

RC
2024

2ND INT. WORK SHOP ON RESERVOIR COMPUTING

First Call for Papers

Reservoir Computing (RC) denotes a class of recurrent neural models whose dynamics are left unadapted after initialization. The approach is appealing for several reasons, such as fast training, a natural propensity to edge computing and strong theoretical foundations with implications for the basic properties of recurrent neural networks in general.

After the success of the first edition, the 2nd International Workshop on Reservoir Computing (RC 2024) intends to bring back together researchers to update the discussion on the state-of-the-art and the cutting-edge challenges in the field of RC, in all its declinations. These include, among the others, new models of Echo State Networks and Liquid State Machines, applications to problems of AI also in the human-centric perspective, emerging paradigms, RC for structured data, deep RC, hybrid RC/fully trained RNN models, and many more. The workshop provides an open forum for researchers to meet and present recent contributions and ideas in a fervid and highly interdisciplinary environment. Industrial contributions are welcome.

Location

RC2024 is organized as a workshop of the International Conference on Artificial Neural Networks (ICANN), which is the annual flagship conference of the European Neural Network Society (ENNS) <https://e-nns.org>. In 2024, the ICANN will take place in Lugano, Switzerland.

Conference Dates: September 17 to September 20, 2024

Conference Venue: Campus of the University of Southern Switzerland and the University of Applied Sciences and Arts of Southern Switzerland, Via la Santa 1, 6962 Lugano-Viganello, Switzerland.

Conference Webpage: <https://icann2024.org>

RC2024 Workshop Webpage: <https://sites.google.com/view/reservoircomputing2024>

Contributions

The RC 2024 Workshop will be an in-person conference. We expect that at least one co-author of each paper will be physically present in Lugano to give his or her presentation. We will also enforce a no-show rule, in order to encourage an optimal quality of the scientific discussion here in Lugano.

Papers must be written in the English language and must conform to the format defined in the Author's Kit, available on the conference webpage at <https://e-nns.org/icann2024/submission>. The workshop will accept the following types of contributions:

- Short papers (6-11 pages) and full papers (12-15 pages) to be **published in Springer-Verlag Lecture Notes in Computer Science (LNCS) series with individual DOI** as part of the conference proceedings;
- Extended abstracts of up to 5 pages (including references) that may be published in the conference proceedings, but *without indexing*.

Papers will undergo rigorous peer review; the Program Committee will make the final decision which papers will be included in the conference program. For papers with conflicting reviews, or which are on the borderline between acceptance and rejection, a short rebuttal phase is foreseen.

The conference will feature two categories of communications: oral communications (15' presentation + 5' questions) and poster communications.

Potential topics of interest for the workshop include (without being limited to) the following:

- Echo State Networks, Liquid State Machines
- Hybrids of fully-trained and RC models
- Deep Reservoir Computing
- Reservoir Computing for structured data (trees, graphs, networks, ...)
- Ensemble learning and Reservoir Computing
- Trustworthy AI concepts for Reservoir Computing
- Reservoir dimensionality reduction, efficient reservoir hyper-parameter search and learning
- Reservoir Computing in Neuroscience
- Theoretical analysis of Reservoir Computing
- Statistical Learning Theory of Reservoir Computing networks
- Reservoir Computing for AI applications (e.g., vision, natural language processing, health, bioinformatics, etc.)

Important dates

Opening of submission portal: Feb 15 2024

Deadline for full paper submission: March 15 2024

Notification of Acceptance or Rebuttal: May 15 2024

Deadline for rebuttal: May 31 2024

Final notification of Acceptance or Rejection after Rebuttal: June 10 2024

Camera-ready paper upload and author registration: June 30 2024

Call for reviewers

Please consider volunteering as a reviewer to help us ensure the quality of the papers presented at this Workshop, by submitting this form: <https://forms.gle/Br2Q5tQ6d1SGKEZr8>

Organizing committee and program chairs

- [Alessio Micheli](#) (University of Pisa, Italy)
- [Gouhei Tanaka](#) (Nagoya Institute of Technology, Japan)
- [Claudio Gallicchio](#) (University of Pisa, Italy)
- [Benjamin Paassen](#) (Bielefeld University, Germany)
- [Domenico Tortorella](#) (University of Pisa, Italy)

Contact

In case you have any questions concerning registration, attendance, and other issues related to the main Conference, please contact program-committee@icann2024.org.

For questions regarding the Workshop, please contact us at <https://sites.google.com/view/reservoircomputing2024>.

Follow us on <https://twitter.com/intrcworkshop> to keep in touch!

Acknowledgements



IEEE Task Force
on
Reservoir Computing

