UNIVERSITÉ DE FRIBOURG
UNIVERSITÄT FREIBURG

DEPARTEMENT D'INFORMATIQUE
DEPARTEMENT FÜR INFORMATIK

INFORMATICS COLLOQUIUM

Speaker:

Prof. Pinar Tözün, IT University of Copenhagen, Denmark

The Different Scales of Resource-Aware Deep Learning & How to Tackle Them

Abstract:
Today, deep learning runs at various scales of hardware resources from the cloud and high-performance computing (HPC) centers to edge and Internet-of-Things (IoT) devices. To achieve resource-aware deep learning, we must understand the needs and challenges of deep learning applications at these different scales. In this talk, we will first investigate ways of improving hardware utilization on modern and powerful CPU-GPU co-processors, which serve as the commodity hardware for deep learning in the cloud and HPC, using workload collocation. Then, we will investigate performance and power trade-offs for deep-learning-based image analysis in space using resource-constrained edge/IoT devices.

Bio:
Pinar Tözün is an Associate Professor at IT University of Copenhagen. Before ITU, she was a research staff member at IBM Almaden Research Center. Prior to joining IBM, she received her PhD from EPFL. Her thesis received ACM SIGMOD Jim Gray Doctoral Dissertation Award Honorable Mention in 2016. Her research focuses on resource-aware machine learning, performance characterization of data-intensive systems, and scalability and efficiency of data-intensive systems on modern hardware.

Date and time:	*Monday, **December 04th, 2023**, 11.00 am.*
Location:	*Pérolles 21, room E040, Bd de Pérolles 90, Fribourg*
Contact person:	*Prof. Philippe Cudré-Mauroux*

The colloquium is free and open to the public.