

UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II

**DOTTORATO DI RICERCA / PHD PROGRAM IN
INFORMATION TECHNOLOGY AND ELECTRICAL ENGINEERING**

Seminar announcement

July 19th 2023, 11:00 - 12:00 am

Room C2A, Building 3, DIETI Dept. - Via Claudio, 21 - NAPOLI



Prof. Dr. Odej Kao

Technische Universität Berlin, Berlin, Germany

Distributed and Operating Systems research group

<https://distributedsystems.berlin/>

<https://www.tu.berlin/dos/>

Resource Management and Anomaly Detection for Predictable IT Operation

Abstract: This talk will present an overview of the current research work in the group distributed and operating systems from the TU Berlin, Germany. After a brief discussion of the main results in the areas of big data engines (Apache Flink), reusable performance models for distributed dataflow jobs, and carbon-aware computing, the talk will focus on detecting and mitigating anomalies in large IT infrastructures to

achieve predictable fault tolerance. Examples for using metric data, logs, and traces for incident detection and deployment verification as well as use cases in automatic performance diagnosis and recovery for microservices as well as SSD failure prediction through logs illustrate the current research. The talk will conclude with an outlook to the next steps regarding log analytics.

Lecturer short bio: *Odej Kao is full professor of distributed and operating systems at the Technical University of Berlin and chairman of the Einstein Center Digital Future, in which 50 industry-funded professorships research interdisciplinary issues of digitization, from technology to business models and social impacts. He is a chairman of the German Research Network DFN, former dean of the faculty of computer science, and spent time as a visiting professor at the University of California at Irvine, National Dong Hwa University in Taiwan, Massey University in New Zealand, and University of Technology Sydney. Dr. Kao is a graduate from the TU Clausthal (master computer science in 1995, PhD in 1997, habilitation in 2002). In 2002 he joined the Paderborn University as associated professor for operating systems and director of the center for parallel computing. In 2006, he moved to Berlin and focused his research on AIOps, big data / streaming analytics, cloud computing, and fault tolerance. Prof. Kao is involved as a PI in BIFOLD (National Institute on Foundations of Learning and Data), Collaborative Research Center FONDA (Foundations of Workflows for Large-Scale Scientific Data Analysis), and BBDC (National Big Data Center). Prof. Kao is a member of numerous program and review committees and has published over 400 papers in peer-reviewed proceedings and journals.*

For information: Prof. Roberto Natella (DIETI, UniNA) – roberto.natella@unina.it (organizer)