

Peter Willendrup, Erik Knudsen, Mads Bertelsen

Welcome...

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Peter Willendrup



- Born 1973 in Copenhagen, DK
- BSc. in Physics - RISØ / Univ. CPH 1997 “Neutron diffraction and magnetic structures” (Ho-Er alloys)
- Master-courses in X-ray scattering, atomic physics, solid state physics, “computer physics”, numerical analysis
- MSc. in Physics, BSc. in Mathematics from Univ. CPH year 2000
“Point-spread Functions in Tomography using Filtered Back-projection Reconstruction” (CT/PET/SPECT scanners)
- Software solutions for Neurobiology Research Unit, Copenhagen University Hospital 2000-2002
3D brain-scan visualisation, alignment MR-PET etc...



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DTU

EUROPEAN SPALLATION SOURCE



Neurobiology Research Unit
Rigshospitalet
Copenhagen University Hospital

About the lecturer



- 2002- “development engineer” on the McStas project

- 2002-2007 Risø National Lab
- 2007-2011 Risø DTU
- 2012- DTU Physics
- 2015- 1/3 seconded to ESS DMSC



- External funding from EU projects, ISIS TS2 project, ESS project etc.
Currently ESS project + 



- Daily tasks wrt. McStas:

- Develop new functionality - be it physics or infrastructure-wise
- Work with users to solve their problems (in any area of neutron scattering...)
- Software expert for “anything McStas”
- Teach users about the code and how to use it efficiently



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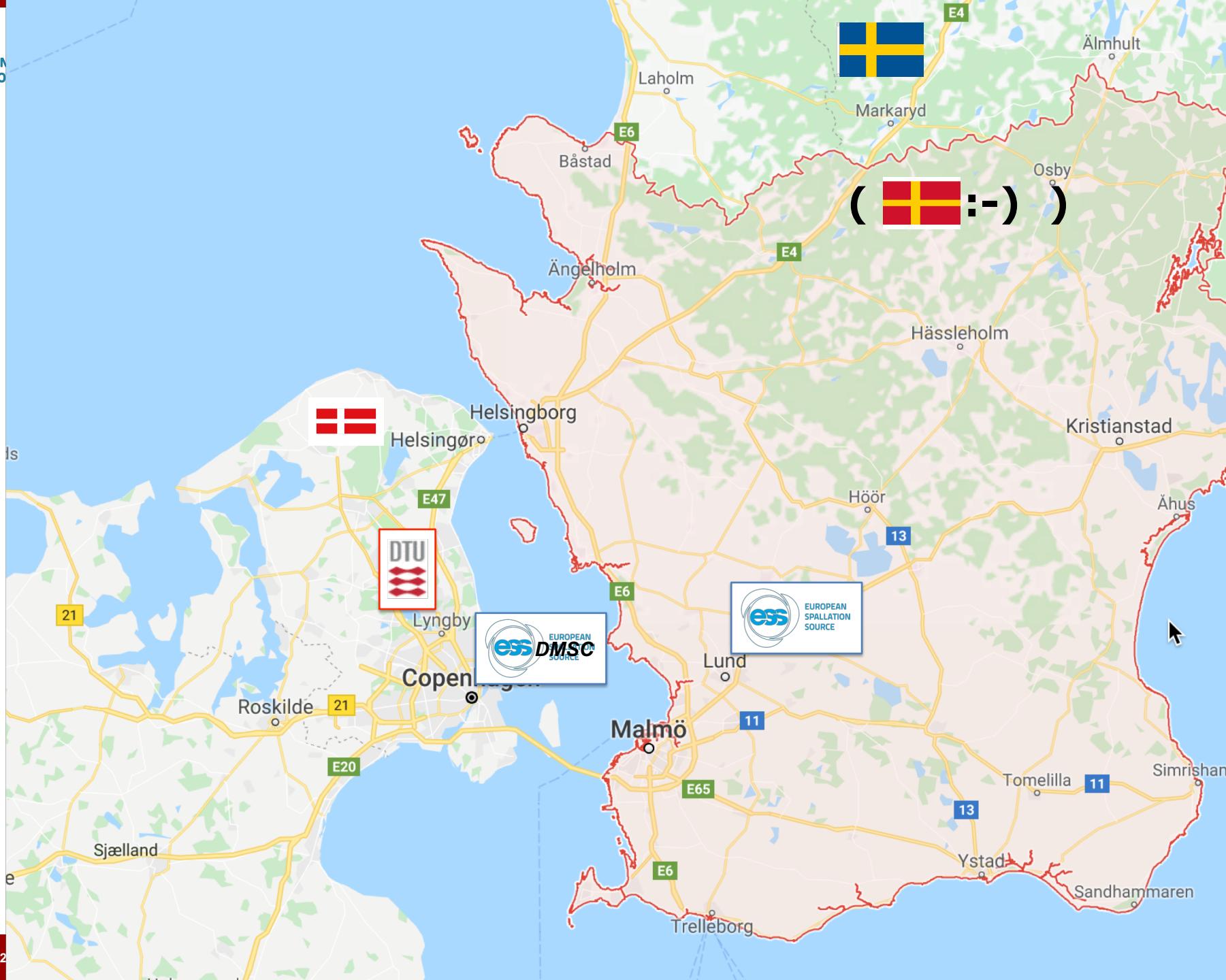
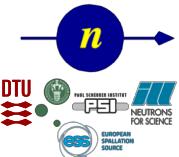




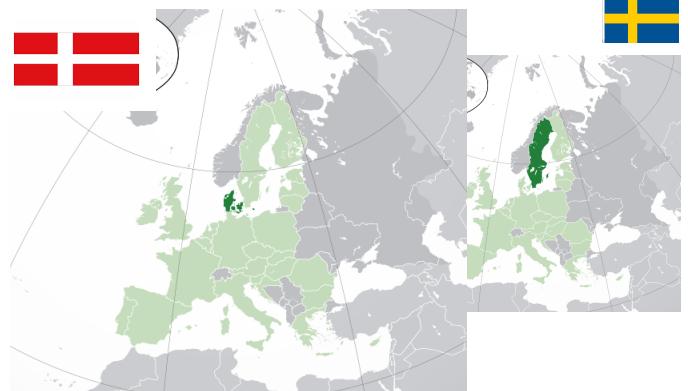
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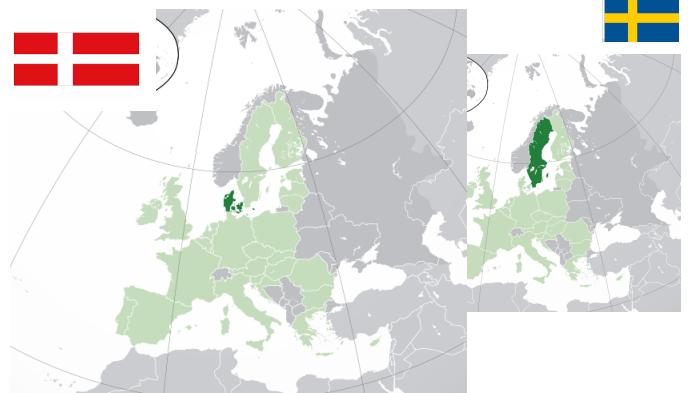
Erik Bergbäck Knudsen



- Born 1974 in Finspång, SE
- M. Sc. E. E – Lund University, Sweden
("Multi-mode optical Fibers")
- Ph. D. in Fiber Optics Modelling, Technical University of Denmark.
- Tomographic Reconstruction Algorithms for X-ray Diffraction Microscopy Data
- From 2007 – McStas and McXtrace development

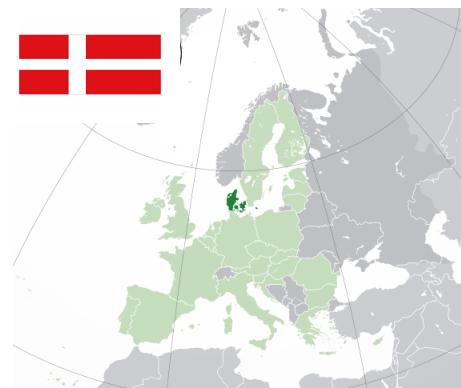
About me:

- Responsibilities and Research Interests:
 - McStas Polarization subsystem
 - Head developer of McXtrace
 - Interference effects in photon ray tracing simulations.
 - Molecular orientation scattering simulations
 - X-ray Space telescope simulations
 - McHelium ray tracing He atom beams.



Mads Bertelsen

- Born 1988 in Copenhagen, DK
- M. Sc. in neutron guide optimization, University of Copenhagen
- Ph. D. in neutron instrument simulation, University of Copenhagen
- Currently a Post Doc at the European Spallation Source, DMSC



Mads Bertelsen

- Research on guide optimization
 - Minimalist principle – Boundary conditions for optimization
 - `guide_bot` automatic guide optimization software
- McStas Union expansion
 - Multiple scattering in complex geometries
 - Alternate approach to sample physics
- Co proposer on 5 ESS Instruments, 3 accepted for construction
- Provided large part of data for optics consideration of ESS moderator choice

