Lecture Series: Requirements and methodologies for design of integrated circuits from industrial production perspective

- The lecture provides both overview as well as selected details of the whole lifetime of an integrated circuit: from first idea, system and circuits design phase via prototype evaluation and test development to ramp-up and application support. Also the special needs of automotive integrated circuits will be investigated, like thorough methodologies for verification, reliability and functional safety

- All lectures given by experts from local industry and institutes

- Summer semester 2025
  Tue + Wed 16:40 – 18:10 BAR I88

- Full program & agenda see
  www.silicon-saxony.de/en/services/skilled-worker-activities/lecture-series-ic-design/

NES-E-LSer-23

- 5 ECTS in NES, open for all Diploma course as "Zusatzmodul"
- Written exam (90 min) with selected questions from each lecture
- Contact: graupner@ieee.org, stefan.schulz@zfm.tu-chemnitz.de

NES-E-RVL-23
Requirements and methodologies for design
of integrated circuits from industrial production perspective

Date		Time	Location	Lecturer	Topic
2025-04-08	Tue	16:40	BAR I88	n/a	No Lecture
2025-04-09	Wed	16:40	BAR I88	Mario Orgis, Last Mile Semiconductor	Lifetime on an IC from a Managers Perspective
2025-04-15	Tue	16:40	BAR I88	Daniel Kollar, Racyics	From specification to the System on Chip – Which jobs and tasks are required to design a SoC IC?
2025-04-16	Wed	16:40	BAR I88	Achim Graupner, Bosch Sensortec	The Beauty of IC Design
2025-04-22	Tue	16:40	BAR I88	Karsten Einwich, Coseda	Electronic System Level (ESL) Modelling and Simulation
2025-04-23	Wed	16:40	BAR I88	Julian Meyer, Racyics	RTL2GDS ASIC Design Flow
2025-04-29	Tue	16:40	BAR I88	Kay-Uwe Giering, Fraunhofer IIS EAS	Overview on integrated-circuit reliability
2025-04-30	Wed	16:40	BAR I88	Stefan Getzlaff, Renesas	Analog Frontend Design for Sensor Signal Conditioner
2025-05-06	Tue	16:40	BAR I88	Thomas Klotz, Bosch Sensortec	Advanced verification methods 1
2025-05-07	Wed	16:40	BAR I88	Thomas Klotz, Bosch Sensortec	Advanced verification methods 2
2025-05-13	Tue	16:40	BAR I88	Marcel Jotschke, Achim Graupner, Bosch	Device variation: Analog Design Practises for Six-Sigma Yield
2025-05-14	Wed	16:40	BAR I88	Gerald Dallmann, SGS Fresenius	Application of physical failure analysis methods for failure localization, defect characterization and layout analysis
2025-05-20	Tue	16:40	BAR I88	Love Cederström, Racyics	Power Integrity and Chip-Package-Board Co-Design
2025-05-21	Dies				
2025-05-27	Tue	16:40	BAR I88	Jeannette Zarbock + Mohammed El-Shennawy, Melexis	Requirement engineering and Functional Safety in Automotive
2025-05-28	Wed	16:40	BAR I88	n/a	No Lecture
2025-06-03	Tue	16:40	BAR I88	Jeannette Zarbock + Sascha Beyer, Melexis	EMC (ElectroMagnetic Compatibility) in Automotive
2025-06-04	Wed	16:40	BAR I88	Christoph Bukethal + Stefan Tangelst, Infineon Technologies Dresden	Pre- and Post-silicon Verification of Embedded Power ICs
2025-06-10	holiday				
2025-06-11	holiday				
2025-06-17	Tue	16:40	BAR I88	Andy Heinig, Fraunhofer IIS	Introduction into Advanced Packaging
2025-06-18	Wed	16:40	BAR I88	Andy Heinig, Fraunhofer IIS	Design Space Exploration and Design of Advanced Packages
2025-06-24	Tue	16:40	BAR I88	Thilo Wagner, Racyics	Design for Test (DfT) – How to test a SoC IC in milliseconds
2025-06-25	Wed	16:40	BAR I88	Sebastian Zwietz, David Ihle, Indie	Power Management in Automotive-ICs
2025-07-01	Tue	16:40	BAR I88	Michael Jonas, Infineon Technologies Dresden	Semiconductor Test in Automotive Industry Part I
2025-07-02	Wed	16:40	BAR I88	Stefan Trost, Infineon Technologies Dresden	Semiconductor Test – DfT based Diagnosis
2025-07-08	Tue	16:40	BAR I88	tba	tba
2025-07-09	Wed	16:40	BAR I88	tba	tba
2025-07-15	Tue	16:40	BAR I88	tba	tba
2025-07-16	Wed	16:40	BAR I88	tba	tba