sriparna Saha and Pushpak Bhattacharyya(IIT, Patna)] **Presenter: Santosh Kumar Mishra**

Performance of BERT on Persuasion for Good [Saumajit Saha, Kanika Kalra, Manasi Patwardhan, Shirish Karande (TCS Research Pune, India)] **Presenter: Saumajit Saha**

Auditing Keyword Queries Over Text Documents [Apparreddy Bharath Kumar Reddy(IIT Hyderabad), Sailaja Rajanala(IIT Hyderabad), Manish Singh(IIT Hyderabad)] **Presenter: Sailaja Rajanala**

Automated Evidence Collection for Fake News Detection [Mrinal Rawat (LJMU), Diptesh Kanojia (University of Surrey)] **Presenter: Mrinal Rawat**

Multi-Turn Target-Guided Topic Prediction with Monte Carlo Tree Search [Jingxuan Yang, Si Li and Jun Guo (Beijing University of Posts and Telecommunications)] **Presenter: Jingxuan Yang**

A Method to Disambiguate a Word by Using Restricted Boltzmann Machine [Nazreena Rahman and Bhogeswar Borah (Tezpur University)] **Presenter: Nazreena Rahman**

Prediction of Video Game Development Problems Based on Postmortems using Different Word Embedding Techniques (Anirudh A, Aman Raj Singh, Anjali Goyal, Lov Kumar and N L Bhanu Murthy)

Encoder Decoder Approach to Automated Essay Scoring For Deeper Semantic Analysis (Priyatam Sai Naravajhula, Sreedeeep Rayavarapu and Srujana Inturi)

Multi-task pre-finetuning for zero-shot cross lingual transfer [Moukthika Yerramilli, Pritam Varma and Anurag Dwarakanath (Amazon)] **Presenters: Moukthika and Pritam**

9:00AM to 12:00PM

01:30PM to 02:30PM

Lunch Break

02:30PM to 03:30PM

Keynote Lecture 4: Human-centered Natural Language Processing : Prof. Rada Mihalcea

Session Chair: Rajeev Sangal

03:30PM to 03:45PM

TEA BREAK

Technical Session VII: Computational Psycholinguistics/Sentiment Analysis and Emotion Recognition Session Chair: Dipankar Das Co-Chair: Ujwala Baruah

Technical Session VIII: QA/Information Extraction/Information Retrieval/Text Mining Session Chair: Ranjani Parthasarathi Co-Chair: Partha Pakray

Technical Session IX: Language Resources and Evaluation Session Chair: Girish Nath Jha Co-Chair: Shyamapada Mukherjee

Sentiment Analysis For Bengali Using Transformer Based Models [Anirban Bhowmick, Abhik Jana (Universität Hamburg)]

Evaluating Pretrained Transformer Models for Entity Linking inTask-Oriented Dialog [Sai Muralidhar Jayanthi(MindMeld, Cisco Systems), Varsha Embar(MindMeld, Cisco Systems), Karthik Raghunathan (MindMeld, Cisco Systems)] **Presenter: Sai Muralidhar Jayanthi**

A German Corpus of Reflective Sentences [Veronika Solopova, Oana-Iuliana Popescu, Margarita Chikobava, Ralf Romeike, Tim Landgraf and Christoph Benz Müller] **Presenter: Veronika Solopova**

IndicFed: A Federated Approach for Sentiment Analysis in Indic Languages [Jash Mehta, Deep Rajesh Gandhi, Naitik Rathod and Sudhir Bagul (Dwarkadas J. Sanghvi College of Engineering)] **Presenter: Jash Mehta**

Cascading Adaptors to Leverage English Data to Improve Performance of Question Answering for Low-Resource Languages [Hariom A. Pandya (Dharmsinh Desai University),Bhavik Ardesana (Dharmsinh Desai University),Dr. Brijesh S. Bhatt (Dharmsinh Desai University)] **Presenter: Bhavik Ardesana**

Analysis of Manipuri Tones in ManiTo: A Tonal Contrast Database [Thiyam Susma Devi (IIT Guwahati, India), Pradip K. Das (IIT Guwahati, India)] **Presenter: Thiyam Susma Devi**

An Efficient BERT Based Approach to Detect Aggression and Misogyny [Sandip Dutta, Utso Majumder and Sudip Kumar Naskar (Department of CSE, Jadavpur University)] **Presenters: Sandip Dutta & Utso Majumder**

eaVQA: An Experimental Analysis on Visual Question Answering Models [Souvik Chowdhury and Badal Soni (NIT, Silchar)] **Presenter: Souvik Chowdhury**

Building a Linguistic Resource : A Word Frequency List for Sinhala [Aloka Fernando, Gihan Dias (UOM, LK)] **Presenter: Aloka Fernando**

How vulnerable are you? A Novel Computational Psycholinguistic Analysis for Phishing Influence Detection [Anik Chatterjee ,Sagnik Basu (St. Thomas' College of Engineering and Technology, Kolkata)] **Presenter: Anik Chatterjee**

Deep Embedding of Conversation Segments [Abir Chakraborty(Microsoft) and Anirban Majumder (Flipkart Internet Pvt. Ltd.)] **Presenter: Anirban Majumder**

Part of Speech Tagging for a Resource Poor Language : Sindhi in Devanagari Script using HMM and CRF [Bharti Nathani and Nisheeth Josh (Banasthali Vidyapith)] **Presenter: Bharti Nathani**

Aspect Based Sentiment Analysis Using Spectral Temporal Graph Neural Network [Abir Chakraborty (Microsoft India)] **Presenter: Abir Chakraborty**

DialogActs based Search and Retrieval for Response Generation in Conversation Systems [Nidhi Arora (Interactions India LLC) , Rashmi Prasad(Interactions LLC), Srinivaas Bangalore (Interactions LLC)] **Presenter: Nidhi Arora**

Stress Rules from Surface Forms: Experiments with Program Synthesis [Saujas Vaduguru (IIIT, Hyderabad), Partho Sarthi (University of Wisconsin, Madison), Monojit Choudhury (Microsoft Research India), Dipti Misra Sharma (IIIT, Hyderabad)] **Presenter: Saujas Vaduguru**

Using Random Perturbations to Mitigate Adversarial Attacks on Sentiment Analysis Models [Abigail Swenor, Jugal Kalita (University of Colorado - Colorado Springs)] **Presenter: Abigail Swenor**

An On-device Deep-Learning Approach for Attribute Extraction from Heterogeneous Unstructured Text [Mahesh Gorjala, Aniruddha Bala, Pinaki Bhaskar, Krishnaditya and Vikram Mupparthi(Samsung R&D Institute India-Bangalore (SRI-B))]

Cross-lingual Alignment of Knowledge Graph Triples with Sentences [Swayatta Daw, Shivprasad Rajendra Sagare, Tushar Abhishek, Vikram Pudi and Vasudeva Varma(IIIT Hyderabad)]

Retrofitting of Pre-trained Emotion Words with VAD-dimensions and the Plutchik Emotions [Manasi Kulkarni (IIT Bombay, Mumbai and VJTI, Mumbai) , Pushpak Bhattacharyya(IIT Bombay)] **Presenter: Manasi Kulkarni**

Weakly Supervised Extraction of Tasks from Text [Sachin Pawar, Girish K. Palshikar, Anindita Sinha Banerjee (TCS Research)] **Presenter: Sachin Pawar**

Introduction to ProverbNet: An Online Multilingual Database of Proverbs and Comprehensive Metadata [Shreyas Pimpalgaonkar, Dhanashree Lele, Malhar Kulkarni, Pushpak Bhattacharyya (IIT Bombay)] **Presenter: Shreyas Pimpalgaonkar**

06:00PM to 07:00PM

Valedictory

07:00PM to 08:00PM

NLP AI Meeting

NOTE:

Short paper duration: (10+3) min

Long paper duration: (15+3) min

****The keynote talks, inauguration and technical sessions I, IV, VII will be hosted in Webex link and other sessions will be in Google Meet Link.****