



# Christian Bernt Haakonsen

**Graduate Institution:** Massachusetts Institute of Technology

**Graduate Discipline:** Plasma Physics

**Hometown:** Bergen, Norway

**Relevant SC Research:** Fusion Energy Sciences

## Research Interest:

My current research focus is the computational study of Mach probes and other objects in flowing, magnetized, non-uniform plasmas, which is relevant to applications ranging from tokamak and dusty plasmas to the moon's wake in the solar wind.

Another research interest of mine is the development of fusion energy reactor concepts, which involves looking at a wide range of design aspects including tritium-breeding blankets and high-temperature superconducting demountable magnets.

Finally, I have a long-standing interest in astrophysics (including cosmology), with a particular focus on simulating the hydrogen atmospheres of neutron stars in quiescent low-mass x-ray binaries.

## About Me:

Currently a graduate student at MIT, my career aspirations are to do research that is not only interesting and worthwhile in its own right, but also has the potential to benefit humanity directly through future applications. I see academia as my most likely path going forward, but am also weighing the pros and cons of a career in industry or at a national lab.

I came to plasma physics through astrophysics, being drawn to its potential terrestrial applications for fusion energy. That said, some of my current research is relevant to objects in the solar wind, like the moon or spacecraft, and I retain a basic fascination with cosmology and astrophysics. I approach science from

the computational side, developing and using codes to study complicated physical systems that elude analytical treatment.

When not doing research, I often play ultimate Frisbee, rock climb, dance Argentine tango, sing in a choir, or go sailing. I grew up in Norway, went to an international high-school there, taught English in China for a year, and got a B.Sc. and an M.Sc. from McGill University in Montreal before coming to MIT.



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