



Gebäude B,C

↑ Gebäude D

## **General Model for Epidemic Diseases**

# Make it concrete!

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- Both graduated in Biomathematics at TUM.
- Now in the data science group at Fraunhofer ITMP and the Tropical Institute at LMU Hospital.



#### What we do:

- Research on mathematical models of infectious diseases
- Based on Kermack-McKendrick's SIR model





### General Epidemic Model For Various Infectious Diseases



- Covering all kinds of pathogens and transmission pathways
- Enabling in depth analysis of different compartments (more than in SIR model)



#### **Case Study:**

### **Does it work with real world epidemics?**

- Use this general model for real past epidemics
  - Compare this general model to disease specific models using R
  - Include different pathogens with different transmission pathways (direct human contact, smear infections, vector borne transmissions, ...)







Also feel free to contact me: <u>christoph.sticha@itmp.fraunhofer.de</u>





Thank you See you soon!

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