IJCAI 2023

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ÚFAL MFF UK

Praha

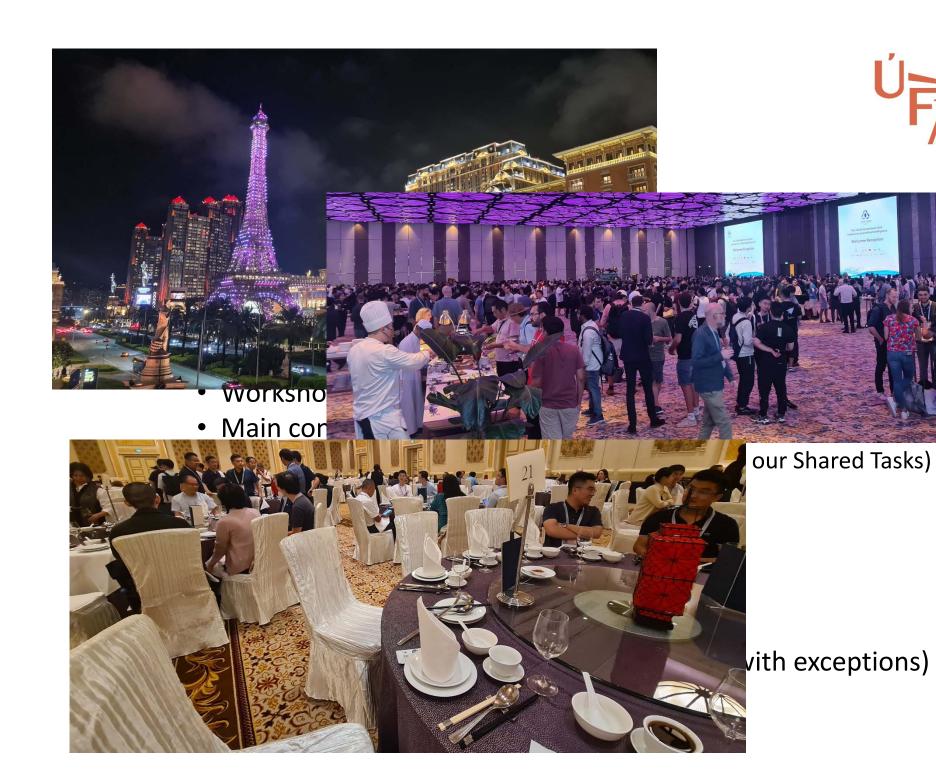# International Joint Conference on Artificial Intelligence

- Organized annually since 2016 (biannual from 1969)
- By International Joint Conferences on Artificial Intelligence, https://www.ijcai.org/
  - non-profit corporation founded in California, in 1969
  - two divisions:
    - Conference Division – IJCAI conference, CORE A*
      - https://www.ijcai.org/future_conferences
    - AI Journal Division
      - https://www.ijcai.org/aijd (since 1970), 2022 IF: 14.2 (Q2)
      - Published by Elsevier (sort of Open Access – passes available)
        - » https://aij.ijcai.org/free-access-to-the-ai-journal/

IJCAI 2023

- Macao S.A.R., https://ijcai-23.org/ Aug. 19-25
  - Located in Cotai, entertainment/conference district
    - Moved from Cape Town, South Africa
  - Structure
    - Workshops (29), Tutorials (27, incl. **UMR**) (Aug. 19-21)
    - Main conference (Aug. 22-25), including:
      - Competitions (CC) – not necessarily finished (~ our Shared Tasks)
      - Special Sessions ("Symposia"), Posters, Demos
      - Keynote talks: 9(!) total
      - Sessions in parallel: max. 15 at the same time
    - Reception, Social event
  - 2500 participants, semi-hybrid
    - Online watching OK but not presentations (with exceptions)

- worksho
- Main con

(our Shared Tasks)

(with exceptions)

IJCAI 2023

- Keynotes
  - Alex Teytelboym, University of Oxford
    - Refugees.AI: Improving Refugee Resettlement and Humanitarian Parole
  - Pascale Fung, Hong Kong University of Science & Technology
    - Safer Generative ConvAI
  - Dieter Fox, University of Washington & NVIDIA (***John McCarthy Award Winner***)
    - Toward Foundational Robot Manipulation Skills
  - Mary Lou Maher, University of North Carolina at Charlotte
    - Enhancing Human Creativity Through the Synergy of Cognitive and Connectionist Models
  - Noam Brown, OpenAI
    - CICERO: Human-Level Performance in the Game of Diplomacy by Combining Language Models with Strategic Reasoning
  - Alice Xiang, Sony
    - Mirror, Mirror, on the Wall, Who's the Fairest of Them All?
  - Sarit Kraus, Bar-Ilan University (***Award for Research Excellence Winner***)
    - Human-agent collaboration: facing the challenges of super-intelligent agents
  - Pin-Yu Chen, IBM, USA (***Computers and Thoughts Award Winner***)
    - An Eye for AI: Towards Scientific Approaches for Evaluating and Improving Robustness and Safety of Foundation Models
  - Suchi Saria, Johns Hopkins Medicine & CS
    - AI for augmenting clinical teams: opportunity, technical hurdles, promising results, and open problems

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Scheduling, resource matching

NLP / LLMs – current issues

Robotics catching up

Only creativity: co-creation

Full steam ahead...

General about AI Ethics and Regulation: not much new

Planning problems

Evaluation of LLMs: most relevant! (HPLT etc.)

AI in medicine: "from an idea to a bedside tool". Shameless ad for "Bayesian Health" though...

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Something to do with NLP

- Workshops (29)
  - 1 on NLP (in the financial sector)
  - 1 on Social media (DNN for social media mining)
  - 1 on Fake audio detection
  - 1 on Neuro-symbolic agents
  - 1 on Explainable AI
- Symposia (4)
  - 3 on LLMs (one for financial services again)
  - 1 on multimodal reasoning

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- Main conference (~100 [60-90 minute] blocks)
  - 10(-15) minutes max. presentation
    - ! Possibility to have a **poster in addition to oral presentation**
  - **Machine Learning**: 12 blocks
    - ML: Federated learning (3) – also in workshops (big topic)
    - ML: RL & Deep RL, Explainable ML, Time series, Neurosymbolic, Seq. & Graphs, …
  - **Computer vision**: 6 blocks
    - CV & segmentation, biomedical, language (2), 3D, ML for CV
  - **Multi-agent systems**, AI Ethics/trust/…, Games, Classical AI
  - NLP: only 4 blocks
    - Low quality papers…
  - Special Topics: AI for social good (NLP, Vision, Projects, ML, Ethics/Fairness); AI for Arts (+ panel)
  - Job fair, Industry track, Demos, African Spotlight session
- ☺ Most likely paper title to be accepted: ***Graph Neural Networks for Deep Reinforcement Learning: Contrastive Detection with Federated Data Model***
  - … coming from Austria (50% acceptance rate)

IJCAI 2023 Summary

- Similar to ACL
  - Number of attendees
  - CORE A*
  - Main conference, workshops, tutorials, demos, industry booths, keynotes, prizes (papers, long-term impact), social events, job fair/ads
  - Journal track (34 papers)
  - Shared Tasks (~ CoNLL)
- Dissimilar to ACL
  - **More** plenary **keynotes** (9 vs. 3)
  - Much **shorter oral presentations** (10-15 min.), possibility of a poster
  - Many **more workshops (29), tutorials (27)**
  - More parallel sessions at the main conference (up to **15**)
  - Less NLP/LLM/… talks (obviously)
    - Many ML, CV, ethics et al. papers generally relevant for CL/NLP
  - IJCAI organization: President of BT for 2 yrs + 2 yrs past president
  - **Lower acceptance rate** (643 accepted papers vs. 4566 full subm., 14%)
  - Uses Whova for limited online participation (vs. underline.io for ACL)

18. 9. 2023