

Einladung zu einem Promotionsvortrag

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| Vortragender: | Caner Bektas, M. Sc. |
| Thema: | Machine Learning-Enabled Dimensioning of Slicing-Based Private Mobile Communication Networks |
| Inhalt: | <p>5G and future mobile communication networks present new possibilities for highly critical applications requiring resilient communication. In response, private 5G networks have emerged, offering localized solutions, while the network slicing technology allows for tailored services within a single infrastructure. This thesis proposes new solutions for optimizing network slices and planning private 5G networks to meet the challenging demands of highly critical applications and scenarios. Regarding network slicing, a novel approach called SAMUS is introduced, which is a dynamic resource scheduler based on Machine Learning (ML), aimed at achieving low latency for critical slices while maintaining high resource utilization for high throughput applications. Additionally, this thesis introduces an automated network planning approach based on the unsupervised ML method k-means for planning demand-based private 5G networks. This approach offers results comparable to exhaustive search but with significantly reduced computation time. By leveraging this method, possible operators can rapidly deploy private 5G networks, making this approach ideal for temporary or nomadic deployments.</p> |
| Termin: | Mittwoch, 15.05.2024, 14:00 Uhr |
| Ort: | Raum C1-04-105, Campus Nord, Otto-Hahn-Str. 6, 44227 Dortmund Lehrstuhl für Kommunikationsnetze, TU Dortmund |
| Vortragsleitung: | Prof. Dr.-Ing. Christian Wietfeld |

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Dekanat für Elektrotechnik und Informationstechnik
dekanat.etit@tu-dortmund.de