

International Symposium on Physical Design



March 16-19, 2025
Austin, Texas



Welcome to the 2025 ACM International Symposium on Physical Design

Gracieli Posser (Cadence Design Systems, Inc.)

ISPD 2025 General Chair

ISPD Timeline



- 2019 San Francisco was in person!
- ✗ 2020 Taiwan skipped; papers published
- 2021 Online with 167 attendees
- 2022 Planned for Banff in Canada
→ Online with 196 attendees
- 2023 Online with 239 attendees
- 2024 Taiwan
- 2025 Austin, Texas



Symposium Logistics



- 16 sessions across 3 days
 - Mar. 17-19, Monday, Tuesday, Wednesday
- Starts each day at 9am in Austin time
- First session of each day is a keynote or panel, then paper sessions.
- All presentations will be in person.
- After conference, they will be available on YouTube
- Slide PDFs will be available at www.ispd.cc/?page=program
- Papers will be available soon in the ACM Digital Library

Session Logistics



- Paper sessions:
 - The session chair introduces the session topic and themselves.
 - The session chair introduces each speaker with their bio, maximum of 1 minute.
 - Regular talks are 12 minutes in length, with 5 minutes for questions.
 - Budget one extra minute for transitions between speakers.
 - Extra discussions related to the session topic will be at the end of the session in a panel style, in which all speakers can respond to questions.
- Keynotes: 35 to 40 min presentation, followed by Q&A
- There is no break between the panel/keynote and the following session on Tuesday and Wednesday, so the handover there needs to be quick.
- For other sessions, there is 10-to-20-minute breaks between sessions
- We suggest speakers and session chair arrive at the session room during the break before the session.
 - Update and test the slides

Award: Lifetime Achievement



- 2025 Lifetime Achievement Award goes to Professor Jason Cong for his pioneering contributions in the algorithmic aspects of physical design.
- Congratulations from all of us!
- Commemoration session: 4:00 - 6:00, Tuesday



Technical Program



- ISPD 2025 submission summary
 - 64 abstracts submitted and 48 papers reviewed
 - Double-blind review process and virtual TPC meeting
 - 18 papers accepted (37.5% acceptance rate) with 3 best paper candidates
- We also have 3 keynotes, 13 invited talks, 4 panelists on Heterogenous Integration, and 4 talks from Professor Jason Cong mentor, labmate and former students.
- Topics: placement; legalization; lithography; quantum layout; photonic integrated circuits; timing propagation; logic optimization; crosstalk mitigation; DRC checking; gate sizing; standard cell layout; 3D ICs.
- Techniques: advanced mathematical programming, satisfiability problem solving, GPU acceleration, and machine learning.

Keynotes



- **Monday morning:**

- "Towards Designing and Deploying Ising Machines", Sachin Sapatnekar (University of Minnesota)

- **Monday afternoon:**

- "How Automotive Functional Safety is Disrupting Digital Implementation", Charles J Alpert (Cadence)

- **Wednesday:**

- "Automation and Optimization of Heterogeneous Systems", Henry Sheng (Synopsys)

Best Paper Candidates



- **Session 3: Cypress: VLSI-Inspired PCB Placement with GPU Acceleration**
 - Niansong Zhang, Anthony Agnesina, Noor Shbat, Yuval Leader, Zhiru Zhang and Haoxing Ren (Cornell University, NVIDIA)
- **Session 9: HeLO: A Heterogeneous Logic Optimization Framework by Hierarchical Clustering and Graph Learning**
 - Yuan Pu, Fangzhou Liu, Zhuolun He, Keren Zhu, Rongliang Fu, Ziyi Wang, Tsung-Yi Ho and Bei Yu (The Chinese University of Hong Kong, Fudan University)
- **Session 10: LEGO-Size: LLM-Enhanced GPU-Optimized Signoff-Accurate Differentiable VLSI Gate Sizing in Advanced Nodes**
 - Yi-Chen Lu, Kishor Kunal, Geraldo Pradipta, Rongjian Liang, Ravikishore Gandikota and Haoxing Ren (NVIDIA)
- Stephan will announce the winner in the last session

Organizing Committee



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March 16–19, 2025
Austin, TX, USA

 Association for
Computing Machinery

Advancing Computing as a Science & Profession

ISPD'25

Proceedings of the 2025 International Symposium on
Physical Design

Sponsored by:
ACM SIGDA

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ISPD 2025 Contest



- The 2025 contest is on
Performance-Driven Large Scale Global Routing
- Session 16 on Wednesday will give an overview of the contest, the teams, and the contest results.
- 46 teams participated!
- Organizers:
Rongjian Liang, Wen-Hao Liu,
Anthony Agnesina, Haoxing Ren



Sponsors

- Sponsor



- Technical sponsors



- Corporate sponsors

- Gold



- Silver



- Bronze



A big thank you!



My thanks to all of you for making this a great conference:

- Speakers, sessions chairs, and all the attendees
- Organizing committee and steering committee members
- Technical program committee and additional reviewers
- ISPD 2025 contest organizers
- ACM, particularly the folks behind the scenes who helped
- Sheridan Communications for help with the proceedings
- IEEE, our corporate sponsors, Cadence and UT Austin
- We are a community. Your great research and contributions make all this possible.
- A warm welcome to you all!

Banquet



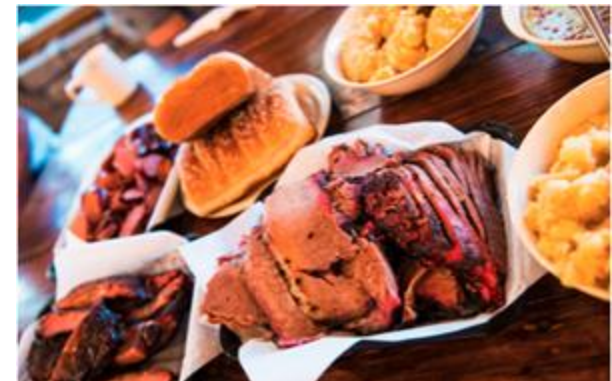
- 18:30 – 20:30, Tuesday
- In the Elm room (same room as our reception)
- **Bring your badge**



Social Tour



- 12:00 - 17:00, Wednesday
- Shuttle bus departure at 12:20 from the hotel (**Bring your badge**)
- 13:15 - 14:00 - The Salt Lick BBQ
- 14:30 - 16:30 - City Tour with two stops: one at Texas State Capitol and a stop at the Greetings from Austin mural
- 17:00 - Drop off back to the hotel
- Google form:



Wifi/Proceedings



- IHG ONE REWARDS Free WI-FI
 - Password: AUSTIN

- Online proceedings - program webpage
 - User: ispd25
 - Password: iloveispd25

Welcome!

