

Wahlmodul: Measurement & Model (2.7.-27.7.2012)

Week 1:

| Time | Mon, 02.07.12 | Tue, 03.07.12 | Wed, 04.07.12 | Thu, 05.07.12 | Fri, 06.07.12 |
|---------------------|--------------------------------------|---------------------------|-----------------------------|--------------------------|---------------|
| 9-10 | | | | | |
| 10-12 | Probabilistic models in neuroscience | Discrete random variables | Continuous random variables | Moments and correlation | |
| 12-14 | <i>LUNCH</i> | | | | |
| 14-17 ³⁰ | Introduction to Mathematica | Computer-based exercises | Computer-based exercises | Computer-based exercises | |

Week 2:

| Time | Mon, 09.07.12 | Tue, 10.07.12 | Wed, 11.07.12 | Thu, 12.07.12 | Fri, 13.07.12 |
|---------------------|------------------------------|--------------------------|--------------------------|----------------------------------|---------------|
| 9-10 | | | | | |
| 10-12 | Principal component analysis | Conditional probability | Signal + noise | Parametric models and regression | |
| 12-14 | <i>LUNCH</i> | | | | |
| 14-17 ³⁰ | Computer-based exercises | Computer-based exercises | Computer-based exercises | Computer-based exercises | |

Week 3:

| Time | Mon, 16.07.12 | Tue, 17.07.12 | Wed, 18.07.12 | Thu, 19.07.12 | Fri, 20.07.12 |
|---------------------|-------------------------------------|--------------------------|--|--------------------------|---------------|
| 9-10 | | | | | |
| 10-12 | Classification and cluster analysis | Code and information | Stochastic processes in space and time | Markov processes | |
| 12-14 | <i>LUNCH</i> | | | | |
| 14-17 ³⁰ | Computer-based exercises | Computer-based exercises | Computer-based exercises | Computer-based exercises | |

Week 4:

| Time | Mon, 23.07.12 | Tue, 24.07.12 | Wed, 25.07.12 | Thu, 26.07.12 | Fri, 27.07.12 |
|---------------------|--------------------------|--------------------------|--------------------------|------------------------------------|---------------|
| 9-10 | | | | | |
| 10-12 | Poisson processes | Renewal processes | Neuronal point processes | Networks and neuronal interactions | |
| 12-14 | <i>LUNCH</i> | | | | |
| 14-17 ³⁰ | Computer-based exercises | Computer-based exercises | Computer-based exercises | Wrap up | |

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| Exercises | Lecture | Seminar |
|-----------|---------|---------|