Press Release

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TAICHIP Winter School 2025 at IHP: Advancing AI Chip Reliability and Innovation

An international platform for researchers to explore cutting-edge AI hardware solutions

Leibniz Institute for High Performance Microelectronics

Frankfurt (Oder). The first edition of the TAICHIP Winter School took place from February 10–12, 2025, at IHP Leibniz Institute for High Performance Microelectronics in Frankfurt (Oder). Organized as part of the TAICHIP project, this annual event aims to foster collaboration and knowledge exchange among PhD students, researchers, and experts in the field of AI-driven chip design.

A total of 42 participants from seven countries travelled to IHP for the three-day event. The theme of the inaugural Winter School was "Reliable Hardware Infrastructure for Upcoming AI Chips," reflecting the increasing importance of resilient and efficient semiconductor technologies in artificial intelligence applications. The event featured an extensive technical program covering both technical and transferable skills essential for research and development in AI chip design. A key highlight was the PhD Forum, providing young researchers with the opportunity to present their work and engage with leading academics and industry professionals.

Experts from esteemed institutions from all over Europe participated in the Winter School. It featured keynote talks, lectures, and discussions on various critical topics, including architectures and AI-based applications, AI-driven high-performance resilient systems, processor AI-based fault-injection simulation, as well as ethical considerations and intellectual property rights in AI technologies. Participants had the opportunity to engage with cutting-edge research and gain insights into the latest advancements in AI-driven chip development. A visit to IHP's state-of-the-art laboratories and cleanroom facilities was also part of the program, offering participants first-hand insights into IHP's advanced chip manufacturing process.

The international event provided a unique platform for attendees to exchange ideas, establish new collaborations, and engage with the international research community.
Beyond the technical sessions, the event included a networking dinner at a local restaurant, offering attendees the chance to connect in a more informal setting and foster long-term professional relationships.

By bringing together researchers from different backgrounds and expertise areas, the format of this winter school aims to accelerate advancements in reliable and efficient AI hardware systems, as Dr Fabian Luis Vargas from IHP also emphasised in his closing speech: "The TAICHIP Winter School is a crucial initiative for driving forward innovation in AI chip design and, by being organised at IHP, has found an ideal place to achieve these goals and to bring together future and established experts."

The TAICHIP Winter School hosted by IHP was the first of a series of 4 schools to be organized under the umbrella of the EU-financed TAICHIP Twinning Project. The upcoming events will be organized at by Taltech (Estonia), ETH Zurich (Switzerland), École Centrale

IHP GmbH • Leibniz Institute for High Performance Microelectronics | Leibniz-Institut für innovative Mikroelektronik
Im Technologiepark 25 • 15236 Frankfurt (Oder) • Tel.: +49 335 5625 0 • E-Mail: ihp@ihp-microelectronics.com

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de Lyon - ECL (France) and University of Manchester – UOM (UK). For more details about future editions of the TAICHIP Winter School visit
taichip.taltech.ee/events/

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TAICHIP Winter School, ©IHP

Contact:
Dr. Anna Sojka-Piotrowska
Marketing and Strategy
IHP GmbH – Leibniz Institute for High Performance Microelectronics/
Leibniz-Institut für innovative Mikroelektronik
Im Technologiepark 25
15236 Frankfurt (Oder)
Fon: +49 335 5625 409
E-Mail: sojka@ihp-microelectronics.com

About IHP:
The IHP is an institute of the Leibniz Association and conducts research and development of silicon-based systems and ultrahigh frequency circuits and technologies including new materials. It develops innovative solutions for application areas such as wireless and broadband communication, security, medical technology, industry 4.0, automotive industry, and aerospace. The IHP employs approximately 365 people. It operates a pilot line for technological developments and the preparation of high-speed circuits with 0.13/0.25 µm SiGe BiCMOS technologies, located in a 1500 m² DIN EN ISO 14644-1 3 certified clean room.

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