Petra Mutzel

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Fri 20 May
3:00pm CET

Algorithmic Data Science

Abstract: The area of algorithmic data science offers new opportunities for researchers in the algorithmic and the optimization community. In this talk we will first survey four fundamental problems for analysing data. The basis for these problems are concepts for distance and similarity. We will discuss similarity concepts for graphs that are relevant for analysis tasks on graph data sets. These approaches are increasingly applied in the context of data analysis tools for systems with a network structure. Applications are, e.g., learning tasks in drug design, social network analysis, and geodesy.

Bio: Petra Mutzel is professor of Computational Analytics at the University of Bonn, where she is also the scientific director of the High Performance Computing and Analytics Lab at the Digital Science Center. Before she was professor at TU Dortmund University and at Vienna University of Technology. She received her Ph.D. in Computer Science at the University of Cologne in 1994, followed by a PostDoc position at the Max Planck Institute for Informatics in Saarbrücken. Her research focuses on algorithm engineering, algorithmic data analysis, and combinatorial optimization for graphs and networks. Currently, the main application areas are in cheminformatics, social and biological network analysis, statistical physics, and geodesy. She is a member of the Steering Committees of ESA, ALENEX, and WALCOM, and Associate Editor of the ACM Journal on Experimental Algorithmics, Journal of Graph Algorithms and Applications (JGAA), and Mathematical Programming Computation (MPC).

Link to the Zoom session:
`https://us02web.zoom.us/j/81100173104?pwd=HTAZbKF9g2xEHgWl3y68G3v4oSyj9L.1`