

# YIBO LIN

Associate Professor ◊ Department of Design Automation and Computing System  
School of Integrated Circuits, 5 Yiheyuan Road, Beijing, China, 100871 ◊ Peking University  
yibolin@pku.edu.cn ◊ www.yibolin.com

## RESEARCH INTERESTS

Modeling and optimization in VLSI CAD, machine learning applications, and heterogeneous computing

## EDUCATION

|   |                       |
|---|-----------------------|
| <b>University of Texas at Austin, Texas, USA</b>  | Aug. 2013 – May 2018  |
| Ph.D., Department of Electrical and Computer Engineering  |                       |
| Advisor: David Z. Pan   |                       |
| Thesis: Bridging Design and Manufacturing Gap through Machine Learning and Machine-Generated Layout |                       |
| <b>Shanghai Jiao Tong University, Shanghai, China</b>   | Sep. 2009 – Jun. 2013 |
| B.S., Department of Microelectronics  |                       |

## EXPERIENCE

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|--|-----------------------|
| <b>Peking University, Beijing, China</b>   | Aug. 2025 – present   |
| Associate Professor  |                       |
| <b>Peking University, Beijing, China</b>   | Jul. 2019 – Jul. 2025 |
| Assistant Professor  |                       |
| Department of Design Automation and Computing System,<br>School of Integrated Circuits (since Nov. 2021)                 |                       |
| Center for Energy-efficient Computing and Applications (CECA),<br>School of Electronics Engineering and Computer Science |                       |
| <b>University of Texas at Austin, Texas, U.S.</b>  | Jun. 2018 – Jun. 2019 |
| Postdoc  |                       |
| Department of Electrical and Computer Engineering  |                       |

## TEACHING EXPERIENCE

|   |               |           |
|---|---------------|-----------|
| Fundamental Algorithms for Engineering in Integrated Circuits |               |           |
| Instructor  | Graduate      | 2023–2024 |
| Design Automation and Computing System                        |               |           |
| Instructor  | Graduate      | 2022–2024 |
| Optimization and Machine Learning in VLSI Design Automation   |               |           |
| Instructor  | Undergraduate | 2021–2024 |
| Introduction to Computing B                                   |               |           |
| Instructor  | Undergraduate | 2020–2022 |

## AWARDS AND HONORS

|   |                               |      |
|---|-------------------------------|------|
| Best Paper Award Nomination                             | DAC                           | 2025 |
| Honorable Mention ( $\times 2$ )                        | ISEDA                         | 2025 |
| Best Paper Award Nomination                             | ASPDAC                        | 2025 |
| Best Paper Award Nomination                             | ICCAD                         | 2024 |
| Best Paper Award & Honorable Mention                    | ISEDA                         | 2024 |
| Early Career Award (only one per year)                  | CCF Technical Committee in IC | 2023 |
| Inaugural Best Reviewer Award                           | ICCAD                         | 2023 |
| Best Paper Award (4/205)                                | DATE                          | 2023 |
| Best Paper Award (4/249)                                | DATE                          | 2022 |
| Best Paper Award Nomination                             | ICCAD                         | 2022 |
| Donald O. Pederson Best Paper Award (2/3495 in 4 years) | TCAD                          | 2021 |
| Best Paper Award  | ISPD                          | 2020 |
| Best Paper Award Nomination                             | ASPDAC                        | 2020 |
| Best Paper Award (1/201) & Nomination (5/201)           | DAC                           | 2019 |
| Best Paper Award Nomination                             | ISPD                          | 2019 |
| Inaugural Best Paper Award                              | Integration, the VLSI Journal | 2018 |
| Franco Cerrina Memorial Best Student Paper Award        | SPIE                          | 2016 |
| A. Richard Newton Young Student Fellow                  | DAC                           | 2014 |

## PROFESSIONAL SERVICE

### Executive Committee Member

- General co-chair, ACM/IEEE International Symposium on Machine Learning for CAD (MLCAD) 2025
- Program co-chair, ACM/IEEE International Symposium on Machine Learning for CAD (MLCAD) 2024
- Panel chair, IEEE International Symposium of Electronics Design Automation (ISEDA) 2023–2024
- Financial chair, ACM/IEEE Workshop on Machine Learning for CAD (MLCAD) 2021–2023

### Journal Editor

- Associate Editor, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), 2024 – present
- Associate Editor, ACM Transaction on Design Automation of Electronic Systems (TODAES), 2024 – present
- Associate Editor, Elsevier Integration, the VLSI Journal (Integration), 2024 – present
- Guest Editor, ACM Transaction on Design Automation of Electronic Systems (TODAES) Special Issue on MLCAD, 2024
- Guest Editor, ACM Transaction on Design Automation of Electronic Systems (TODAES) Special Issue on MLCAD, 2022

### Contest Chair

- Contest Problem Chair, Interated Circuits EDA Elite Challenge 2021 – 2023

### Technical Program Committee Member

- ACM/IEEE Design Automation Conference (DAC): 2020
- IEEE/ACM International Conference on Computer-Aided Design (ICCAD): 2018 – 2021, 2023
- Design, Automation and Test in Europe Conference (DATE): 2025
- IEEE International Conference on Computer Design (ICCD): 2019
- IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC): 2021 – 2022
- ACM International Symposium on Physical Design (ISPD): 2020, 2025
- ACM/IEEE Workshop on Machine Learning for CAD (MLCAD): 2021
- ACM Great Lakes Symposium on VLSI (GLVLSI): 2024
- Workshop on Synthesis And System Integration of Mixed Information technologies (SASIMI): 2021
- IEEE Electron Devices Technology and Manufacturing Conference (EDTM): 2021
- IEEE International Conference on Artificial Intelligence Circuits and Systems (AICAS): 2022.

#### **Journal Reviewer**

- IEEE Transaction on Computer-Aided Design of Integrated Circuits and Systems (TCAD)
- IEEE Transactions on Computers (TC)
- ACM Transaction on Design Automation of Electronic Systems (TODAES)
- SPIE Journal of Micro/Nanolithography, MEMS, and MOEMS (JM3)
- Elsevier, Integration, the VLSI Journal (Integration)

#### **Volunteer**

- ACM SIGDA Website Administrator, 2021 – present

## **10 SELECTED PUBLICATIONS**

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Inverse chronological order. \* denotes corresponding authors.

1. Yifan Chen, Zaiwen Wen, Yun Liang and **Yibo Lin\***, “[Stronger Mixed-Size Placement Backbone Considering Second-Order Information](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), San Francisco, CA, Oct 29-31, 2023.
2. Haoyi Zhang, Xiaohan Gao, Haoyang Luo, Jiahao Song, Xiyuan Tang, Junhua Liu, **Yibo Lin\***, Runsheng Wang and Ru Huang, “[SAGERoute: Synergistic Analog Routing Considering Geometric and Electrical Constraints with Manual Design Compatibility](#)”, IEEE/ACM Proceedings Design, Automation and Test in Europe (DATE), Antwerp, Belgium, Apr 17-19, 2023. (**Best Paper Award**)
3. Jing Mai, Jiarui Wang, Zhixiong Di and **Yibo Lin\***, “[Multi-Electrostatic FPGA Placement Considering SLICEL-SLICEM Heterogeneity, Clock Feasibility, and Timing Optimization](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Sep, 2023.
4. Zizheng Guo, Tsung-Wei Huang and **Yibo Lin\***, “[Accelerating Static Timing Analysis using CPU-GPU Heterogeneous Parallelism](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Jun, 2023.

5. Qipan Wang, Xiaohan Gao, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “DeePEB: A Neural Partial Differential Equation Solver for Post Exposure Baking Simulation in Lithography”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), San Diego, CA, Nov 01-03, 2022. (**Best Paper Nomination**)
6. Zizheng Guo and **Yibo Lin**\*, “Differentiable-Timing-Driven Global Placement”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jul 10-14, 2022.
7. Siting Liu, Peiyu Liao, Zhitang Chen, Wenlong Lv, **Yibo Lin**\* and Bei Yu\*, “FastGR: Global Routing on CPU-GPU with Heterogeneous Task Graph Scheduler”, IEEE/ACM Proceedings Design, Automation and Test in Europe (DATE), Antwerp, Belgium, Mar 14-23, 2022. (**Best Paper Award**)
8. Zizheng Guo, Jing Mai and **Yibo Lin**\*, “Ultrafast CPU/GPU Kernels for Density Accumulation in Placement”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Dec 05-09, 2021.
9. Zizheng Guo, Tsung-Wei Huang and **Yibo Lin**\*, “A Provably Good and Practically Efficient Algorithm for Common Path Pessimism Removal in Large Designs”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Dec 05-09, 2021.
10. **Yibo Lin**\*, Zixuan Jiang, Jiaqi Gu, Wuxi Li, Shounak Dhar, Haoxing Ren, Brucek Khailany and David Z. Pan, “DREAMPlace: Deep Learning Toolkit-Enabled GPU Acceleration for Modern VLSI Placement”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Apr, 2021. (**Best Paper Award**)

## PUBLICATIONS

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### Book Chapters

- [B3] **Yibo Lin**, Zizheng Guo and Jing Mai, “Deep Learning Framework for Placement”, Machine Learning Applications in Electronic Design Automation, Springer, 2023, edited by Haoxing Ren and Jiang Hu. (**Invited Book Chapter**)
- [B2] Haoyu Yang, **Yibo Lin** and Bei Yu, “Machine Learning for Mask Synthesis and Verification”, Machine Learning Applications in Electronic Design Automation, Springer, 2023, edited by Haoxing Ren and Jiang Hu. (**Invited Book Chapter**)

### Conference and Journal Papers (\* denotes corresponding authors)

Summary: DAC (29), ICCAD (24), IEEE TCAD (30), DATE (15), etc.

- [C209] Zizheng Guo, Haichuan Liu, Xizhe Shi, Shenglu Hua, Zuodong Zhang, Chunyuan Zhao, Runsheng Wang and **Yibo Lin**\*, “HeteroSTA: A CPU-GPU Heterogeneous Static Timing Analysis Engine with Holistic Industrial Design Support”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Hong Kong, Jan, 2026. (accepted)
- [C208] Xizhe Shi, Zizheng Guo, Zuodong Zhang, Yun Liang, Runsheng Wang\* and **Yibo Lin**\*, “HeteroLatch: A CPU-GPU Heterogeneous Latch-Aware Timing Analysis Engine”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Hong Kong, Jan, 2026. (accepted)
- [C207] Kairong Guo, Haoran Lu, Rui Guo, Jiarui Wang, Chunyuan Zhao, Heng Wu, Runsheng Wang and **Yibo Lin**\*, “Standard Cell Layout Synthesis for Dual-Sided 3D-Stacked Transis-

tors”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Hong Kong, Jan, 2026. (accepted)

[C206] Weijian Fan, Haoyi Zhang, Weibin Lin, Runsheng Wang and **Yibo Lin**\*, “MOSTAR: Multi-Stage Hierarchical Bayesian Optimization for Substructure-Aware High-Dimensional Analog Circuit Sizing”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Hong Kong, Jan, 2026. (accepted)

[C205] Chenhao Xue, Kezhi Li, Jiaxing Zhang, Yi Ren, Zhengyuan Shi, Chen Zhang, **Yibo Lin**, Lining Zhang, Qiang Xu and Guangyu Sun\*, “AC-Refiner: Efficient Arithmetic Circuit Optimization Using Conditional Diffusion Models”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Hong Kong, Jan, 2026. (accepted)

[J204] Siting Liu, Ziyi Wang, Fangzhou Liu, **Yibo Lin**, Bei Yu\* and Martin Wong, “[Sign-off Timing Considerations via Concurrent Routing Topology Optimization](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), 2025. (accepted)

[J203] Zhenkun Lin, Genggeng Liu\*, Xing Huang, **Yibo Lin**, Jixin Zhang, Wenhao Liu and Ting-Chi Wang, “[A Unified Deep Reinforcement Learning Approach for Constructing Rectilinear and Octilinear Steiner Minimum Tree](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), 2025. (accepted)

[J202] Bingyang Liu, Haoyi Zhang, Xiaohan Gao, Zichen Kong, Xiyuan Tang, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[LayoutCopilot: An LLM-powered Multi-agent Collaborative Framework for Interactive Analog Layout Design](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), 2025. (accepted)

[J201] Jingchen Zhu, Chenhao Xue, Yiqi Chen, Zhao Wang, Chen Zhang, Yu Shen, Yifan Chen, Zekang Cheng, Yu Jiang, Tianqi Wang, **Yibo Lin**, Wei Hu, Bin Cui, Runsheng Wang, Yun Liang and Guangyu Sun\*, “[Theseus: Exploring Efficient Wafer-Scale Chip Design for Large Language Models](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), 2025. (accepted)

[J200] Yajuan Su, Zixi Liu, **Yibo Lin**, Xiaojing Su, Yuqin Wang, Xin Hong, Yujie Jiang, Pengyu Ren and Yayi Wei, “[A Post-Routing Layout Optimization Framework for Lithography Process Window Enlargement](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), 2025. (accepted)

[J199] Jing Mai, Chunyuan Zhao, Zuodong Zhang, Zhixiong Di, Runsheng Wang and **Yibo Lin**\*, “[LEGALM 2.0: A Versatile Augmented Lagrangian Method-Based Methodology for Mixed-Cell-Height Legalization](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), 2025. (accepted)

[C198] Chunyuan Zhao, Jiarui Wang, Xun Jiang, Jincheng Lou and **Yibo Lin**\*, “GTA: GPU-Accelerated Track Assignment with Lightweight Lookup Table for Conflict Detection”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Munich, Germany, Oct, 2025. **(Best Paper Nomination)**

[C197] Yufan Du, Zizheng Guo, Runsheng Wang and **Yibo Lin**\*, “Differentiable Physical Optimization”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Munich, Germany, Oct, 2025.

[C196] Yuhao Ji, Yuntao Lu, Zuodong Zhang, Zizheng Guo, **Yibo Lin** and Bei Yu\*, “DiffCCD:

Differentiable Concurrent Clock and Data Optimization”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Munich, Germany, Oct, 2025.

[C195] Yuan Pu, Yuhao Ji, Siying Yu, Zuodong Zhang, Zizheng Guo, Zhuolun He, **Yibo Lin**, David Z. Pan and Bei Yu\*, “GPU Acceleration for Versatile Buffer Insertion”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Munich, Germany, Oct, 2025.

[C194] Yi Ren, Baokang Peng, Chenhao Xue, Kairong Guo, Yukun Wang, Guoyao Cheng, **Yibo Lin**, Lining Zhang and Guangyu Sun\*, “Orthrus: Dual-Loop Automated Framework for System-Technology Co-Optimization”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Munich, Germany, Oct, 2025.

[C193] Haichuan Liu, Zizheng Guo, Runsheng Wang and **Yibo Lin**\*, “IncreGPUSTA: GPU-Accelerated Incremental Static Timing Analysis for Iterative Design Flows”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Munich, Germany, Oct, 2025.

[C192] Tianxiang Zhu, Qipan Wang, **Yibo Lin**\* and Runsheng Wang\*, “High-Resolution Full-Chip Thermal Resistance Extraction of BEOL Interconnects in 3-D ICs Considering Detailed Via Connectivity”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Munich, Germany, Oct, 2025.

[C191] Chenchen Zhao, Zhengyuan Shi, Xiangyu Wen, Chengjie Liu, Yi Liu, Yunhao Zhou, Yuxiang Zhao, Hefei Feng, Yinan Zhu, Waa Gwok-Wan, Xin Cheng, Weiyu Chen, Yongqi Fu, Chuojie Chen, Chenhao Xue, Ying Wang, **Yibo Lin**, Jun Yang, Ning Xu, Xi Wang and Qiang Xu\*, “MMCircuitEval: A Comprehensive Multimodal Circuit-Focused Benchmark for Evaluating LLMs”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Munich, Germany, Oct, 2025.

[C190] Yuxiang Zhao, Zhuomin Chai, Xun Jiang, Qiang Xu, Runsheng Wang and **Yibo Lin**\*, “DeepLayout: Learning Neural Representations of Circuit Placement Layout”, International Conference on Machine Learning (ICML), Vancouver, Canada, Jul 13-19, 2025.

[C189] Lijie Zeng, Jiatai Sun, Xiao Wu, Dan Niu, Tianshi Wang, **Yibo Lin**, Zuochang Ye and Zhou Jin\*, “G-SpNN: GPU-Accelerated Passivity Enforcement for S-Parameter Modeling with Neural Networks”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 22-25, 2025.

[C188] Ziyang Yu, Peng Xu, Zixiao Wang, Binwu Zhu, Qipan Wang, **Yibo Lin**, Runsheng Wang, Bei Yu\* and Martin Wong, “SDM-PEB: Spatial-Depthwise Mamba for Enhanced Post-Exposure Bake Simulation”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 22-25, 2025.

[C187] Zizheng Guo, Yanqing Zhang, Runsheng Wang, **Yibo Lin** and Haoxing Ren, “GEM: GPU-Accelerated Emulator-Inspired RTL Simulation”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 22-25, 2025. (**Best Paper Nomination**)

[C186] Xun Jiang, Haoran Lu, Yuxuan Zhao, Jiarui Wang, Zizheng Guo, Heng Wu, Bei Yu, Sung Kyu Lim, Runsheng Wang, Ru Huang and **Yibo Lin**\*, “A Systematic Approach for Multi-Objective Double-Side Clock Tree Synthesis”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 22-25, 2025.

[C185] Jiarui Wang, Yanjing Liu and **Yibo Lin**\*, “Synergistic Die-Level Router for Multi-FPGA System with Time-Division Multiplexing Optimization”, ACM/IEEE Design Automation Con-

ference (DAC), San Francisco, CA, Jun 22-25, 2025.

[C184] Yifan Chen, Jing Mai, Zuodong Zhang and **Yibo Lin**\*, “[RUPlace: Optimizing Routability via Unified Placement and Routing Formulation](#)”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 22-25, 2025.

[J183] Yuxiang Zhao, Zhuomin Chai, Xun Jiang, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[PDNNet: PDN-Aware GNN-CNN Heterogeneous Network for Dynamic IR Drop Prediction](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Jun, 2025.

[J182] Rui Guo, Haoran Lu, Jiacheng Sun, Xun Jiang, Lining Zhangm, Ming Li, **Yibo Lin**, Runsheng Wang, Heng Wu\* and Ru Huang, “[Design Optimization of Flip FET Standard Cells With Dual-Sided Pins for Ultimate Scaling](#)”, IEEE Transactions on Electron Devices (TED), Jun, 2025.

[C181] Haoyi Zhang, Shizhao Sun, **Yibo Lin**, Runsheng Wang and Jiang Bian, “[AnalogXpert: Automating Analog Topology Synthesis by Incorporating Circuit Design Expertise into Large Language Models](#)”, IEEE/ACM International Symposium of EDA (ISEDA), Hong Kong, May 9-12, 2025.

[C180] Yufan Du, Zizheng Guo, Yang Hsu, Zhili Xiong, Seunggeun Kim, David Z. Pan, Runsheng Wang and **Yibo Lin**\*, “[Addressing Continuity and Expressivity Limitations in Differentiable Physical Optimization: A Case Study in Gate Sizing](#)”, IEEE/ACM International Symposium of EDA (ISEDA), Hong Kong, May 9-12, 2025. (**Honorable Mention Paper Award**)

[C179] Kairong Guo and **Yibo Lin**\*, “[Multi-Row Standard Cell Layout Synthesis with Enhanced Scalability](#)”, IEEE/ACM International Symposium of EDA (ISEDA), Hong Kong, May 9-12, 2025.

[C178] Qipan Wang, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[ATSim3.5D: A Multiscale Thermal Simulator for 3.5D-IC Systems based on Nonlinear Multigrid Method](#)”, IEEE/ACM International Symposium of EDA (ISEDA), Hong Kong, May 9-12, 2025. (**Honorable Mention Paper Award**)

[C177] Chenhao Xue, Yi Ren, Jinwei Zhou, Kezhi Li, Chen Zhang, **Yibo Lin**, Lining Zhang, Qiang Xu and Guangyu Sun\*, “[DOMAC: Differentiable Optimization for High-Speed Multipliers and Multiply-Accumulators](#)”, IEEE/ACM International Symposium of EDA (ISEDA), Hong Kong, May 9-12, 2025.

[C176] Yi Ren, Chenhao Xue, Jiaxing Zhang, Chen Zhang, Qiang Xu, **Yibo Lin** and Guangyu Sun\*, “[DiffuSE: Cross-Layer Design Space Exploration of DNN Accelerator via Diffusion-Driven Optimization](#)”, IEEE/ACM International Symposium of EDA (ISEDA), Hong Kong, May 9-12, 2025.

[C175] Haoran Lu, Xun Jiang, Yanbang Chu, Ziqiao Xu, Rui Guo, Wanyue Peng, **Yibo Lin**, Runsheng Wang, Heng Wu\* and Ru Huang, “[A Tale of Two Sides of Wafer: Physical Implementation and Block-Level PPA on Flip FET with Dual-sided Signals](#)”, IEEE/ACM Proceedings Design, Automation and Test in Europe (DATE), Lyon, France, Mar 31, 2025.

[C174] Tianxiang Zhu, Qipan Wang, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[MORE-Stress: Model Order Reduction based Efficient Numerical Algorithm for Thermal Stress Simulation](#)”

of TSV Arrays in 2.5D/3D IC”, IEEE/ACM Proceedings Design, Automation and Test in Europe (DATE), Lyon, France, Mar 31, 2025.

[C173] Xizhe Shi, Zizheng Guo, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “Handling Latch Loops in Timing Analysis with Improved Complexity and Divergent Loop Detection”, IEEE/ACM Proceedings Design, Automation and Test in Europe (DATE), Lyon, France, Mar 31, 2025.

[C172] Haikang Diao, Haoyi Zhang, Jiahao Song, Haoyang Luo, **Yibo Lin**, Runsheng Wang, Yuan Wang and Xiyuan Tang\*, “SEGA-DCIM: Design Space Exploration-Guided Automatic Digital CIM Compiler with Multiple Precision Support”, IEEE/ACM Proceedings Design, Automation and Test in Europe (DATE), Lyon, France, Mar 31, 2025.

[C171] Jing Mai, Chunyuan Zhao, Zuodong Zhang, Zhixiong Di, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “LEGALM: Efficient Legalization for Mixed-Cell-Height Circuits with Linearized Augmented Lagrangian Method”, ACM International Symposium on Physical Design (ISPD), Austin, TX, Mar 16-19, 2025.

[J170] Xun Jiang, Jiarui Wang, Jing Mai, Zhixiong Di and **Yibo Lin**\*, “A Robust FPGA Router With Optimization of High-Fanout Nets and Intra-CLB Connections”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Mar, 2025.

[J169] Yuxuan Zhao, Peiyu Liao, Siting Liu, Jiaxi Jiang, **Yibo Lin** and Bei Yu\*, “Analytical Heterogeneous Die-to-Die 3D Placement With Macros”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Feb, 2025.

[C168] Che Chang, Boyang Zhang, Cheng-Hsiang Chiu, Dian-Lun Lin, Yi-Hua Chung, Wan-Luan Lee, Zizheng Guo, **Yibo Lin** and Tsung-Wei Huang\*, “PathGen: An Efficient Parallel Critical Path Generation Algorithm”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Tokyo, Japan, Jan, 2025. (**Best Paper Nomination**)

[C167] Boyang Zhang, Che Chang, Cheng-Hsiang Chiu, Dian-Lun Lin, Yang Sui, Chih-Chun Chang, Yi-Hua Chung, Wan Luan Lee, Zizheng Guo, **Yibo Lin** and Tsung-Wei Huang\*, “iTAP: An Incremental Task Graph Partitioner for Task-parallel Static Timing Analysis”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Tokyo, Japan, Jan, 2025.

[C166] Zizheng Guo, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “Analyzing Timing in Shorter Time: A Journey through Heterogeneous Parallelism for Static Timing Analysis”, IEEE International Conference on Solid-State and Integrated Circuit Technology (ICSICT), Zhuhai, China, Oct 22-25, 2024. (**Invited paper**)

[J165] Wenshuo Yue, Teng Zhang, Zhaokun Jing, Kai Wu, Yuxiang Yang, Zhen Yang, Yongqin Wu, Weihai Bu, Kai Zheng, Jin Kang, **Yibo Lin**, Yaoyu Tao, Bonan Yan\*, Ru Huang and Yuchao Yang\*, “A scalable universal Ising machine based on interaction-centric storage and compute-in-memory”, Nature Electronics, Oct, 2024.

[C164] Qipan Wang, Xueqing Li, Tianyu Jia, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “AT-Place2.5D: Analytical Thermal-Aware Chiplet Placement Framework for Large-Scale 2.5D-IC”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), New Jersey, Oct, 2024.

[C163] Chunyuan Zhao, Zizheng Guo, Rui Wang, Zaiwen Wen, Yun Liang and **Yibo Lin**\*, “HeLEM-GR: Heterogeneous Global Routing with Linearized Exponential Multiplier Method”, IEEE/ACM

International Conference on Computer-Aided Design (ICCAD), New Jersey, Oct, 2024.

[C162] Zizheng Guo, Zuodong Zhang, Wuxi Li, Tsung-Wei Huang, Xizhe Shi, Yufan Du, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[HeteroExcept: A CPU-GPU Heterogeneous Algorithm to Accelerate Exception-aware Static Timing Analysis](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), New Jersey, Oct, 2024.

[C161] Xiaohan Gao, Haoyi Zhang, Bingyang Liu, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[Joint Placement Optimization for Hierarchical Analog/Mixed-Signal Circuits](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), New Jersey, Oct, 2024.

[C160] Yufan Du, Zizheng Guo, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[Fusion of Global Placement and Gate Sizing with Differentiable Optimization](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), New Jersey, Oct, 2024. (**Best Paper Nomination**)

[C159] Tianxiang Zhu, Qipan Wang, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[FaStTherm: Fast and Stable Full-Chip Transient Thermal Predictor Considering Nonlinear Effects](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), New Jersey, Oct, 2024.

[C158] Jing Mai, Zuodong Zhang, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[MORPH: More Robust ASIC Placement for Hybrid Region Constraint Management](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), New Jersey, Oct, 2024.

[J157] Tsung-Yi Ho, Sadaf Khan, Jinwei Liu, Yi Liu, Zhengyuan Shi, Ziyi Wang, Qiang Xu\*, Evangeline F.Y. Young, Bei Yu, Ziyang Zheng, Binwu Zhu, Keren Zhu, Yiqi Che, Yun Liang, **Yibo Lin**, Guojie Luo, Guangyu Sun, Runsheng Wang, Xinming Wei, Chenhao Xue, Haoyi Zhang, Zuodong Zhang, Yuxiang Zhao, Sunan Zou, Lei Chen, Yu Huang, Min Li, Dimitrios Tsaras, Mingxuan Yuan, Hui-Ling Zhen, Zhufei Chu, Wenji Fang, Xingquan Li and Zhiyao Xie, “[Large Circuit Models: Opportunities and Challenges](#)”, Science China Information Sciences, Sep, 2024.

[C156] Jiarui Wang, Xun Jiang and **Yibo Lin**\*, “[Top-Level Routing for Multiply-Instantiated Blocks with Topology Hashing](#)”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 23-27, 2024.

[C155] Yufan Du, Zizheng Guo, Xun Jiang, Zhuomin Chai, Yuxiang Zhao, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[PowPrediCT: Cross-Stage Power Prediction with Circuit-Transformation-Aware Learning](#)”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 23-27, 2024.

[C154] Haoyi Zhang, Jiahao Song, Xiaohan Gao, Xiyuan Tang, **Yibo Lin**\*, Runsheng Wang and Ru Huang, “[EasyACIM: An End-to-End Automated Analog CIM with Synthesizable Architecture and Agile Design Space Exploration](#)”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 23-27, 2024.

[C153] Zichen Kong, Xiyuan Tang\*, Wei Shi, Yiheng Du, **Yibo Lin** and Yuan Wang, “[PVTSizing: A TuRBO-RL-Based Batch-Sampling Optimization Framework for PVT-Robust Analog Circuit Synthesis](#)”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 23-27, 2024.

[C152] Yuan Pu, Fangzhou Liu, Yu Zhang, Zhuolun He, Kai-Yuan Chao, **Yibo Lin** and Bei Yu\*, “[Lesyn: Placement-aware Logic Resynthesis for Non-Integer Multiple-Cell-Height Designs](#)”,

ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 23-27, 2024.

[C151] Wan Luan Lee, Dian-Lun Lin, Tsung-Wei Huang\*, Shui Jiang, Tsung-Yi Ho, **Yibo Lin** and Bei Yu, “[G-kway: Multilevel GPU-Accelerated k-way Graph Partitioner](#)”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 23-27, 2024.

[C150] Chenhao Xue, Chen Zhang, Xun Jiang, Gao Zhutianya, **Yibo Lin** and Guangyu Sun\*, “[Oltron: Algorithm-Hardware Co-design for Outlier-Aware Quantization of LLMs with Inter-/Intra-Layer Adaptation](#)”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 23-27, 2024.

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===== Below are publications during Ph.D. and Postdoc =====

## Book Chapters

- [B1] **Yibo Lin** and David Z. Pan, “[Machine Learning in Physical Verification, Mask Synthesis, and Physical Design](#)”, Machine Learning in VLSI Computer-Aided Design, Springer, 2018, edited by Abe Elfedel, Duane Boning and Xin Li. (**Invited Book Chapter**)

## Conference and Journal Papers (\* denotes corresponding authors)

Summary: DAC (7), ICCAD (7), IEEE TCAD (10), DATE (1), etc.

- [J52] Hao Chen, Mingjie Liu, Biying Xu, Keren Zhu, Xiyuan Tang, Shaolan Li, **Yibo Lin**, Nan Sun and David Z. Pan\*, “[MAGICAL: An Open-Source Fully Automated Analog IC Layout System from Netlist to GDSII](#)”, IEEE Design & Test, Apr, 2021.

- [C51] Rachel Selina Rajarathnam, **Yibo Lin**, Yier Jin and David Z. Pan\*, “[ReGDS: A Reverse Engineering Framework from GDSII to Gate-level Netlist](#)”, IEEE International Workshop on Hardware-Oriented Security and Trust (HOST), San Jose, CA, May 4, 2020.

- [C50] Mingjie Liu, Wuxi Li, Keren Zhu, Biying Xu, **Yibo Lin**, Linxiao Shen, Xiyuan Tang, Nan Sun and David Z. Pan\*, “[S3DET: Detecting System Symmetry Constraints for Analog Circuits with Graph Similarity](#)”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Jan 13-16, 2020. (**Best Paper Nomination**)

- [C49] Mohamed Baker Alawieh, Wuxi Li, **Yibo Lin**, Love Singhal, Mahesh Iyer and David Z. Pan\*, “[High-Definition Routing Congestion Prediction for Large-Scale FPGAs](#)”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Jan 13-16, 2020.

- [C48] Wuxi Li, **Yibo Lin** and David Z. Pan\*, “[elfPlace: Electrostatics-based Placement for Large-Scale Heterogeneous FPGAs](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Westminster, CO, Nov 4-7, 2019.

- [C47] Keren Zhu, Mingjie Liu, **Yibo Lin**, Biying Xu, Shaolan Li, Xiyuan Tang, Nan Sun and David Z. Pan\*, “[GeniusRoute: A New Analog Routing Paradigm Using Generative Neural Network Guidance](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Westminster, CO, Nov 4-7, 2019.

- [C46] Chengyue Gong, Zixuan Jiang, Dilin Wang, **Yibo Lin**, Qiang Liu and David Z. Pan\*, “[Mixed Precision Neural Architecture Search for Energy Efficient Deep Learning](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Westminster, CO, Nov 4-7, 2019.

- [C45] Biying Xu, Keren Zhu, Mingjie Liu, **Yibo Lin**, Shaolan Li, Xiyuan Tang, Nan Sun and David Z. Pan\*, “[MAGICAL: Toward Fully Automated Analog IC Layout Leveraging Human and Machine Intelligence](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Westminster, CO, Nov 4-7, 2019. (**Invited paper**)

- [J44] **Yibo Lin**, Meng Li, Yuki Watanabe, Taiki Kimura, Tetsuaki Matsunawa, Shigeki Nojima and David Z. Pan\*, “[Data Efficient Lithography Modeling with Transfer Learning and Active Data Selection](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Oct, 2019.

- [C43] Wei Li, Yuzhe Ma, Qi Sun, **Yibo Lin**, Iris Hui-Ru Jiang, Bei Yu and David Z Pan, “[Open-MPL: An Open Source Layout Decomposer](#)”, International Conference on ASIC (ASICON),

Chongqing, China, Oct, 2019. (**Invited paper**)

- [C42] **Yibo Lin**, Shounak Dhar, Wuxi Li, Haoxing Ren, Brucek Khailany and David Z. Pan\*, “[DREAMPlace: Deep Learning Toolkit-Enabled GPU Acceleration for Modern VLSI Placement](#)”, ACM/IEEE Design Automation Conference (DAC), Las Vegas, NV, Jun 2-6, 2019. (**Best Paper Award**)
- [C41] Wei Ye, Mohamed Baker Alawieh, **Yibo Lin** and David Z. Pan\*, “[LithoGAN: End-to-End Lithography Modeling with Generative Adversarial Networks](#)”, ACM/IEEE Design Automation Conference (DAC), Las Vegas, NV, Jun 2-6, 2019. (**Best Paper Nomination**)
- [C40] Biying Xu, **Yibo Lin**, Xiyuan Tang, Shaolan Li, Linxiao Shen, Nan Sun and David Z. Pan\*, “[WellGAN: Generative-Adversarial-Network-Guided Well Generation for Analog/Mixed-Signal Circuit Layout](#)”, ACM/IEEE Design Automation Conference (DAC), Las Vegas, NV, Jun 2-6, 2019.
- [C39] Mohamed Baker Alawieh, **Yibo Lin**, Zaiwei Zhang, Meng Li, Qixing Huang and David Z. Pan\*, “[GAN-SRAF: Sub-Resolution Assist Feature Generation Using Conditional Generative Adversarial Networks](#)”, ACM/IEEE Design Automation Conference (DAC), Las Vegas, NV, Jun 2-6, 2019.
- [C38] **Yibo Lin**, Zhao Song and Lin F. Yang\*, “[Towards a Theoretical Understanding of Hashing-Based Neural Nets](#)”, International Conference on Artificial Intelligence and Statistics (AISTATS), Okinawa, Japan, Apr 16-18, 2019.
- [C37] Biying Xu, Shaolan Li, Chak-Wa Pui, Derong Liu, Linxiao Shen, **Yibo Lin**, Nan Sun and David Z. Pan\*, “[Device Layer-Aware Analytical Placement for Analog Circuits](#)”, ACM International Symposium on Physical Design (ISPD), San Francisco, CA, Apr 14-17, 2019. (**Best Paper Nomination**)
- [J36] Ying Chen, **Yibo Lin**, Tianyang Gai, Yajuan Su\*, Yayi Wei\* and David Z. Pan, “[Semi-Supervised Hotspot Detection with Self-Paced Multi-Task Learning](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Apr, 2019.
- [C35] Wei Ye, Mohamed Baker Alawieh, Meng Li, **Yibo Lin** and David Z. Pan\*, “[Litho-GPA: Gaussian Process Assurance for Lithography Hotspot Detection](#)”, IEEE/ACM Proceedings Design, Automation and Test in Europe (DATE), Florence, Italy, Mar 25-29, 2019.
- [J34] Jing Chen, **Yibo Lin**, Yufeng Guo, Maolin Zhang, Mohamed Baker Alawieh and David Z. Pan\*, “[Lithography Hotspot Detection Using a Double Inception Module Architecture](#)”, Journal of Micro/Nanolithography, MEMS, and MOEMS (JM3), Mar, 2019.
- [C33] Ying Chen, **Yibo Lin**, Tianyang Gai, Yajuan Su\*, Yayi Wei\* and David Z. Pan, “[Semi-Supervised Hotspot Detection with Self-Paced Multi-Task Learning](#)”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Tokyo, Japan, Jan 21-24, 2019.
- [C32] Wei Ye, Mohamed Baker Alawieh, **Yibo Lin** and David Z. Pan\*, “[Tackling Signal Electromigration with Learning-Based Detection and Multistage Mitigation](#)”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Tokyo, Japan, Jan 21-24, 2019.
- [C31] Wei Ye, **Yibo Lin**, Meng Li, Qiang Liu and David Z. Pan\*, “[LithoROC: Lithography Hotspot Detection with Explicit ROC Optimization](#)”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Tokyo, Japan, Jan 21-24, 2019. (**Invited paper**)

- [C30] **Yibo Lin**, Mohamed Baker Alawieh, Wei Ye and David Z. Pan\*, “Machine Learning for Yield Learning and Optimization”, IEEE International Test Conference (ITC), Phoenix, Arizona, Oct, 2018. (**Invited paper**)
- [J29] **Yibo Lin**, Bei Yu, Meng Li and David Z. Pan\*, “Layout Synthesis for Topological Quantum Circuits with 1D and 2D Architectures”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Aug, 2018.
- [J28] Meng Li, Bei Yu, **Yibo Lin**, Xiaoqing Xu, Wuxi Li and David Z Pan, “A practical split manufacturing framework for trojan prevention via simultaneous wire lifting and cell insertion”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Jul, 2018.
- [C27] Jiong Zhang, **Yibo Lin**, Zhao Song and Inderjit S Dhillon\*, “Learning Long Term Dependencies via Fourier Recurrent Units”, International Conference on Machine Learning (ICML), Stockholm, Sweden, Jun 10-15, 2018.
- [J26] Xiaoqing Xu, **Yibo Lin**, Meng Li, Tetsuaki Matsunawa, Shigeki Nojima, Chikaaki Kodama, Toshiya Kotani and David Z. Pan\*, “Subresolution Assist Feature Generation With Supervised Data Learning”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Jun, 2018.
- [J25] **Yibo Lin**, Bei Yu, Xiaoqing Xu, Jhih-Rong Gao, Natarajan Viswanathan, Wen-Hao Liu, Zhuo Li, Charles J Alpert and David Z. Pan\*, “MrDP: Multiple-row detailed placement of heterogeneous-sized cells for advanced nodes”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Jun, 2018.
- [J24] Wuxi Li, **Yibo Lin**, Meng Li, Shounak Dhar and David Z. Pan\*, “UTPlaceF 2.0: A High-Performance Clock-Aware FPGA Placement Engine”, ACM Transactions on Design Automation of Electronic Systems (TODAES), Jun, 2018.
- [C23] **Yibo Lin**, Yuki Watanabe, Taiki Kimura, Tetsuaki Matsunawa, Shigeki Nojima, Meng Li and David Z. Pan\*, “Data Efficient Lithography Modeling with Residual Neural Networks and Transfer Learning”, ACM International Symposium on Physical Design (ISPD), Monterey, CA, Mar 25-28, 2018.
- [C22] Meng Li, Bei Yu, **Yibo Lin**, Xiaoqing Xu, Wuxi Li and David Z. Pan\*, “A Practical Split Manufacturing Framework for Trojan Prevention via Simultaneous Wire Lifting and Cell Insertion”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Jeju, Korea, Jan 22-25, 2018.
- [C21] Che-Lun Hsu, Shaofeng Guo, **Yibo Lin**, Xiaoqing Xu, Meng Li, Runsheng Wang, Ru Huang and David Z Pan, “Layout-dependent aging mitigation for critical path timing”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Jeju, Korea, Jan 22-25, 2018.
- [C20] **Yibo Lin**, Peter Debacker, Darko Trivkovic, Ryoung-han Kim, Praveen Raghavan and David Z. Pan\*, “Patterning Aware Design Optimization of Selective Etching in N5 and Beyond”, IEEE International Conference on Computer Design (ICCD), Boston, MA, Nov 5-8, 2017.
- [C19] **Yibo Lin**, Xiaoqing Xu, Jiaojiao Ou and David Z Pan, “Machine learning for mask/wafer hotspot detection and mask synthesis”, Photomask Technology, Oct 16, 2017. (**Invited paper**)

- [J18] **Yibo Lin**, Bei Yu and David Z. Pan\*, “[High performance dummy fill insertion with coupling and uniformity constraints](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Sep, 2017.
- [C17] Wei Ye, **Yibo Lin**, Xiaoqing Xu, Wuxi Li, Yiwei Fu, Yongsheng Sun, Canhui Zhan and David Z. Pan\*, “[Placement Mitigation Techniques for Power Grid Electromigration](#)”, IEEE International Symposium on Low Power Electronics and Design (ISLPED), Taipei, Jul 24-26, 2017.
- [J16] **Yibo Lin**, Bei Yu, Biying Xu and David Z. Pan\*, “[Triple patterning aware detailed placement toward zero cross-row middle-of-line conflict](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Jul, 2017.
- [J15] Xiaoqing Xu, **Yibo Lin**, Meng Li, Jiaojiao Ou, Brian Cline and David Z. Pan\*, “[Redundant local-Loop insertion for unidirectional routing](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), Jul, 2017.
- [C14] Xiaoqing Xu, **Yibo Lin**, Vinicius Livramento and David Z. Pan\*, “[Concurrent Pin Access Optimization for Unidirectional Routing](#)”, ACM/IEEE Design Automation Conference (DAC), Austin, TX, Jun 18-22, 2017.
- [J13] **Yibo Lin**, Bei Yu, Yi Zou, Zhuo Li, Charles J Alpert and David Z. Pan\*, “[Stitch aware detailed placement for multiple e-beam lithography](#)”, Integration, the VLSI Journal, Jun, 2017. (**Best Paper Award**)
- [J12] **Yibo Lin**, Xiaoqing Xu, Bei Yu, Ross Baldick and David Z. Pan\*, “[Triple/quadruple patterning layout decomposition via linear programming and iterative rounding](#)”, Journal of Micro/Nanolithography, MEMS, and MOEMS (JM3), Jun, 2017.
- [C11] Jiaojiao Ou, Bei Yu, Xiaoqing Xu, Joydeep Mitra, **Yibo Lin** and David Z. Pan\*, “[DSAR: DSA aware routing with simultaneous DSA guiding pattern and double patterning assignment](#)”, ACM International Symposium on Physical Design (ISPD), Portland, OR, Mar 19-22, 2017.
- [C10] **Yibo Lin**, Bei Yu, Xiaoqing Xu, Jhih-Rong Gao, Natarajan Viswanathan, Wen-Hao Liu, Zhuo Li, Charles J Alpert and David Z. Pan\*, “[MrDP: Multiple-row detailed placement of heterogeneous-sized cells for advanced nodes](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Austin, TX, Nov 7-10, 2016.
- [C9] Yudong Tao, Changhao Yan\*, **Yibo Lin**, Sheng-Guo Wang, David Z. Pan and Xuan Zeng, “[A novel unified dummy fill insertion framework with SQP-based optimization method](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Austin, TX, Nov 7-10, 2016.
- [C8] **Yibo Lin**, Bei Yu and David Z. Pan\*, “[Detailed placement in advanced technology nodes: a survey](#)”, IEEE International Conference on Solid-State and Integrated Circuit Technology (ICSICT), Hangzhou, China, Oct 25-28, 2016. (**Invited paper**)
- [J7] Bei Yu, Xiaoqing Xu, Subhendu Roy, **Yibo Lin**, Jiaojiao Ou and David Z. Pan\*, “[Design for manufacturability and reliability in extreme-scaling VLSI](#)”, Science China Information Sciences, May, 2016. (**Invited paper**)
- [C6] **Yibo Lin**, Xiaoqing Xu, Bei Yu, Ross Baldick and David Z. Pan\*, “[Triple/quadruple patterning layout decomposition via novel linear programming and iterative rounding](#)”, Proceedings

of SPIE, San Jose, CA, Feb 21-25, 2016. (**Best Student Paper Award**)

- [C5] **Yibo Lin**, Bei Yu, Yi Zou, Zhuo Li, Charles J Alpert and David Z. Pan\*, “[Stitch aware detailed placement for multiple e-beam lithography](#)”, IEEE/ACM Asia and South Pacific Design Automation Conference (ASPDAC), Macau, China, Jan 25-28, 2016.
- [C4] **Yibo Lin**, Bei Yu, Biying Xu and David Z. Pan\*, “[Triple patterning aware detailed placement toward zero cross-row middle-of-line conflict](#)”, IEEE/ACM International Conference on Computer-Aided Design (ICCAD), Austin, TX, Nov 2-6, 2015.
- [C3] **Yibo Lin**, Bei Yu and David Z. Pan\*, “[High performance dummy fill insertion with coupling and uniformity constraints](#)”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 7-11, 2015.
- [C2] David Z. Pan\*, Lars Liebmann, Bei Yu, Xiaoqing Xu and **Yibo Lin**, “[Pushing multiple patterning in sub-10nm: are we ready?](#)”, ACM/IEEE Design Automation Conference (DAC), San Francisco, CA, Jun 7-11, 2015. (**Invited Paper**)
- [J1] Bei Yu, Xiaoqing Xu, Jhih-Rong Gao, **Yibo Lin**, Zhuo Li, Charles Alpert and David Z. Pan\*, “[Methodology for standard cell compliance and detailed placement for triple patterning lithography](#)”, IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems (TCAD), May, 2015.