

# DEEP LEARNING FOR ANALOG EDA: ARE WE THERE YET?

# SMACD19 SPECIAL SESSION

15-18 JULY • LAUSANNE • SWITZERLAND

CALL FOR SPECIAL SESSION ON “DEEP LEARNING FOR ANALOG EDA: ARE WE THERE YET?”

There are two buzzwords around IC world these days: Machine Learning (ML) and Deep Learning (DL). The truth beyond all the fuss is that, for example, machine / deep learning algorithms are already aiding anomaly detection on assembly lines in the industry. Moreover, in the last years, EDA vendors have improved their ML know-how, and, ML research projects are emerging. Once established, they promise to reduce design costs while improving quality and reusability dramatically. When that happens, we'll reach the Golden Age of **machine learning in EDA**, of course, digital EDA... How about analog and mixed-signal EDA?

Recent works show Deep Neural Networks that can not only replace computationally demanding simulations (EM Simulation, Circuit Simulation or Parasitic Estimation) but also to address other aspects of Analog IC design, such as topology discovery, device sizing, device placement, or, circuit partitioning. This Special Session aims to bring together original research that **advances analog and mixed-signal EDA using machine learning methods**.

Topics include, but are not limited to:

- Applied Supervised and Unsupervised Machine / Deep Learning algorithms
- Partitioning and System Design
- Topology Selection and Creation
  - Integrated Circuit Sizing, Design Centering and Corner Analysis
    - Layout Placement and Routing
      - Layout retargeting from legacy designs
        - Parasitic-Aware Design
          - Layout description languages, devices and procedural generators

## ORGANIZERS

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## PAPER SUBMISSION

If you would like to contribute to this Special Session please contact its organizers.

All paper submissions should follow the SMACD guidelines: [smacd2019.com/paper-submission](http://smacd2019.com/paper-submission)

**Important Note:** Authors should **only** indicate the “**Special Session**” option when submitting the paper on the **EasyChair platform**.

## IMPORTANT DATES

Paper Submission Deadline ..... 8<sup>th</sup> March 2019  
 Author Notification ..... 19<sup>h</sup> April 2019  
 Camera Ready Submission ..... 3<sup>th</sup> May 2019  
 Early Registration Deadline ..... 3<sup>th</sup> May 2019

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