

CHARIS M. HORN

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EDUCATION

- 2017-present **PhD, Department of Earth & Planetary Sciences, Washington University in St Louis**
Adviser: Philip Skemer
- 2017-2019 **MA, Department of Earth & Planetary Sciences, Washington University in St Louis**
Adviser: Philip Skemer
- 2012-2016 **MEarthSci, St Anne's College, University of Oxford, UK**
Supervisors: Lars Hansen & David Wallis
(includes Bachelor's Degree in Geology), Upper Second Class

RESEARCH EXPERIENCE

- 2017-present Washington University in St Louis, USA
Topic: Experimental deformation of hydrous subduction zone minerals
- High-pressure (2-3 GPa) torsion experiments in the Large Volume Torsion press
 - Nanoindentation using a Hysitron TI 950 TriboIndenter
 - SEM imaging and EBSD in a Thermo Fisher Quattro ESEM
 - TEM sample preparation in a Thermo Fisher Scios 2 FIB
 - TEM BF and HAADF imaging in a JEOL JEM-2100F TEM
 - Use of the modified Drickamer anvil apparatus on beamline 13-BM-D at the Advanced Photon Source, Argonne National Laboratory, USA
- 2017-2019 Washington University in St Louis, USA
MA Project: EBSD investigation of mylonitic serpentinites
- Assessing bulk anisotropy of naturally mylonitised olivine-antigorite specimens via EBSD (JEOL 7001LVF FE-SEM)
- 2015-2016 University of Oxford, UK
MEarthSci Project: Dunite Genesis in the Trinity Peridotite: the Competing Effects of Reaction and Deformation, First Class
- Using EBSD and EDS in a FEI Quanta 650 SEM to understand microstructural changes across a dunite-harzburgite transition
- Summer 2015 Oxford University Museum of Natural History, UK
Mineral Identification & Curation Intern
- Identifying misidentified and unidentified minerals using a variety of techniques, including FT-IR and EDS

TEACHING & MENTORING EXPERIENCE

- 2019-2020, 2021-2022 Washington University in St Louis, USA
Department of Earth & Planetary Sciences Peer Mentor
- Mentored two incoming students in their first years
- Jan – May 2020 Washington University in St Louis, USA
Mentored Teaching Experience, Energy and the Environment
- Helped with homework and classes for ~50 undergraduate students
 - Received Certificate of Recognition for excellence
- Jan – May 2017 Washington University in St Louis, USA
Mentored Teaching Experience, Earth and the Environment
- Oversaw a lab section of ~25 undergraduate students

UNIVERSITY LEADERSHIP EXPERIENCE

2019-2021

Washington University in St Louis, USA

Department of Earth & Planetary Sciences Peer Mentor Coordinator

- Arranged mentoring relationships between incoming and established students
- Organised first year welcome lunch, first year party and end of year picnic
- Facilitated practice talks for 2nd year qualification examinations
- Managed a budget and handled reimbursements

PUBLICATIONS

Horn C., Bouilhol P., Skemer P., (2020), *Serpentinization, Deformation, and Seismic Anisotropy in the Subduction Mantle Wedge*, *Geochemistry Geophysics Geosystems*, 21, e2020GC008950. <https://doi.org/10.1029/2020GC008950>

PRESENTATIONS

Horn C., Bouilhol P., Skemer P., (2020), *Deformation and Anisotropy of Hydrous Silicates (invited)*, virtual oral presentation at the AGU Fall Meeting, session DI030

Horn C., Bouilhol P., Skemer P., (2019), *Seismological Characteristics of Deformed Antigorite*, poster presentation at the Interior of the Earth Gordon Research Conference

Horn C., Skemer P., (2018), *Serpentine Microstructures in Ultramafic Samples from the Kohistan Arc*, poster presentation at the Rock Deformation Gordon Research Conference

Horn C., Cross A., Skemer P., (2018), *Serpentine Lattice-Preferred Orientations in Mylonites from the Kohistan Arc*, poster presentation at the EBSD-2018 Microanalysis Society Conference

OTHER EXPERIENCE

Feb 2020

Bayerisches Geoinstitut, Universität Bayreuth, Germany

Short course: HP Experimental Techniques & Application to the Earth's Interior

June – July 2013

International Seismological Centre, UK

Data Entry Clerk

- Digitalizing and testing seismological data collected during 1914-1917

July 2012

DTC (now De Beers UK Technologies Ltd.), UK

Laboratory Assistant

- Assisting researchers to distinguish between man-made and natural diamonds