LOUISIANA SCHOLARS' COLLEGE

ABOUT SLAI

The Symposium on Logic and Artificial Intelligence ("Symposium on L&AI" or "SLAI") is annually organized by the International Society for Logic and Artificial Intelligence (ISLAI) in cooperation with research, development and educational organizations worldwide. SLAI is intended to add synergy to the efforts of researchers working on logic, AI, and their confluence. Round tables are planned to ensure an open debate on the state of the art and new directions.

SLAI-2022 is organized in cooperation with:

- International Society for Logic and Artificial Intelligence,
- Louisiana Scholars' College at Northwestern State University, Louisiana, USA, Host
- Taras Shevchenko National University of Kyiv, Ukraine,
- Alexandru Ioan Cuza University of Iasi, Romania,
- Vladimir Andrunachievici Institute of Mathematics and Computer Science, Chisinau, Moldova,
- Ukrainian Logic Society, Ukraine,
- Academy of Sciences, Moldova.

CHAIR: Alexei Muravitsky (USA)
CO-CHAIRS:
- Mykola Nikitchenko (Kyiv, Ukraine)
- Inga Titchiev (Chisinau, Moldova)
- Adrian Iftene (Iasi, Romania)
- Svetlana Cojocaru (Chisinau, Moldova)
- Ioachim Drugus (Chisinau, Moldova)

WEBSITE:
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SLAI-2022: THE SYMPOSIUM ON LOGIC AND ARTIFICIAL INTELLIGENCE

PROGRAM

January 13-15, 2022

SLAI-2022 is devoted to the **World Logic Day.**

Collocated to SLAI-2022 **events are**

- *Moldovan Prizes in Logic and Artificial Intelligence (*https://islai.org/mplai-2022/*)*
- *Romanian Prizes in Logic and Artificial Intelligence (*https://logic-prize-romania.islai.org/*)*
- *Ukrainian Seminar on Logic and its Applications – 2022 (*http://logic.net.ua/*)*

SLAI-2022 with collocated events is a cluster of World Logic Day events.

Each talk will be scheduled per Eastern European Time (EET).

The conference will be held in online mode via ZOOM.

ZOOM LINK TO ALL SLAI-2022 SESSIONS:

https://zoom.us/j/2022131415

Time is EET (Romania-Moldova-Ukraine time)

OPENING

15:30 – 16:00

SESSION 1

16:00 - 18:45

Chairs: Svetlana Cojocaru, Alexei
Muravitsky

Ioachim Drugus, Alexei Muravitsky

Invited talk introduced by Lluis Godo (Spain)

- **16:00-16:45 Irina Perfilieva (Ostrava, Czech Republic)**. Fuzzy sets, fuzzy partitions and manifolds.

Regular talks

- 17:00-17:20 **Alexander Sakharov.** Knowledge Base Logics
- 17:30-17:50 **Jørgen Villadsen.** A Formulation of Classical Higher-Order Logic in Isabelle/Pur

Invited talk introduced by Sheila Mcilraith (Canada)

- **18:00-18:45 Leora Morgenstern (Palo Alto, USA)**. From text to battle simulations using formal representations: How NLP, logic, and planning work together in COMBAT

Break

SESSION 2

19:00 - 20:20

Chairs: Inga Titchiev, Ioachim Drugus

- 19:00-19:20 **Asta Halkjær From, Agnes Moesgård Eschen and Jørgen Villadsen.** Asta Halkjær From, Agnes Moesgård Eschen and Jørgen Villadsen
- 19:20-19:40 **Meenesh Solanki.** Using Twitter to measure the impact of immigration by studying people's mood
- 19:40-20:00 **Oleksiy Oletsky.** Use of the Model "State-Probability of Choice" for Modelling Decision Making within Uncertain Reasoning
- 20:00-20:20 **Mohammed Alshehri.** Fuzzy logic based explainable AI approach for the easy Calibration of AI models in IoT environments

WORLD LOGIC DAY

SESSION 3

16:00 - 17:40

Chairs: Alexei Muravitsky, Adrian Iftene

SESSION 4

18:00-20:45

Chairs: Adrian Iftene, Mykola Nikitchenko

- 16:00-16:20 **Cristian Simionescu.** Privacy Aware Self-Supervised Deep Learning Approaches for Medical Data

- 16:20-16:40 **Bogdan Cretu and Adrian Iftene.** Flower Recognition Using Neural Networks

- 16:40-17:00 **Ingrid Stoleru.** Developing an early predictive system for the diagnosis of Alzheimer's disease and identifying lead biomarkers for this condition

- 17:00-17:20 **Irimia Cosmin-Iulian.** Decentralized infrastructure for digital notarizing, signing and sharing files securely using Blockchain

- 17:20-17:40 **Bogdan Aman and Gabriel Ciobanu.** Timed Modal Logic for rTiMo

Break

- 18:00-18:20 **Ioana Madalina Tugui and Adrian Iftene.** Ocular Disease Recognition

- 18:20-18:40 **Mihai Andrei Costandache.** Using Machine Learning and Sound Processing Techniques to Improve Patient Health

- 18:40-19:00 **Nicoleta-Tatiana Trifan and Adrian Iftene.** Appetite – Nutritionist Assistant

- 19:00-19:20 **Paola Cattabriga.** Uniqueness Violations

- 19:20-19:40 **Sergiu Amihaesei and Cristian Frasinaru.** Tourist Trip Design Problem - A Practical Application

Invited talk introduced by Sven Ove Hansson (Sweden)

- **20:00 -20:45 DAVID MAKINSON (LONDON, UK).** Logicians like climbing trees

SESSION 5

16:00 - 20:00

Chairs: Svetlana Cojocaru, Inga Titchiev

JANUARY 15, 2022

Invited talk introduced by Ioachim Drugus (Moldova)

- **16:00-16:45 Anatol Reibold (Darmstadt, Hessen, Germany).** Deep learning as a special case of abductive reasoning

Regular talks

- 17:00-17:20 **Ioachim Drugus**. Towards an Extensional Model of Natural Languages
- 17:30-17:50 **Victoria Bobicev and Tudor Bumbu**. Punctilog Compared to Dependency Grammar and Constituency Grammar

Invited talk introduced by Valentin Goranko (Sweden)

- **18:00-19:00 Dimiter Vakarelov (Sofia, Bulgaria).** Region-based theories of space and time

Regular talks

- 19:00-19:20 **Mykola Nikitchenko** Towards methodological foundations of propositional logic
- 19:20-19:40 **Ervin Maftei, Cristian-Mihai Rosu and Adrian Iftene**. Using Natural Language Processing for Centralising Research Project Calls
- 19:40-20:00 **Alexandr Parahonco and Mircea Petic**. E-course: developing a model for content generation