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Biography:

Carsten Wolff is Professor for Computer Science at Dortmund University of Applied Sciences and Arts (FH Dortmund) since 2007. He studied electrical engineering and economics at Paderborn University and did a PhD in information technology at the Heinz Nixdorf Institute. In his industrial career, Dr. Wolff was in the semiconductor industry (Infineon AG), working in Germany, P.R. China, and Taiwan. At FH Dortmund, he is the spokesman of the DAAD strategic partnership „EuroPIM – European Partnership for Project and Innovation Management", and the co-founder of the Master's Embedded Systems for Mechatronics and Master Digital Transformation. From 2011-2015 he was the vice-rector for study, teaching, and international relations. From 2019-2022 he was the provost and vice-rector of the newly founded Astana IT University (AITU) in Kazakhstan. From 2015-2018 he was the spokesman of the industry-university cluster ruhrvalley. Carsten Wolff is a founding member and director of the "Institute for the Digital Transformation of Application and Living Domains (IDiAL)". Carsten Wolff is a co-founder of Smart Mechatronics GmbH and CP contech electronic GmbH.

Title of the talk: Model-based Systems and Software Engineering for Automotive Systems

Abstract: The automotive future is facing three major trends: automated driving, electric driving, and cloud-connected car. These trends are based on software, transforming cars into software-defined products. Nevertheless, classic software engineering does not sufficiently reflect the requirements of designing cyber-physical systems where the physical world still is a very relevant factor. Two key areas where systems and software engineering methods need to be improved are: 1) the validation and verification of automotive systems in complex real-word scenarios, and 2) the guaranteed compliance with real-time requirements of the physical domain. For both aspects, recent model-based approaches are presented which are validated in real automotive systems engineering scenarios.