Christian Olsen - Curriculum Vitae

Address	2326 West 12th Avenue, V6K2N9 Vancouver, BC, Canada
Date of Birth	23^{rd} August 1988
Nationality	Danish

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Experience

The Quantum Matter Institute - Quantum Devices Group
PhD - 2016-present

- Fabricated gated Josephson junction arrays in InAs+Al 2DEG samples. Investigated non-zero resistances in the superconducting and metallic regimes using low-noise, low temperature transport measurements.
- Collaborated with University of Washington on the measurements of superconductivity in monolayer WTe_2.
- Measured and fabricated InAs VLS nanowire, SAG and 2DEG devices, in collaboration with Microsoft and University of Copenhagen.
- Designed coldfingers for two Blue Fors cryofree dilution refrigerators, compatible with high magnetic fields and low electron temperatures.
- Co-authored data acquisition software currently used in the lab.

The Niels Bohr Institute - Center for Quantum Devices
BSc & MSc - 2011-2015

- Fabricated high quality GaAs 2DEG devices using state-of-the-art UV and electron beam lithography.
- Measured QPCs and Fabry-Pérot interferometers in the Integer & Fractional Quantum Hall regimes, focusing on the $\nu = 1/3$ state.
- Setup and rewired an Oxford Instruments Triton 200 cryofree dilution refrigerator. Fabricated and installed new electronic filtering needed to achieve low electron temperatures.

Education

2016- PhD in Physics - The Quantum Matter Institute, University of British Columbia

Advisor: Joshua A. Folk.

2013-2015 MSc in Physics - The Niels Bohr Institute, University of Copenhagen

Final project: *Quasi Particle Tunneling in the Fractional Quantum Hall Regime.*
Advisor: Charles M. Marcus.

2010-2013 BSc in Physics - The Niels Bohr Institute, University of Copenhagen

Final project: *Measuring Fractional Quantum Hall Effect.*
Advisor: Charles M. Marcus.

2009-2010 Adgangskursus - Technical University of Denmark

One year accelerated High school (University entrance level)

2005-2009 Electrician Apprentice - J&E Electric A/S

Awarded the Bronze Medal and the Massmannske Medal of Silver.

Received the following scholarships:
Kemp & Lauritzens Rejselegat.
TEC's Rejselegat.

2004-2005 Boarding School - Fårevejle Fri-& Efterskole

1995-2004 Elementary School (1th - 9th grade) - Østerhøjskolen

Employment History

2015-2016 Research Assistant - Quantum Devices Group, University of British Columbia

2015 Teacher - Ø10, Kildevældsskolen

Worked as a math teacher for a three month period before moving to Canada. I was the primary math teacher for two 10th grade classes of 25 students each, plus two extra math classes.

2013 Research Assistant - Center for Quantum Devices, The Niels Bohr Institute

Worked in the lab during the summer. My work was primarily focused on low temperature, electrical measurements of nano structures fabricated on semiconductor materials.

2005-2009 Electrician Apprentice - J&E Electric A/S

The last two and a half years of my education I was effectively working as a fully trained electrician, handling my own projects. These projects ranged from small one hour jobs to renovations of entire apartments.

Scientific Papers

- Gate-induced Superconductivity in a Monolayer Topological Insulator,
  Science 362, 922 (2018).
- Direct Entropy Measurement in a Mesoscopic Quantum System,
  Nature Physics 14, 1083 (2018).

Volunteering

2016- Electrician - Roskilde Festival

I'm in charge of the team (8-10 people) installing all electrical installations in the area called Volunteer's Village.

Language skills

Danish	Native speaker
English	Full professional proficiency
German	Elementary proficiency

Miscellaneous

2017- SBQMI Student Committee member

Chair in the 2018/2019 academic year.

2007-2013 Board member in Måløv Badminton Club

As a board member I handled day-to-day activities, but my primary job was to organize tournaments for the clubs players.