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# Skyler Kern

*PhD Student*  
*Department of Mechanical Engineering*  
*University of Colorado, Boulder*

3300 Bridger Trail apt 301  
Boulder, CO 80303  
☎ +1 (907) 440 0893  
✉ [Skyler.Kern@colorado.edu](mailto:Skyler.Kern@colorado.edu)  
 [skylerjk](#)

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## Education

- May 2022 **Ph.D. in Mechanical Engineering**, *University of Colorado Boulder*, Boulder, CO.  
*(anticipated)* Research: Computation fluid dynamics and ocean turbulence.  
Advisor: Dr. Peter E. Hamlington.
- December 2016 **B.S. in Mechanical Engineering**, *University of Alaska Anchorage*, Anchorage, AK.

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## Professional Experience

### Research Experience

- January 2017 - **SULI Intern**, *Water Power Group*,  
May 2017 National Renewable Energy Laboratory, Boulder, CO.  
Simulating wave-energy converter responses to extreme wave conditions  
Advisor: Eliot Quon
- June 2016 - **SMART Research Assistant**, *Turbulence and Energy Systems Laboratory*,  
August 2016 University of Colorado Boulder, Boulder, CO.  
A comparative study of HydroTurbSim and Large-Eddy Simulations in a tidal flow channel  
Advisor: Peter Hamlington
- June 2015 - **SULI Intern**, *Gao Research Group*,  
August 2015 Lawrence Berkeley National Laboratory, Berkeley, CA.  
Characterization of electrodes fabricated from PAA-LI to create baseline for advanced binding materials  
Advisor: Zhe Jia and Gao Liu

### Industry Experience

- May 2014 - **CIC Intern**, *Production Chemistry and Flow Assurance*,  
August 2014 BP Exploration Alaska, Anchorage, AK.
- June 2013 - **Discipline Engineering Intern**, *Mechanical, Civil, and Lifting Engineering Team*,  
August 2013 BP Exploration Alaska, Anchorage, AK.  
ANSEP Summer Bridge II Program
- May 2012 - **Subsurface Engineering Intern**, *GD East Production Engineers*,  
August 2012 BP Exploration Alaska, Anchorage, AK.  
ANSEP Summer Bridge Program

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## Research Interests

Computational fluid dynamics, turbulent flows, oceanography, renewable energy, biogeochemical oceanography.

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## Fellowships

- September 2018 - **Fellow of National Science Foundation Graduate Research Fellowship Program (NSF GRFP)**,  
Present *Adjoint optimization of marine hydrokinetic plants.*  
Funding: \$138,000 for three years (\$34,000/yr stipend, \$12,000/yr towards cost-of-education)
- August 2017 - **Fellow of Alaska Native Science and Engineering Program (ANSEP): Alaskan Grown PhD.**  
Present Funding: \$150,000 for five years (\$30,000/yr stipend)

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## Conference and Seminar Presentations

- [P.1] Towards a Reduced Biogeochemical Flux Model for Large Eddy Simulations of the Upper Ocean. Rocky Mountain Fluid Mechanics Research Symposium. Boulder, CO, July 29, 2019.

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[P.2] A Reduced Biogeochemical Flux Model for Large Eddy Simulations of the Upper Ocean at Small Scales. 8th Young Scientist Symposium of Atmospheric Research. Fort Collins, CO, October 26, 2018.

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## Activities

- 2019 Volunteer, 5th Rocky Mountain Fluid Mechanics Symposium. Boulder, CO, August 16, 2019.
- 2019 Mentor, Summer Multi-cultural Access to Research Training Program, Colorado Diversity Initiative, University of Colorado Boulder.
- 2018 Volunteer, 4th Rocky Mountain Fluid Mechanics Symposium. Boulder, CO, August 14–15, 2018.
- 2018 Mentor, Summer Multi-cultural Access to Research Training Program, Colorado Diversity Initiative, University of Colorado Boulder.
- 2017 Volunteer, 70th Meeting of the Division of Fluid Dynamics, American Physical Society. Denver, CO, November 19–21, 2017.
- 2017 Volunteer, Mechanical Engineering Graduate Student Research and Recruitment Committee, Department of Mechanical Engineering, University of Colorado Boulder
- 2017 Volunteer, 3rd Rocky Mountain Fluid Mechanics Symposium. Boulder, CO, August 11, 2017.
- 2017 Mentor, Summer Multi-cultural Access to Research Training Program, Colorado Diversity Initiative, University of Colorado Boulder.