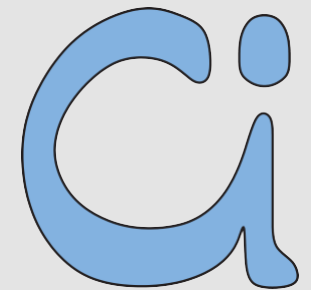# Bayesian Networks

Prof.Dr. Rudolf Kruse

Computational Intelligence Group
Institute for Intelligent Cooperating
Systems Faculty of Computer Science

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Short CV

1979 Diploma in Mathematics (minor computer science) at TU Braunschweig

1980 Dissertation (Fuzzy Systems) , 1984 Habilitation (Data Analysis)

1984-1986 Full-time employee at Fraunhofer Institute (Artificial Intelligence)

1986-1996 Professor of computer science at TU Braunschweig

1996-2017 Professor of computer science at OVGU Magdeburg

Since 2017 Active Emeritus Professor at OVGU Magdeburg

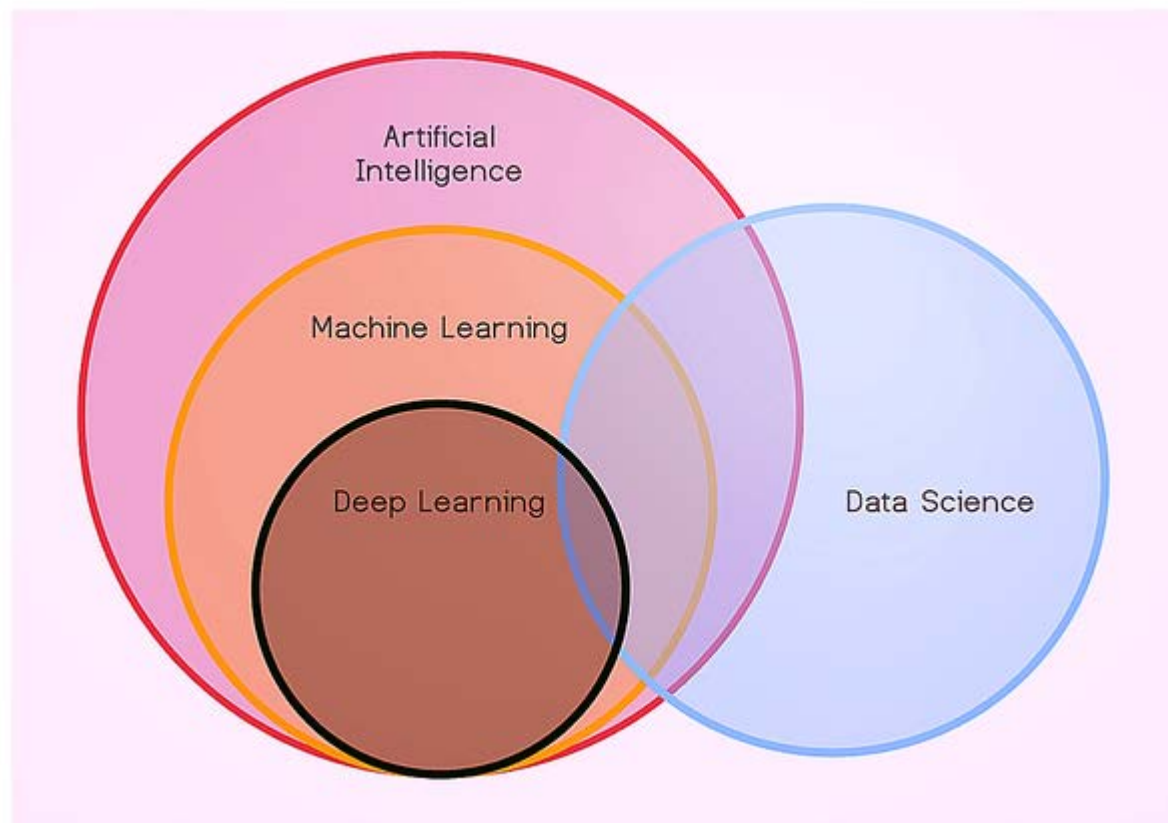**Research Topics**

Data Science and Computational Intelligence
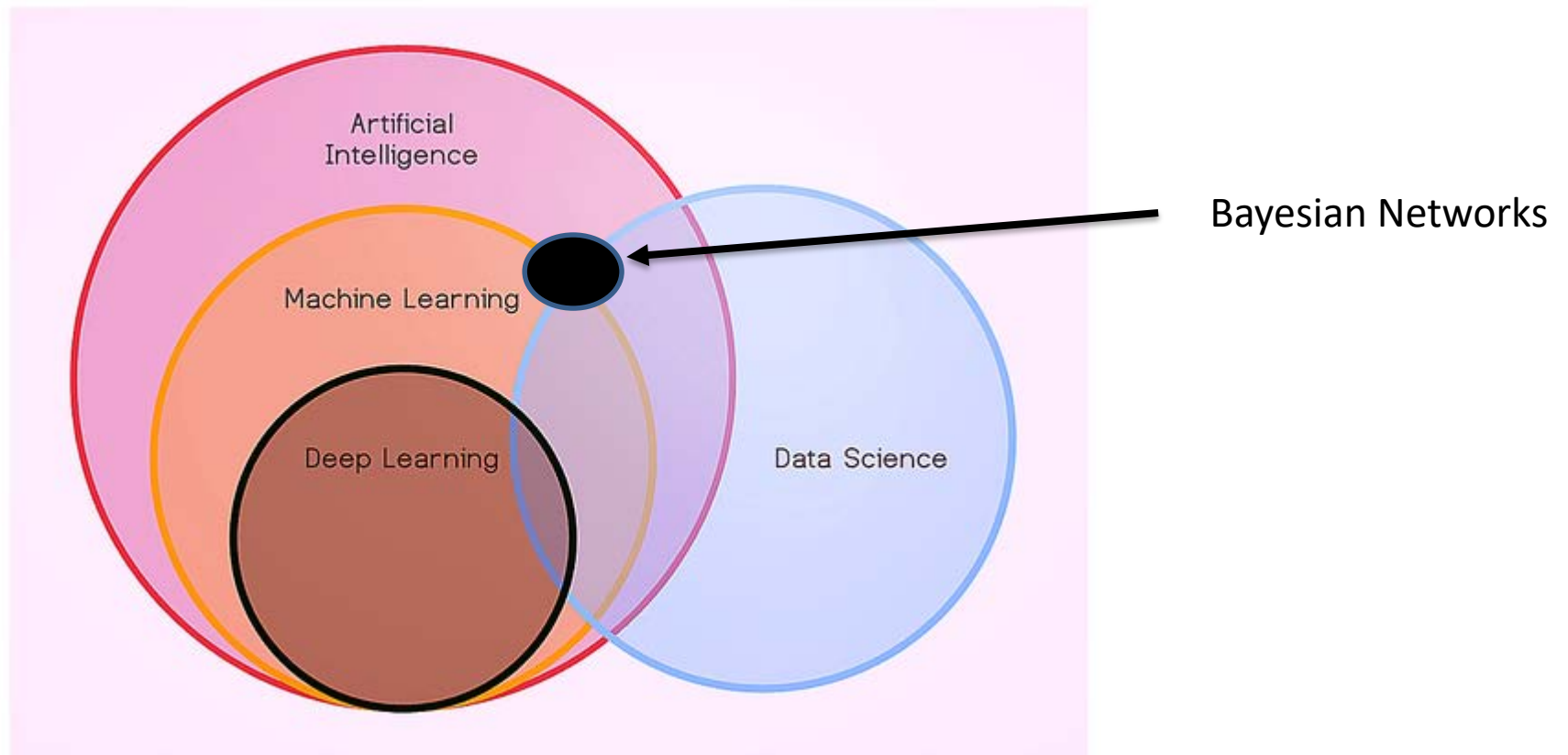
Email   rudolf.kruse@ovgu.de

Website https://www.is.ovgu.de/Team/Rudolf+Kruse.html

An „Intelligent" System is a machine (a program) that is making human perception and understanding available

Several Methods are used for developing Intelligent Systems

Bayesian Networks

About the lecture

Introduction

Rule-based Systems

Elements of Graph Theory

Decomposition

Probability Foundations

Applied Probability Theory
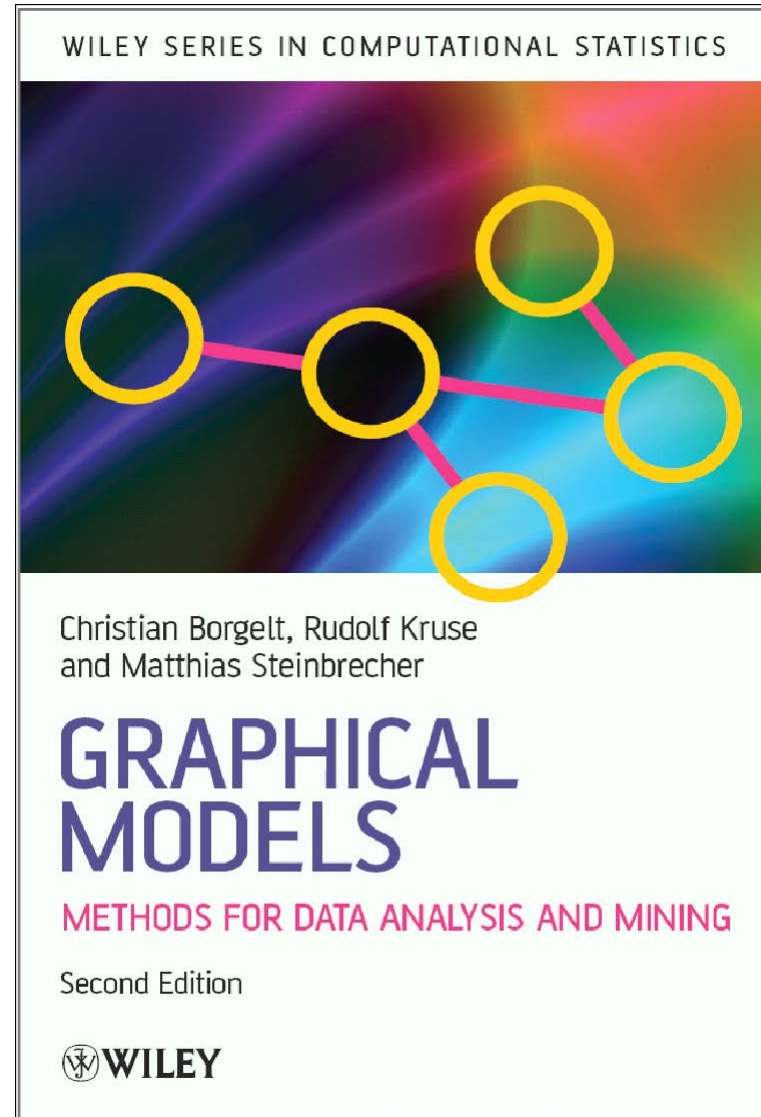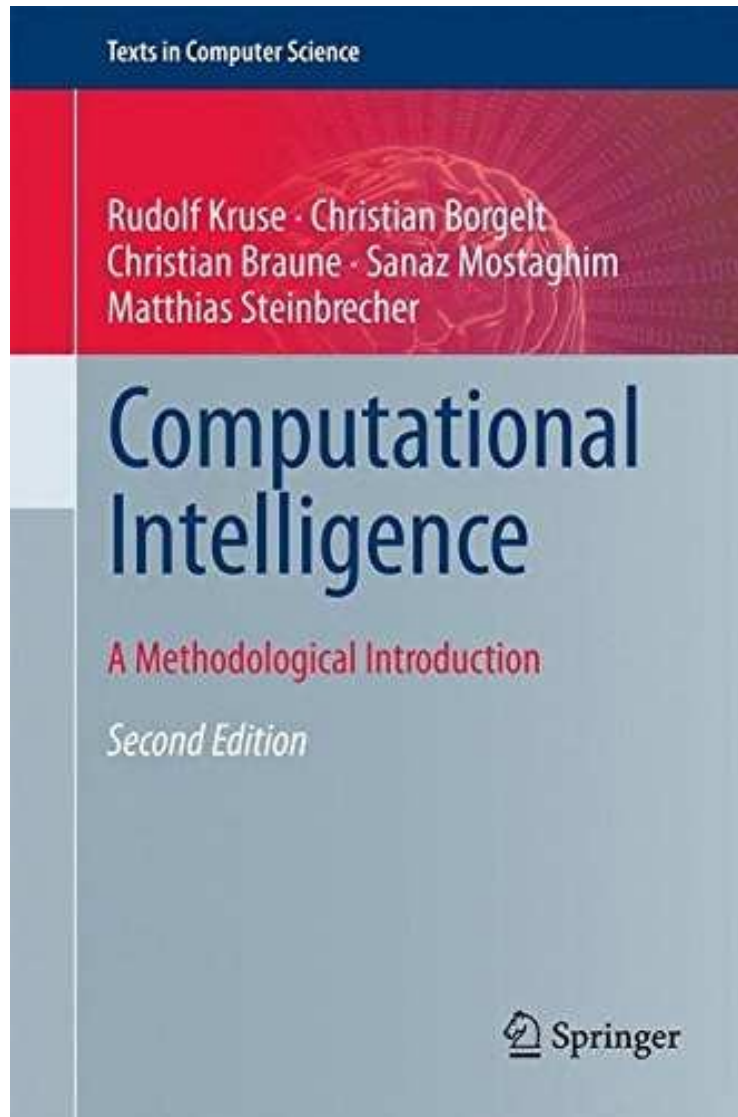
Probabilistic Networks

Propagation in Belief Networks

Learning Graphical Models

Decision Graphs / Influence Diagrams

Causal Networks

http://www.computational-intelligence.eu/

About the lecture

Lecture dates: Wednesdays 11:15 –12:45 Room G29 - 335

Most important Information about the course

https://www.is.ovgu.de/teaching

- Weekly lecture slides as PDF

- Assignment sheets for the exercise

- Announcements

Full material about the course

Videos of lectures, slides, exercise sheets on CICloud

https://www.cicloud.cs.ovgu.de

Tutorial: Dr. Alexander Dockhorn

Email: alexander.dockhorn@ovgu.de

Mode of the tutorial

- Active participation and explanations of your solutions

- Alex will call attention to mistakes and answer questions

- Pure 'calculations' of sample solution is not the purpose

Exam or Certificate

- Contribute well in exercises every week

- Present ≥ 2 solutions to written assignment during exercises

- Tick off ≥ 66% of all written assignments

- Pass written exam (120 min)