

# Taimoor Sohail

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## Education

**The Australian National University** **Canberra, Australia**  
*PhD Candidate in Earth Sciences* *2016–2020*  
**Thesis Title:** *The role of convection in Southern Ocean circulation*  
**Supervisors:** Dr. Bishakhdatta Gayen and Dr. Andrew McC. Hogg  
**Funded by:** Endeavour Scholarship and ARC Centre of Excellence in Climate Extremes

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**Lafayette College** **Easton, PA, USA**  
*Bachelor of Science in Mechanical Engineering* *2010–2014*  
*GPA: 3.84/4.00, magna cum laude*

## Experience

**CTD Watchstander** **March 2018 – May 2018**  
*2018 GO-SHIP S04P Transect* *Southern Ocean*  

- Oversaw CTD casts and collected seawater samples for alkalinity, salinity and nitrogen isotopes over 69 day cruise in Pacific sector of Southern Ocean (S04P).

**Young Professional Officer – Climate Change** **November 2015 – January 2016**  
*LEAD Pakistan* *Islamabad, Pakistan*  

- Head of Operations for the Climate & Development Knowledge Network (CDKN) funded by Department for International Development.

**Research Associate** **November 2014 – November 2015**  
*Centre for Climate Research & Development (CCRD)* *Islamabad, Pakistan*  
**Project Title:** *Low-carbon Scenario Analysis Greenhouse Gas Inventory project*  

- Implemented for the Government of Pakistan, in collaboration with the International Institute for Sustainable Development (IISD);

## Teaching

**Lab Demonstrator, Climate System Science** **July 2017 – December 2017**  
*Research School of Earth Sciences, ANU* *Canberra, Australia*

**Lab Demonstrator, Physics of Fluid Flows** **February 2017 – May 2017**  
*Research School of Earth Sciences, ANU* *Canberra, Australia*

**Teaching Assistant, Climate Change** **August 2013 – December 2013**  
*Department of Geology, Lafayette College* *Easton, PA, USA*

## Publications

**Sohail, T.**, Gayen, B. and Hogg, A. McC. Convection drives mixing in the Southern Ocean. *Geophysical Research Letters* (2018), 45, doi:10.1029/2018GL077711

## Meetings & Conferences

Oral Presentations.....

- **Sohail, T.**, Gayen, B. and Hogg, A. McC. The role of convection and eddies in driving mixing in the Southern Ocean. *American Geophysical Union - Ocean Sciences Meeting*, 2018.
- **Sohail, T.**, Gayen, B. and Hogg, A. McC. The role of convection in driving mixing in the Southern Ocean. *AMOS-ICSHMO Conference*, 2018.

- **Sohail, T.**, Gayen, B. and Hogg, A. McC. Impact of convection on heat uptake and mixing in the Southern Ocean. *10th Australasian Natural Convection Workshop (ANCW)*, 2017. **Awarded Best Speaker.**
- **Sohail, T.**, Gayen, B. and Hogg, A. McC. Turbulent convection in geostrophic circulation with wind and buoyancy forcing. *American Physical Society - Division of Fluid Dynamics (APS-DFD) Meeting*, 2017.
- **Sohail, T.**, Gayen, B. and Hogg, A. McC. The Impact of Wind and Temperature on Southern Ocean Circulation. *Australian Society of Exploration Geophysics (ASEG)*, 2017. **Invited Speaker.**
- **Sohail, T.**, Gayen, B. and Hogg, A. McC. Can convection drive Southern Ocean circulation? *RSES Student Conference*, 2017. **Awarded Best Speaker.**
- **Sohail, T.**, Vreugdenhil, C. A., Gayen, B. and Hogg, A. McC. A turbulence-resolving model of Southern Ocean circulation. *20th Australasian Fluid Mechanics Conference (AFMC)*, 2016.

#### Posters.....

- **Sohail, T.**, Gayen, B. and Hogg, A. McC. Convection drives mixing in the Southern Ocean. *Center of Excellence in Climate System Science Workshop*, 2017. **Awarded Best Poster.**
- **Sohail, T.**, Gayen, B. and Hogg, A. McC. A turbulence-resolving model of Southern Ocean circulation. *AMOS/MSNZ Conference & ANZ Climate Forum*, 2017.
- **Sohail, T.**, Gayen, B. and Hogg, A. McC. A turbulence-resolving model of Southern Ocean circulation. *Center of Excellence in Climate System Science Workshop*, 2016.

#### Summer/Winter Schools.....

<b>Fluid Dynamics &amp; Sustainability of the Environment Summer School August 2018 – September 2018</b>	
<i>hosted by the University of Cambridge and L'Ecole Polytechnique</i>	<i>Cambridge, UK</i>
<b>1st ARC Centre of Excellence for Climate Extremes Winter School</b>	<b>June 2018</b>
<i>hosted by the ARC Centre of Excellence on Climate Extremes</i>	<i>Canberra, Australia</i>
<b>6th ARC Centre of Excellence for Climate System Science Winter School</b>	<b>June 2017</b>
<i>hosted by the ARC Centre of Excellence on Climate System Science</i>	<i>Sydney, Australia</i>
<b>14th Coupled Data Assimilation Summer School</b>	<b>June 2015 – July 2015</b>
<i>hosted by the Chinese Academy of Sciences (CAS)</i>	<i>Beijing, China</i>

## Skills

#### Computer.....

**Programming Languages:** Python, Fortran, Matlab

**Software Packages:** Paraview, Numeca FINE/Open, COMSOL Multiphysics, Engineering Equation Solver (EES), Autodesk Inventor, ANSYS, NI LabVIEW, DirectSoft PLC, Adobe Photoshop, InkScape

#### Language.....

**English:** Fluent

**Urdu:** Fluent

**French:** Intermediate

## Awards & Honours

- *Best Speaker:* RSES Student Conference 2017 & 10th ANCW 2017
- *Best Poster:* Center of Excellence in Climate System Science Workshop 2017
- 2017 Australian Society of Exploration Geophysics (ASEG) ACT Scholarship Recipient - Invited Speaker
- 2016 Endeavour Scholarship Recipient

## Outreach & Volunteering

<b>STEM Professional: Scientists and Mathematicians in Schools</b>	<b>July 2017 – Present</b>
<i>Commonwealth Scientific and Industrial Research Organisation (CSIRO)</i>	<i>Canberra, Australia</i>
<b>Student Representative: Equity and Diversity Committee</b>	<b>May 2017 – Present</b>
<i>Research School of Earth Sciences, ANU</i>	<i>Canberra, Australia</i>

**CFP Seminar Convenor**  
*Research School of Earth Sciences, ANU*

**April 2017 – Present**  
*Canberra, Australia*