

Call for Papers: "IC Design to Tapeout: AI and Open Source Tools"

Submission date: June 30, 2024 Publication date: November 2024

The principles of free redistribution, source code availability, derivative works allowance, integrity of the author's source code, no discrimination against persons or groups, no discrimination against fields of endeavor, distribution of license, license not specific to a product, license not restricting other software, and technology-neutral, are more than relevant today for democratization of IC design. This special issue celebrates the 25th year anniversary of Open Source Initiative along with the recent advances of Artificial Intelligence (AI) models through a special issue on "IC Design to Tapeout: AI and Open Source Tools". The AI when combined with Open Source IC tools can help automate the chip design flow. Every stage of IC design from design to manufacturing currently explores the use of AI, undergoing a major directional change in the way IC designs will be done in the future. We invite submissions for a special issue focused on innovative circuit designs using AI algorithms where open source tools are explicitly used for designing and manufacturing ICs. The primary contributions expected should lie in the implementations of circuit design and its creativity, impact, and significance. We welcome contributions across various aspects of design, development, and application, with open source tools and generative AI playing a supportive role.

Topics of interest in circuit designs and implementations using AI and open source tools include, but are not limited to:

- Innovative Digital and Analog Designs in Open Source Environments
- Using AI for design, verification and validations of ICs
- Reliability and Performance in Open Source ICs
- Integration of Emerging Technologies in Open Source IC Designs
- FPGA implementations using Open Source Tools
- In-Depth Analysis of Successful Open Source IC Design Projects

Important Dates:

- Manuscript submission deadline June 30, 2024
- First-round revision notification due Aug. 30, 2024
- Revised manuscripts due Sept. 30, 2024
- Second-round revision notification due Oct. 30, 2024
- Final manuscript due Nov. 15, 2024
- Online publication Nov. 2024

Guest Editors:

- Javed G.S., Intel Advanced Design Bangalore
- Mehdi Saligane, University of Michigan
- Abhronil Sengupta, Penn State University

Jørgen Kragh Jakobsen (IC works) is the industry liaison for this special issue. For more information and clarifications, please contact the lead editor of this special issue: Prof Alex James, Associate EIC, IEEE OJCAS, api@ieee.org

