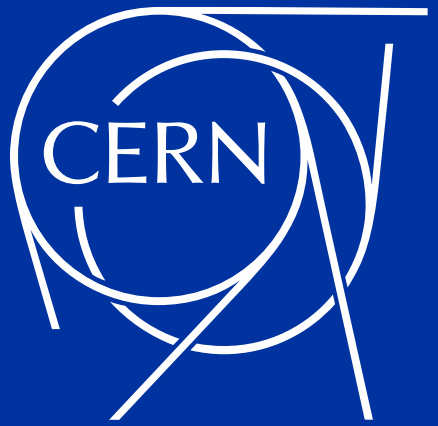

GetDP Workshop

Welcome

Mariusz Wozniak

22.04.2021

Zoom etiquette:

- Mute your microphone when not presenting or asking a question
- Generally, turn off your video, but turn it on when presenting or asking a question
- If you want to ask a question, use the raise-hand feature – in “Reactions” at bottom of zoom screen
  - Session chair will call on you for your question ***after*** the presentation (if time allows)
  - Keep your questions concise and to-the-point

Agenda

Focus on the:
First day -> Tools and methods
Second day -> Applications

Most talks:
50 min talks + 5 min questions
+ 5 min break (buffer)

Discussion session at the end
- specific questions about the talks
- general questions on tools, applications, challenges…
- keep writing questions throughout the workshop in the chat, we will come back to them

13:	0	Mariusz Wozniak	Welcome Introduction, Quiz	Chair: Nicolas Marsic	Anthony Royer Université de Liège	GmshFEM - future direction High Performance Computing
	5					
	10					
	15					
	20					
	25	Bernhard Auchmann PSI	Simulation needs and chalenges for Accelerator magnets			
	30					
	35					
	40					
	45					
	50	Questions			Questions	
	55	Break			Break	
14:	0					
	5					
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	15					
	20	Christophe Geuzaine University of Liège	Introduction and overview Hands On: CAD & Laplace problem in GetDP		Nicolas Marsic TU Darmstadt	SC magnet optimisation Modelling of magnetic shielding
	25					
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	50	Questions			Questions	
	55	Break			Break	
15:	0					
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	20	Christophe Geuzaine University of Liège	Types of problems Multiphysics coupling (OneLab) Tips & tricks		Erik Schnaubelt TU Darmstadt	EM-Th. FE model of SC conductors and coils
	25					
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	50	Questions			Questions	
	55	Break			Break	
16:	0					
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	20	Julien Dular Université de Liège	Superconductors in GetDP		Lorenzo Bortot CERN	Transient effects in accelerators Scalibility and large models
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	50	Questions			Questions	
	55	Break				
17:	0					
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	20	Julien Dular Université de Liège	Various formulations for superconductivity models		All	Questions Remarks Discussion
	25					
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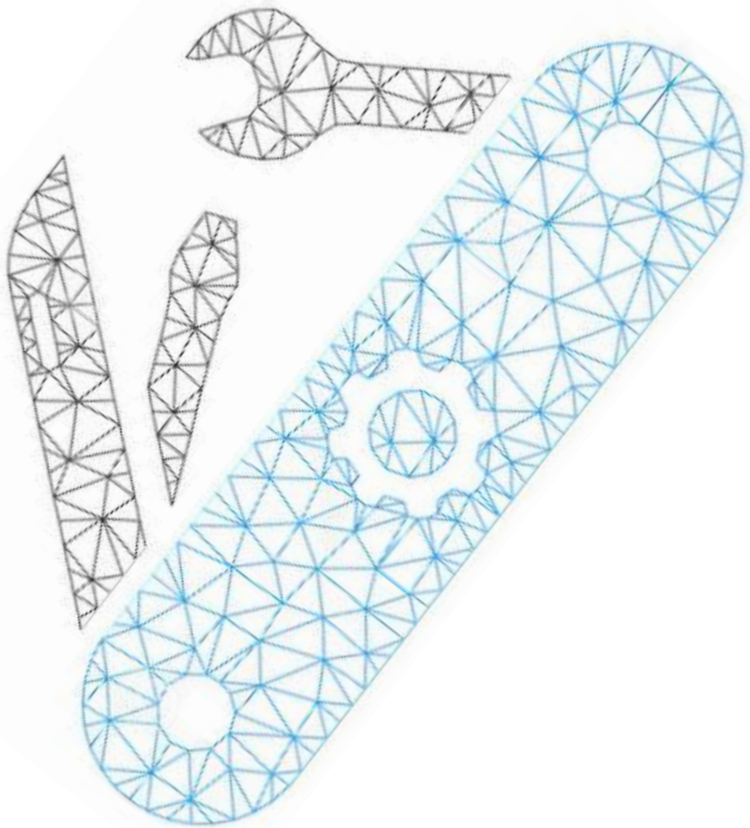
	50	Questions				
	55	Break				

Why GetDP and why the workshop?



Learn how to benefit from the great functionality:

- **modelling freedom (but must be coded yourself)**
- **full reproducibility (source code availability)**
- **interoperability (you can compile it yourself)**
- **easy installation (only one binary)**
- **encapsulated and scriptable (for workflows)**
- **used in industry (e.g. in Siemens NX Magnetics)**
- **academic and open-source community**
- **accessibility (free of cost)**

Other open-source tools are also available, just to name a few:

- **deal.II, Hermes, MFEM, Elmer, DUNE, FEMM, FEniCS, FreeFEM, NGSolve, openCFS…**

Quiz