

MCnet Summer School '23



School programme

Lectures

- Introduction to Event Generators (Stefan Gieseke)
- Matching and Merging (Leif Gellersen)
- Aspects of the EW Standard Model (Jonas Lindert)
- Model-independent measurements (Jon Butterworth)
- Machine Learning and MC Event Generators (Ramon Winterhalter)
- Monte Carlo Event Generators and heavy ion collisions (Christian Bierlich)
- Computing on Modern Architectures (Enrico Bothmann)
- Quantum Computing (Stefan Prestel)
- Industrial Applications (Jennifer Thompson)
- Diversity in Physics (Mathilde Jauzac)

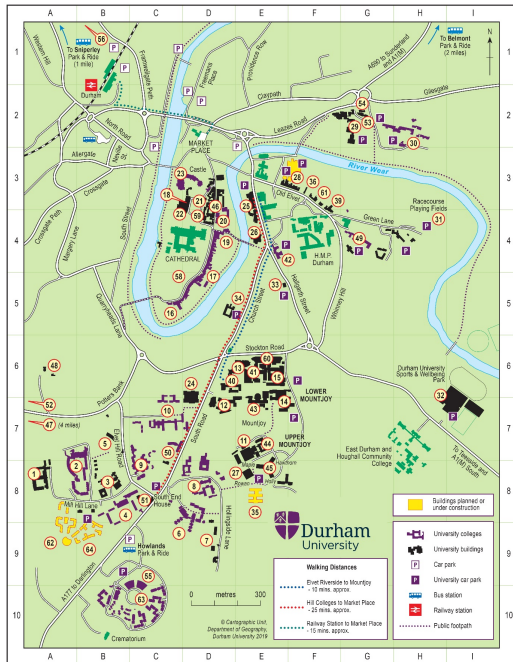
Tutorials

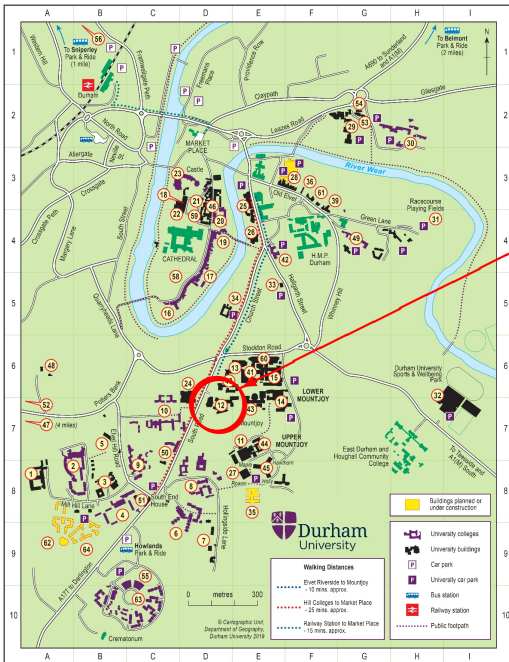
- Monte-Carlo Event Generators (coordinated by Christian Gütschow)
- MADGRAPH, RIVET, and CONTUR frameworks
- Introduction to Computing on GPUs (Enrico Bothmann)

Monday, 10 July	
09:00 – 12:30	Lectures
09:55	Welcome Speaker: Mark Schoenberg (PPH Zurich)
10:00	Introduction to Event Generators 1 Speaker: Stefan Gieseke (Institut für Theoretische Physik, Univ. Karlsruhe)
10:00	Coffee break
10:20	Model-independent Measurements Speaker: Jonathan Butterworth (CERN)
11:30	Introduction to Event Generators 2 Speaker: Stefan Gieseke (Institut für Theoretische Physik, Univ. Karlsruhe)
12:00 – 14:00	Lunch
14:00 – 15:00	Lectures
14:10	Quantum Computing Speaker: Stefan Preußler GitHub repository of ...
16:00 – 18:00	Tutorials
16:00	Monte Carlo Event Generators – Introduction Speaker: Christian Gutscow (CERN)
18:00 – 20:00	Tea / Dinner
20:00 – 22:00	Night Cap
Tuesday, 11 July	
09:00 – 12:30	Lectures
09:10	Introduction to Event Generators 3 Speaker: Stefan Gieseke (Institut für Theoretische Physik, Univ. Karlsruhe)
10:00	Coffee break
10:20	Matching, Merging, and Higher-Order Corrections 1 Speaker: Leif Gallusser
11:30	Diversity in Physics Speaker: Mathias Jaeger
12:00 – 14:00	Lunch
14:00 – 18:00	Tutorials
14:40	Student Presentations
15:20	Madgraph / Rivet / Corfu Tutorial Speaker: Christian Gutscow (CERN)
18:00 – 20:00	Tea / Dinner
20:00 – 22:00	Night Cap

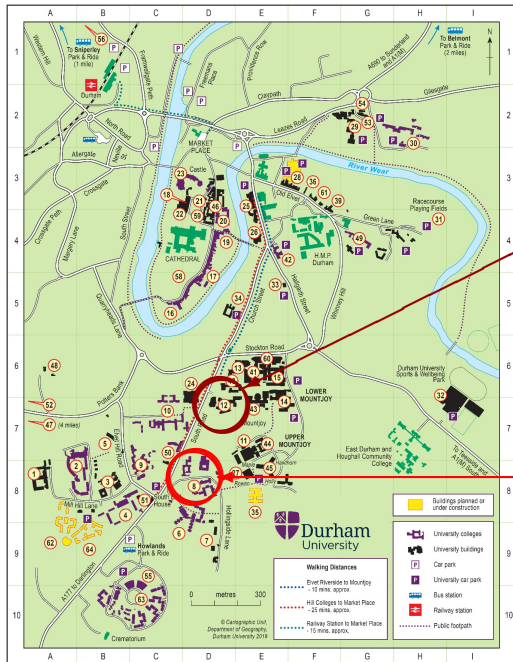
Please download tutorial Docker images well before the tutorials!

Wednesday, 12 July	
09:00 – 12:30	Lectures
09:00	Introduction to Event Generators 4 Speaker: Stefan Gieseke (Institut für Theoretische Physik, Univ. Karlsruhe)
10:00	Coffee break
10:20	Matching, Merging, and Higher-Order Corrections 2 Speaker: Leif Gallusser
11:20	Aspects of the EW Standard Model Speaker: Jonas Lindert (PPH)
12:00 – 14:00	Lunch
14:00 – 15:00	Lectures
14:10	Computing on Modern Architectures Speaker: Enrico Seltenhammer
15:00 – 18:00	Tutorials
15:20	GPU Programming Speaker: Enrico Seltenhammer
18:00 – 20:00	Tea / Dinner
20:00 – 22:00	Night Cap
Thursday, 13 July	
09:00 – 12:30	Lectures
09:00	Monte Carlo Event Generators and Machine Learning Speaker: Stefan Weinzierl
10:00	Coffee break
10:20	Event Generators for Heavy Ion Collisions Speaker: Christian Bierlich
11:30	Industry Talk – From-Particle Physics to Data Engineering and Analysis Speaker: Jacobus Thompson
12:00 – 14:00	Lunch



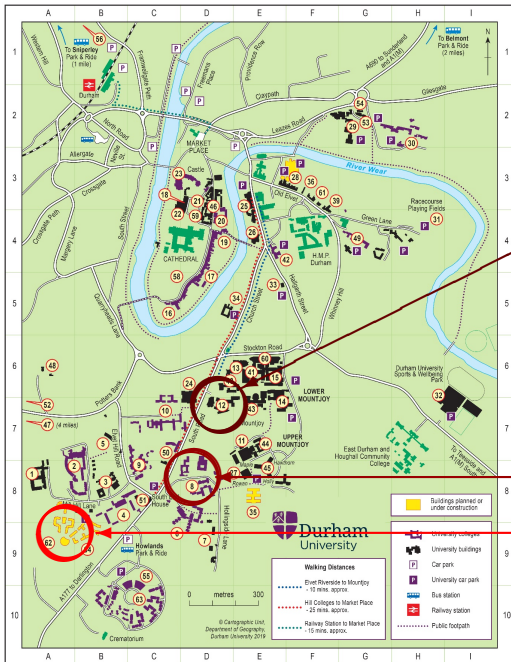


Physics Department and IPPP



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Grey College



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John Snow College