

SoCS 2019

The 12th Annual Symposium on Combinatorial Search
July 16-17, 2019, Napa, CA, USA (co-located with ICAPS 2019)

Call for Papers and Participation

Heuristic search and other forms of combinatorial search optimization are very active areas of research in Artificial Intelligence, Robotics, Planning and other areas of Computer Science. The International Symposium on Combinatorial Search (SoCS) is meant to bring researchers in such areas together to exchange their ideas and cross-fertilize the field.

SoCS is targeting researchers and submissions in all fields that use combinatorial search, including artificial intelligence, planning, robotics, constraint programming, meta-reasoning, operations research, navigation, and bioinformatics.

SPECIAL FOCUS AND ACTIVITIES THIS YEAR

We especially focus on **real-world applications** of heuristic search this year. SoCS this year also should be very attractive for student participants. We expect to make SoCS easily accessible for students by having low registration fees and a travel support. A student **mentoring scheme** in which senior participants will be available for advising students with their research and career prospects is also planned.

TOPICS OF INTEREST

- Analysis of search algorithms
- Automated synthesis of lower bounds
- Bounding and pruning techniques
- Combinatorial puzzles
- Continuous problem solving
- External-memory and parallel search
- Incremental and active learning in search
- Meta-reasoning and search
- Methodology and critiques of current practice
- Model-based search
- Random vs. systematic search strategy selection
- Portfolios of search algorithms
- Real-time search
- Search in goal-directed problem solving
- Search space discretization for continuous state-space problems
- Self-configuring and self-tuning algorithms
- Symmetry handling
- Time, memory, and solution quality trade-offs
- Search in Big Data
- Constraint search

- Search in robotics
- Search-based diagnosis
- Real-life applications

SUBMISSION INFORMATION

We encourage researchers to submit three categories of papers to the symposium. Application oriented papers in all categories are especially welcome:

- **Technical Papers.** We welcome original **long** (up to 8 pages plus up to one page of references) and **short** (up to 4 pages plus up to one page of references) technical papers that report substantial original research.
- **Position Papers.** We also encourage authors to submit original long and short (the same page limits as in technical papers) position papers discussing ideas and concepts related to search. Examples of position papers could include thoughtful critiques of the field, historical perspectives and analysis etc.
- **Extended abstracts.** To foster the exchange of ideas at SoCS, we encourage authors to submit extended abstracts of original work, work-in-progress, or work which has appeared in or is under review at other venues such as AAAI/IJCAI.

DATES AND LOCATION

SoCS 2019 will be co-located with ICAPS 2019 and will take place in Napa, California. SoCS 2019 will start immediately after ICAPS and will be held July 16 -17, 2019.

Important dates:

Abstract submission:	March 25, 2019
Paper submission:	April 1, 2019
Notification:	May 1, 2019
Camera ready:	May 16, 2019
Symposium:	July 16-17, 2019

SoCS web site:

<http://socs19.search-conference.org>

SoCS 2019 CHAIRS

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