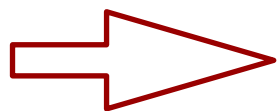


Peter Willendrup

Establishing the learning goals, a look at the programme

Learning goals:

1. Learn McStas basics
2. Build and operate simple instrument models, source + optics + sample + detector
3. Learn basics of instrument-optimisation for your type of instrument
4. Add Mantid / NeXus capabilities
5. Get a better idea of what you want to do with McStas, how to do it, how to get help
6. Get up-to-speed with latest developments and advanced features



Enable your independent work with McStas





HighNes

McStas



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	April 13th Beginners McStas	Time (GMT)	April 14th Instrument design	Time (GMT)	April 15th Advanced
9:00-10:00	15 min Welcome + setting learning goals 15 min McStas live demo 30 min McStas intro + general concepts Responsible: Peter	9:00-10:00	30 min Polarisation 30 min tips and tricks for optimising your simulation Responsibles: Peter + Erik	9:00-10:00	60 min Presentation and demo: Union Responsible: Mads Bertelsen
10:00-10:15	Break	10:00-10:15	Break	10:00-10:15	Break
10:15-11:15	60 min Components basics: 20 min Sources, monitors and slits 40 "Build-along", guided exercise : Create simple instrument with source / det Responsible: Erik	10:15-11:15	Break out groups 1 - theoretical basis of optim: - Diffraction - Spectroscopy - SANS & reflectivity Responsibles: Paul, Rob & Rob	10:15-11:15	60 min Presentation and demo: Guide_bot Responsible: Mads Bertelsen
11:15-11:30	Break	11:15-11:30	Break	11:15-11:30	Break
11:30-12:30	60min Guides and gravity : 20 min presentation 40 min practical Responsible: Peter	11:30-12:30	Break out groups 2 - work on own instrument: - Diffraction - Spectroscopy - SANS & reflectivity Session leads: Paul, Rob & Rob	11:30-12:30	60 min Instrument simulation on GPU: 30 min RAMP 30 min McStas GPU support and 2.x vs 3.0 Responsibles: Gino & Peter
12:30-13:30	Lunch break	12:30-13:30	Lunch break	12:30-13:30	Lunch break
13:30-14:30	60-min Choppers and other rotating optics : 20 min presentation 40 min practical Responsible: Erik	13:30-14:30	40 min McStas -> Mantid, NeXus : 20 min presentation 20 min demo Responsible: Peter	13:30-14:30	Writing your own component /move to 3.0 Break out: a) Build-along, my first component (Erik) b) Convert your 2.x codes to 3.0 (Peter)
14:30-14:45	Break	14:30-14:45	Break	14:30-14:45	Break
14:45-15:45	60-min Samples : 40 min presentation 20 min "Homework assignment" Responsibles: Peter + Erik	14:45-15:45	60 min Practical / "Homework assignment" View instrument and work w/output in Mantid Session leads: Paul, Rob & Rob	14:45-15:45	30 min Q&A, 30 min feedback, continuing from here

School programme - day 1

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McStas



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April 13th Beginners McStas	
9:00-10:00	15 min Welcome + setting learning goals 15 min McStas live demo 30 min McStas intro + general concepts Responsible: Peter
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14:30-14:45	Break
14:45-15:45	60-min Samples : 40 min presentation 20 min "Homework assignment" Responsibles: Peter + Erik

Intro lecture, general principles

Lectures + "recipe" exercises

Sample-lecture, including "advanced McStas grammar..."

+ "homework":
Start off / work on your own instrument-project

In "cookbook" sections,
think ahead toward
your own project:

- * Which neutron source
- * What optics
- * What sample

- K.I.S.S. for now

School programme - day 2

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McStas



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Time (GMT)	April 14th Instrument design
9:00-10:00	30 min Polarisation 30 min tips and tricks for optimising your simulation Responsibles: Peter + Erik
10:00-10:15	Break
10:15-11:15	Break out groups 1 - theoretical basis of optim: - Diffraction - Spectroscopy - SANS & reflectivity Responsibles: Paul, Rob & Rob
11:15-11:30	Break
11:30-12:30	Break out groups 2 - work on own instrument: - Diffraction - Spectroscopy - SANS & reflectivity Session leads: Paul, Rob & Rob
12:30-13:30	Lunch break
13:30-14:30	40 min McStas -> Mantid, NeXus : 20 min presentation 20 min demo Responsible: Peter
14:30-14:45	Break
14:45-15:45	60 min Practical / "Homework assignment" View instrument and work w/output in Mantid Session leads: Paul, Rob & Rob

Lectures on polarisation and instrument optimisation technicals

Discipline-specific parallel-sessions + work-sessions.

Continue on "homework"

Mantid-howto, lecture and demo

Add Mantid backend to your "homework" - or simply continue on it.

School programme - day 3, fancy-fancy “new stuff”



McStas



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Time (GMT)	April 15th Advanced
9:00-10:00	60 min Presentation and demo: Union Responsible: Mads Bertelsen
10:00-10:15	Break
10:15-11:15	60 min Presentation and demo: Guide_bot Responsible: Mads Bertelsen
11:15-11:30	Break
11:30-12:30	60 min Instrument simulation on GPU: 30 min RAMP 30 min McStas GPU support and 2.x vs 3.0 Responsibles: Gino & Peter
12:30-13:30	Lunch break
13:30-14:30	Writing your own component /move to 3.0 Break out: a) Build-along, my first component (Erik) b) Convert your 2.x codes to 3.0 (Peter)
14:30-14:45	Break
14:45-15:45	30 min Q&A, 30 min feedback, continuing from here

Lecture:
Union subsystem - sample
environments and
backgrounds...

Lecture:
Guide_bot, guide optimisation
“robot”

Lectures, speed-up your future:
Using GPU's with RAMP or McStas 3

2 x breakouts:
a) Write your first component
b) Port your instrument / component to McStas 3

Continue “homework”
Give us feedback
Ask your last in-school questions

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McStas

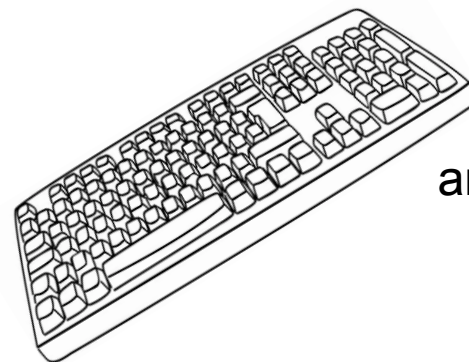


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For the exercise-based work-sessions

- You will benefit from working in pairs, $2 > 1$

- Take turns being the “coder”
(use sharing-feature of
the IDAaaS system)



and the “parallel processor”



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Let's get to it!

