

# CURRICULUM VITAE

## Fabrice Veron

*Professor*

School of Marine Science and Policy, University of Delaware  
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## PROFESSIONAL APPOINTMENTS

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- 2017 - **Deputy Dean**  
College of Earth, Ocean, and Environment, University of Delaware
- 2016 - **Professor**  
School of Marine Science and Policy, University of Delaware
- 2010 - 2017 **Program Director for Physical Ocean Science and Engineering**  
School of Marine Science and Policy, University of Delaware
- 2008 - 2016 **Associate Professor**  
School of Marine Science and Policy, University of Delaware
- 2003 - 2011 **Adjunct research scientist**  
Scripps Institution of Oceanography, USA.
- 2002 - 2008 **Assistant Professor**  
College of Earth, Ocean, and Environment, University of Delaware.
- 2002 - **Director of Air-Sea Interaction Laboratory**  
School of Marine Science and Policy, University of Delaware, Lewes
- 2002 - **Adjunct assistant professor**  
Civil and Environmental engineering, University of Delaware.
- 2000 - 2001 **Post-Doctoral researcher**  
University of California, San Diego, USA.
- 1995 - 2000 **Research Assistant**  
University of California, San Diego, USA. (Supervisor: Prof. Melville)
- 1995 **Research Assistant**  
University of Toronto, Toronto, Canada. (Supervisor: Prof. Loewen)
- 1994 **Research Assistant**  
University College London, London, England. (Supervisor: Prof. Saffari)

## EDUCATION

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- 2000 **Ph.D. Physical Oceanography - Applied Ocean Sciences**  
Scripps Institution of Oceanography, University of California, San Diego, USA
- 1995 **DEA - Mechanical Engineering**  
University of Bordeaux France
- 1994 **Maitrise - Mechanical Engineering**  
University of Bordeaux France.
- 1993 **Licence - Mechanical Engineering**  
University of Bordeaux France.

## AWARDS & PRIZES

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- 2008 **NSF Career award**
- 2005 **ONR Young Investigator**
- 2001 **Edward A. Friemann Prize**  
(Excellence in Graduate Student Research - awarded once a year)

2000

**Luigi Provasoli Award**

(Outstanding paper in the Journal of Phycology - awarded once a year)

**RESEARCH INTERESTS**

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Air-Sea interactions; Turbulence and mixing at free surfaces; Rain-wave interactions, Sea-spray generation and influence on air-sea fluxes; Atmospheric and oceanic boundary layers; Ocean surface infra-red remote sensing; Linear and non-linear surface gravity capillary waves; Wind wave generation; Wave-current interactions;

**COLLABORATORS**

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|  |   |
|--|---|
| Babanin, A.V. (Univ. Adelaide, AU)       | Melville, W.K. (SIO/UCSD)                 |
| Banner, M.L. (Univ. New South Wales, AU) | McGillis, W.R. (Columbia University)      |
| Bazilevs, Y. (UC San Diego)              | Mieussens, L. (Univ. of Bordeaux, France) |
| Brocchini, M. (Univ. di Genova, IT)      | Misra, S.K. (UD)                          |
| McCormick, C. (Univ. of Miami)           | Ho, D.T. (Columbia University)            |
| Donelan, M.A. (Univ. of Miami)           | Oliver, M. (UD)                           |
| Feddersen, F. (SIO/UCSD)                 | Richter, D. (Notre Dame University)       |
| Foster, M. (Rutgers University)          | Secora, J. (Rutgers University)           |
| Hare, J. (Univ. of Colorado)             | Tejada-Martinez, A. (Univ. South Florida) |
| Hara, T. (Univ. of Rhode Island)         | Thomas, M. (UD)                           |
| Ierley, G. (SIO/UCSD)                    | Veron, D.E. (Rutgers University - UD)     |
| Kambhame, C.T. (UD)                      | Weaver, C. (Rutgers University)           |
| Kirby, J.T. (UD)                         | White, C. (Solar turbines)                |
| Kobayashi, N. (UD)                       | Young, I.R. (Univ. of Adelaide, Au)       |
| Latz, M.I. (SIO/UCSD)                    | Zappa, C.J. (LDEO-Columbia)               |
| Lenain, L. (SIO/UCSD)                    | Zirbel, M.J. (Skidaway institute)         |
| Lubin, P. (Univ. of Bordeaux, France)    |   |

**FIELD EXPERIENCE**

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|-------------|---|
| 2019        | Gas flux in shallow water coral reefs - Hawaii  |
| 2017        | Gas flux in shallow water coral reefs - Dongsha Atoll; Taiwan   |
| 2013 - 2014 | Long term wind and wave monitoring, Cape wind tower, MA.  |
| 2010        | Hi-Res ONR R/P FLIP (21 days at sea - Chief Scientist)  |
| 2009        | Hi-Res ONR Pilot R/P FLIP July (12 days at sea)   |
| 2003        | R/P FLIP August (14 days at sea)  |
| 2002        | Passas Experiment - R/P FLIP July (10 days at sea)  |
| 2002        | Mid-Frequency Experiment - R/P FLIP May-June 2002 (12 days at sea)  |
| 2003 - 2004 | Long term wave monitoring SIO pier.   |
| 1999        | Recover buoy and moorings R/V McGaw (8 days at sea)   |
| 1999        | Deploy buoy and moorings R/V Sproul (4 days at sea)   |
| 1998        | Deploy/ recover buoy and moorings R/V Sproul (10 days at sea)   |
| 1997        | Deploy/ recover buoy and moorings R/V Sproul (4 days at sea)  |
| 1996        | Deploy buoy and moorings R/V Sproul (4 days at sea)   |
| 1995 - 2002 | Research Scuba Diver certification - Extensive shallow water diving for deployment of acoustic and oceanographic sensors. |

**PROFESSIONAL AFFILIATIONS**

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American Geophysical Union  
American Physical Society  
American Meteorological Society (Elected member)

## GRADUATE & POST GRADUATE ADVISORS

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Ken Melville (Ph.D.), Mark Loewen (M.S.), Nader Saffari (B.S.), Stephane Baste(B.S.)  
Ph.D Thesis committee: Prof. W. K. Melville, Prof. M. S. Longuet-Higgins, Prof. J. C. Lasheras, Prof. C. D. Winant, Prof. R. T. Guza, Dr. J. A. Smith.

## PUBLICATIONS

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Underline indicate graduate students supervised by F. Veron

Double Underline indicate under-graduate students supervised by F. Veron

### PEER REVIEWED JOURNAL ARTICLES

1. Hasfi, A. A. Tejada Martinez, and **F. Veron**, DNS and LES of small-scale Langmuir circulation and scalar transfer across the air-sea interface. *J Fluid Mechanics. In Press* ([pdf](#))
  2. Husain, N.T., T. Hara, M.P. Buckley, K. Yousefi, **F. Veron**, and P.P. Sullivan, 2019: Boundary Layer Turbulence over Surface Waves in a Strongly Forced Condition: LES and Observation. *J. Phys. Oceanogr.*, 49, 1997-2015, doi: 10.1175/JPO-D-19-0070.1. ([pdf](#))
  3. Davies, A. R., **F. Veron**, and M.J. Oliver: 2019: Biofloat observations of a phytoplankton bloom and carbon export in the Drake Passage. *Deep Sea Res.*, 146, 61-102, doi 10.1016/j.dsr.2019.02.004 ([pdf](#))
  4. Kukulka, T, and **F. Veron**. 2019: Lagrangian Investigation of Wave-Driven Turbulence in the Ocean Surface Boundary Layer. *J. Phys. Oceanogr.*, 49, 1997-2015, doi: 10.1175/JPO-D-18-0081.1 ([pdf](#))
  5. Buckley M., and **F. Veron**, 2018: The turbulent airflow over wind generated surface waves, *Europ. J. Fluid Mech.* <https://doi.org/10.1016/j.euromechflu.2018.04.003> ([pdf](#))
  6. Lubin P., O. Kimmoun, **F. Veron**, and S. Glockner, 2019: Discussion on instabilities in breaking waves: Vortices, air-entrainment and droplet generation. *Europ. J. Fluid Mech* <https://doi.org/10.1016/j.euromechflu.2018.05.006> ([pdf](#))
  7. Buckley M., and **F. Veron**, 2017: Airflow measurements at a wavy air–water interface using PIV and LIF, *Exp Fluids*. 58: 161. <https://doi.org/10.1007/s00348-017-2439-2> ([pdf](#))
  8. Harrison, E.L., and **F. Veron**: 2017: Near-surface turbulence and buoyancy induced by heavy rainfall. *J. Fluid Mech.* 830, 602-630, DOI: 10.1017/jfm.2017.602
  9. Richter, D. H., and **F. Veron**: 2017: Sea Spray: an outsized influence on weather and climate. *Parity*, July 2017, 57-61. (in Japanese)
  10. Hasfi, A., A.A. Tejada Martinez, and **F. Veron**, 2017: Direct numerical simulation of scalar transfer across an air-water interface during inception and growth of Langmuir circulation, *Computers and Fluids*. 158, 49-56. Doi:10.1016/j.compfluid.2017.06.021
  11. Richter, D. H., and **F. Veron**: 2016: Sea Spray: an outsized influence on weather and climate. *Physics Today*, November 2016, 34-39. ([pdf](#))
- Journal Cover**
12. Archer, C. L., B. A. Colle, D. L. Veron, **F. Veron**, and M. J. Sienkiewicz, 2016: On the predominance of unstable atmospheric conditions in the marine boundary layer offshore of the U.S. northeastern coast. *Journal of Geophysical Research - Atmospheres*, doi: 10.1002/2016JD024896. ([pdf](#))
  13. **Veron, F.**, and L. Mieussens, 2016: A kinetic model for particle-surface interaction applied to rain falling on water waves, *J. Fluid Mech.* 796, 767-787. ([pdf](#))
  14. Hafsi, Y. Ma, M. Buckley, A.E. Tejada-Martinez, and **F. Veron**, 2016: DNS and measurements of scalar transfer across an air-water interface during inception and growth of Langmuir

circulation, *IOP Conference Series: Earth and Environmental Science*, 35, 012006. doi:10.1088/1755-1315/35/1/012006

15. Buckley M., and F. Veron, 2016: Structure of the airflow above surface waves, *Journal Physical Oceanography*, DOI: <http://dx.doi.org/10.1175/JPO-D-15-0135.1> (pdf)
16. Colle, B. A., M. J. Sienkiewicz, C. Archer, D. Veron, F. Veron, W. Kempton, and J. E. Mak, 2016: Improving the Mapping and Prediction of Offshore Wind Resources (IMPOWR), Experimental Overview and First Results. *Bulletin of the American Meteorological Society*; DOI:10.1175/BAMS-D-14-00253.1. (pdf)
- Journal Cover**
17. Veron, F. 2015: Ocean Spray. *Annu. Rev. Fluid Mech.*, 47, 507-538. Doi:10.1146/annuerv-fluid-010814-014651. (pdf)
18. Mueller, J.A., and F. Veron, 2014a: Impact of Sea Spray on Air-Sea Fluxes Part I: Results from Stochastic Simulations of Sea Spray Drops over the Ocean. *J. Phys. Oceanogr.*, 44, 2817-2834, doi: 10.1175/JPO-D-13-0245.1. (pdf)
19. Mueller, J.A., and F. Veron, 2014b: Impact of Sea Spray on Air-Sea Fluxes Part II: Feedback effects. *J. Phys. Oceanogr.*, 44, 2835-2853, doi: 10.1175/JPO-D-13-0246.1. (pdf)
20. Harrison, E.L., F. Veron, D. T. Ho, M. C. Reid, P. Orton, and W. R. McGillis. 2012: Nonlinear interaction between rain and wind induced air-water gas exchange. *J. Geophys. Res.*, (117), C03034, 16 PP., 2012, doi:10.1029/2011JC007693. (pdf)
21. Veron F, C. Hopkins, E. L. Harrison, and J. A. Mueller, 2012: Sea spray spume droplet production in high wind speeds. *Geophysical Research Letters*, 39, L16602, 5 PP., 2012, doi:10.1029/2012GL052603. (pdf)
- Journal Cover**
22. Veron, F., W.K. Melville, and L. Lenain, 2011: The Effects of Small-Scale Turbulence on Air–Sea Heat Flux. *J. Phys. Oceanogr.*, 41(1): 205-220. (pdf)
23. Mueller, J.A., and F. Veron, 2010a: Bulk formulation of the heat and water vapor fluxes at the air-sea interface including non-molecular contributions. *J. Atmosph. Sciences.*, 67(1): 234-247. (pdf)
24. Mueller, J.A., and F. Veron, 2010b: A Lagrangian stochastic model for sea spray evaporation in the atmospheric marine boundary layer. *Boundary Layer Meteorology*. 137: 135-152. (pdf)
25. Mueller, J.A. and F. Veron, 2009a: Nonlinear Formulation of the Bulk Surface Stress over Breaking Waves: Feedback Mechanisms from Air-flow Separation. *Boundary Layer Meteorology*. 130(1): 117-134. (pdf)
26. Mueller, J.A. and F. Veron, 2009b: Lagrangian Stochastic Model for Heavy Particle Dispersion in the Atmospheric Marine Boundary Layer. *Boundary Layer Meteorology*. 130(2): 229-247. (pdf)
27. Veron, D. E., C. P. Weaver and F. Veron, 2009: Stochastic Radiative Transfer on Modeled Cloud Fields. *IEEE Geosciences and Remote Sensing Letters*. 6(2): 184-188. (pdf)
28. Veron, F., W.K. Melville, and L. Lenain, 2009: Measurements of ocean surface waves and surface turbulence interactions. *J. Phys. Oceanogr.*, 39(9): 2310-2323. (pdf)
29. Mueller, J.A., and F. Veron, 2009c: A Sea State–Dependent Spume Generation Function. *J. Phys. Oceanogr.*, 30(9): 2363-2372. (pdf)
30. Veron, F., W.K. Melville, and L. Lenain. 2008: Infrared techniques for measuring ocean surface processes. *J. Atmos. and Ocean. Technol.*, 25 (2): 307-326. (pdf)
31. Veron, F., W.K. Melville, and L. Lenain. 2008: Wave-coherent air-sea heat flux. *J. Phys. Oceanogr.*, 38 (4): 788-802. (pdf)

32. Misra, S.K., J.T. Kirby, M. Brocchini, **F. Veron**, M. Thomas, and C. Kambhamettu, 2008: The mean and turbulent flow structure of a weak hydraulic jump, *Phys. Of Fluids*. 20(3) - 035106. ([pdf](#))
33. **Veron, F.**, [G. Saxena](#) and S Misra. 2007: Measurements of viscous tangential stresses in the separated airflow above wind waves. *Geophysical Research Letters*, 34, L19603, doi: 10.1029/2007GL031242. ([pdf](#))
34. Misra, S.K., M. Thomas, J.T. Kirby, M. Brocchini, **F. Veron**, and C. Kambhamettu, 2006: Estimation of complex air-water interfaces from PIV images, *Exp. In Fluids*, 40(5), 764-775. ([pdf](#))
35. Feddersen, F, and **F. Veron**, 2005: Wind effects on shoaling wave shape, *J. Phys. Oceanogr.*, 35(7), 1223-1228. ([pdf](#))
36. Chruuch T. M, **F. Veron** and T.D. Jickells, 2005: "Coastal Atmospheric Chemistry" in Chapter 4, *Coastal Atmospheric circulation dynamics*. Coastal Atmospheric phenomena. Coupled Coastal Wind-Wave-Current Dynamics. SCOR working group.
37. Ho, D.T., **Veron, F.**, [Harrison, E.L.](#), Bliven, L.F., Scott, N., McGillis, W.R. 2005: The combined effect of rain and wind on air-water gas exchange: A feasibility study. *J. Mar. Syst.*, 66(1-4), 150-160. ([pdf](#))
38. Young, I. R., M. L. Banner, M.A. Donelan, A.V. Babanin, **F. Veron**, W.K. Melville, and C. McCormick, 2004: An Integrated Study of the Wind Wave Source Term Balance in Finite Depth Water. *J. Atmos. and Ocean. Technol.*, 22(7), 814-831. ([pdf](#))
39. Melville, W. K., **F. Veron** and C. White, 2002: The velocity field under breaking waves: coherent structures and turbulence. *J. Fluid Mech.*, 454, 203-233. ([pdf](#))
40. **Veron, F.**, and W. K. Melville, 2001: Experiments on the stability and transition of wind driven water surfaces. *J. Fluid Mech.*, 446, 25-65. ([pdf](#))  
**Award:** Edward A. Frieman Prize.
41. Zirbel, M. J., **F. Veron**, and M. I. Latz, 2000: The reversible effect of fluid flow on the morphology of the dinoflagellate *Ceratocorys horrida* (peridinales). *J. Phycol.*, 36, 46-58. ([pdf](#))  
**Award:** Luigi Provasoli Award.  
**Journal Cover**
42. **Veron, F.**, and W. K. Melville, 1999: Laboratory studies of the initiation of Langmuir circulations and turbulence. *Fourth International Symposium on Air-Sea Interaction*. Sydney, Australia. M. L. Banner, editors. 265-272.
43. Melville, W. K., C. White, **F. Veron**, and E. Luft, 1999: Laboratory measurements of turbulence under breaking waves. *Fourth International Symposium on Air-Sea Interaction*. Sydney, Australia. M. L. Banner, editors. 211-218.
44. **Veron, F.**, and W. K. Melville, 1999: Laboratory measurements of Langmuir circulations and surface waves. *A Symposium on Fluid Mechanics and the Environment: Dynamical Approaches*. Ithaca, New York, USA. J. L. Lumley, editor. 401-412.
45. **Veron, F.**, and W. K. Melville, 1999: Pulse-to-pulse coherent Doppler measurements of waves and turbulence. *J. Atmos. and Ocean. Technol.*, 16, 1580-1597. ([pdf](#))
46. Melville, W. K., R. Shear, and **F. Veron**, 1998: Laboratory measurements of the generation and evolution of Langmuir circulations. *J. Fluid Mech.*, 364, 31-58. ([pdf](#))

#### **MANUSCRIPTS UNDER REVIEW**

1. [Yousefi, K.](#), and **F. Veron**, Boundary layer formulations in orthogonal curvilinear coordinates for flow over wind-generated surface waves. *Journal Fluid Mech. Submitted*
2. [Yousefi, K.](#), and **F. Veron**, Airflow over wind-generated surface waves. Part 2: Momentum fluxes measurements in strongly forced conditions. *Journal Fluid Mech. Submitted*

3. **Veron, F.** and L. Mieussens, An Eulerian model for sea spray transport and evaporation. *Journal Fluid Mech.* Submitted

#### **MANUSCRIPTS IN PREPARATION**

4. **Buckley, M.** and **F. Veron**, Airflow structure and wind stress above laboratory wind waves in the presence of airflow separation, *J. Fluid Mech.* In preparation.

#### **NON-REFEREED PUBLICATIONS**

1. **Harrison, E.L., F. Veron, D. T. Ho, M. C. Reid, P. Orton, and W. R. McGillis**, 2012: EOS AGU Journal Highlights: In calm seas, precipitation drives air-sea gas exchange.
2. **Veron F, C. Hopkins, E. L. Harrison, and J. A. Mueller**, 2012: EOS AGU Journal Highlights: High-speed imagery captures new sea spray formation mechanism.
3. **Veron, F., W.K. Melville, and L. Lenain**, 2010: Wave Modulated turbulence fields at the ocean surface and related air-sea fluxes. *NSF CBMS proceedings*.
4. **Veron, F.**, 2009: Surface turbulence Measurements at Ohmsett. *Report to US Minerals Management Service. SL Ross*.
5. **Veron, F.** 2008: Airflow separation above wind waves. *Solas News*, 8. 24-25.
6. Feddersen, F. and **F. Veron**, 2005: BAMS Research highlights: Wind and waves.

#### **CONFERENCE PROCEEDINGS**

1. **Veron, F., Y. Ma, M. P Buckley, A Tejada Martinez, Amine Hasfi** 2016: Laboratory measurements of the inception and evolution of centimeter-scale Langmuir Turbulence. *Proceedings of ICTAM 16*, Montreal, Canada.
2. **Buckley M.P., and F. Veron**, 2016: Structure of the airflow above surface gravity waves, *Proceedings of ICTAM 16*, Montreal, Canada.
3. **Hafsi, Y. Ma, M. Buckley, A.E. Tejada-Martinez, and F. Veron**, 2015: DNS and measurements of scalar transfer across an air-water interface during inception and growth of Langmuir circulation, *Proceedings of The International Symposium on Gas Transfer at Water Surfaces*, Seattle, USA.
4. **Buckley M., and F. Veron**, 2012: Airflow separation over surface gravity waves, *Proceedings of ICTAM 12*, Beijing, China.
5. **Buckley M., F. Bernard, and F. Veron**, 2010: Donut-shaped Bubbles Formed by Raindrops. *American Physical Society Meeting, Division of Fluid Dynamics*, Long Beach, USA.
6. **Veron, F., J. Mueller, and M. Buckley**, 2008: Air-flow separation above wind-waves. *Proceedings of ICTAM 08*, Adelaide, Australia.
7. **Misra, S.K., J.T. Kirby, M. Brocchini, F. Veron, M. Thomas, and C. Kambhamettu**, 2005: Coherent turbulent structures in a quasi-steady spilling breaker, *Waves'05*, Madrid, Spain.
8. **Misra, S. K., J. T. Kirby, M. Brocchini, M. Thomas, F. Veron, and C. Kambhamettu**, 2004: Extra strain rates in spilling breaking waves. *Proc. 29th Int. Conf. Coastal Engrng.* Lisbon, Portugal.
9. **Veron F., and W.K. Melville**: 2004: Measurements of the influence of ocean surface kinematics on air-sea heat fluxes, *Proceedings of ICTAM 04*, Warsaw, Poland.
10. **Veron, F. and W. K. Melville** 2001: Remote observations of the initial generation of surface waves. *IGARSS symposium*, Sydney. Australia.
11. **Veron, F., and W. K. Melville**, 1998: Laboratory and field measurements of turbulence under breaking waves. *Proceedings Johns Hopkins Conference in Environmental Fluid Mechanics*. pp 155-156. Baltimore, USA.

12. Melville, W. K., E. Terrill, and **F. Veron**, 1997: Bubbles and turbulence under breaking waves. *Natural Physical Processes Associated with Sea Surface Sound*. T. G. Leighton, Editor. pp135-145. Southampton, UK.
13. **Veron, F.**, and W. K. Melville, 1996: Pulse-to-pulse coherent Doppler measurements of waves and turbulence: Laboratory and field testing. *Proceedings Microstructure Sensors Workshop*, Mt Hood, ONR.

### **CONFERENCE POSTERS**

1. Buckley, M., J. Horstmann, J. Carpenter, and **F. Veron**, 2018: Sub-millimeter scale turbulent airflow dynamics above waves, *European Geophysical Union, Vienna, Austria*
2. Yousefi, K., M. Buckley, **F. Veron**, N. Hussain, and T. Hara, 2017: Viscous and turbulent stress measurements over wind driven surface waves. *American Geophysical Union. New Orleans.*
3. **Veron, F.**, M. Buckley, and K. Yousefi, 2017: Airflow separation effects on the surface stress and TKE production over wind-driven waves. *European Geophysical Union, Vienna, Austria.*
4. Buckley M., and **F. Veron**, 2016: Structure of the airflow above surface waves, *European Geophysical Union, Vienna, Austria.*  
**Award:** *Outstanding Student Poster (Buckley).*
5. Hafsi, Y. Ma, M. Buckley, A.E. Tejada-Martinez, and **F. Veron**, 2016: DNS and measurements of scalar transfer across an air-water interface during inception and growth of Langmuir circulation, *Ocean Science, New Orleans, LA.*
6. Brodie, J. F., D. E. Veron, C. L. Archer, and **F. Veron**, 2014: Modeling offshore wind farm configurations in a mesoscale atmospheric model to optimize power production, *American Geophysical Union – Ocean Science*, Feb 2014, Hawaii, USA.
7. Brodie, J. F., D. E. Veron, C. L. Archer, and **F. Veron**, 2014: Modeling offshore wind farm configurations in a mesoscale atmospheric model to optimize power production, *American Geophysical Union – Ocean Science*, Dec 2014, San Francisco, USA.
8. Foster, M., and **F. Veron**, 2012: An Investigation of Wave Breaking off the Coast of Northern California, *ASLO*, Salt Lake City, USA.
9. Brodie, J. F., D. E. Veron, C. L. Archer, and **F. Veron**, 2012: Investigation of turbine spacing on turbulent wake effects and power output using a mesoscale atmospheric model, AWEA Offshore WINDPOWER Conference and Exposition 2012, *American Wind Energy Association*, 9-11 October 2012, Virginia Beach, VA.
10. Harrison, E.L., and **F. Veron**, 2011: rain effect on air-sea gas transfer, *SOLAS Summer school*, Corsica, France.
11. Grossi, M.D., E.F., Geiger, A.J. Irwin, **F. Veron**, and M. Oliver, 2010: Predicting Open Ocean Density Profiles from Satellite Observations. *AGU Ocean Sciences*, Portland, USA.
12. Buckley M., and **F. Veron**: 2010: Airflow separation above wind waves. *AGU Ocean Sciences*, Portland, USA.
13. Mueller J.A., and **F. Veron**, 2009: Sea spray contributions to the air-sea fluxes at moderate and hurricane wind speeds. *American Geophysical Union meeting*, San Francisco, USA.
14. LeBars D., and **F. Veron**, 2008: The role of rain in upper-Ocean mixing and momentum transfer. UDRF annual presentation, Newark, USA.
15. Harrison E.L. and **F. Veron**, 2005: The impact of rainfall on the ocean surface at low wind speed. *Invited presentation, ASLO meeting*. Salt Lake city, USA.
16. Veron, D., J. Secora, M. Foster, C. Weaver and **F. Veron**, 2005: Application Of Stochastic Techniques To The Arm Cloud-Radiation Parameterization Problem, *Proceedings from the 2005 ARM Science Team Meeting, Atmospheric Radiation Measurement Program*, Daytona Beach, USA.

17. Mueller J.A., and **F. Veron**, 2005: A Lagrangian turbulent transport model of evolving sea-spray droplets over water waves. *American Meteorological Society annual meeting*. Atlanta, USA.
- Award**: *Best student Presentation* (Mueller).
18. Paterson C. F. and **F. Veron**, 2004: Particle Image Velocimetry analysis of rain induced mixing of the oceanic boundary layer. *Invited presentation, ASLO meeting*, Honolulu, Hawaii, USA.
19. **Veron F.**, and W.K. Melville: 2004: Measurements of the influence of ocean surface kinematics on air-sea heat fluxes, *ICTAM 04*, Warsaw, Poland.
20. Feddersen, F., and **F. Veron**, 2004: Wind effects on Shaoling wave shape, *American Geophysical Union meeting*, San Francisco, USA.
21. Paterson C. F. and **F. Veron**, 2003: Particle Image Velocimetry analysis of rain induced mixing of the oceanic boundary layer. *Murdock conference*, Seattle, USA
22. Latz, M. I., **F. Veron**, and M. J. Zirbel, 2000: The effect of flow on dinoflagellates: quantifying the shear in shaken flasks using DPIV. *Poster, American Geophysical Union*, San Antonio, USA.
23. **Veron, F.**, and W. K. Melville, 2000: Laboratory and field measurements of the initiation of Langmuir circulations. *Poster, Fourth international symposium on gas transfer at water surfaces*. Miami, USA.
24. **Veron, F.**, and W. K. Melville, 1999: Laboratory measurements of Langmuir circulations and turbulence. *100 years of discovery*. San Diego, USA
25. **Veron, F.**, and W. K. Melville, 1998: Laboratory and field measurements of turbulence under breaking waves. *Poster, Johns Hopkins Conference in Environmental Fluid Mechanics*. Baltimore, USA.

## PROFESSIONAL PRESENTATIONS

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### CONFERENCE PRESENTATIONS

1. *4 APS conferences*
2. Jaquette, R., **F. Veron**, and Moss, S 2019: APSx3 Spume/Splash Droplet Production and Lifetimes, *Thesis workshop, Newark*.
3. Buckley et al, 2019: Momentum and energy exchange mechanisms between wind and surface gravity waves, *European Geophysical Union, Vienna, Austria*
4. Yousefi, K., **F. Veron**, M. Buckley, N. Husain, and T. Hara, 2018: Measurements of the Turbulent Stress over Wind-Driven Surface Waves in the Wave-Boundary Layer, *APS DFD, Atlanta*.
5. Buckley M., **F. Veron**, J. Horstmann, J. Carpenter J, P. Chabert, 2018: "Field observations of the airflow over waves using PIV", *B<sup>2</sup> Waves workshop, Marseille, France*
6. Yousefi, K., M. Buckley, **F. Veron**, N. Husain, and T. Hara, 2018: Measurements of Turbulent Stress in Curvilinear Coordinates over Wind-driven Surface Waves *AMS 20th Conference on Air-Sea Interaction, Oklahoma City, Oklahoma*
7. **Veron, F.**, and L. Mieussens: 2018: A kinetic approach to estimate air-sea exchanges driven by sea spray in high winds. *AMS Conference, Newark, DE*.
8. Kukulka, T., and **F. Veron**, 2018: A Lagrangian perspective on wave-driven turbulence in the ocean surface boundary layer *European Geophysical Union, Vienna, Austria*
9. Buckley, M.P., J. Horstmann, J. Carpenter, **F. Veron**, 2018: Sub-millimeter scale turbulent dynamics of the airflow above waves, *European Geophysical Union, Vienna, Austria*.
10. **Veron, F.**, K. Yousefi, M. P Buckley, N. Husain, and T. Hara, 2018: Turbulent and wave-induced velocity fields over wind-driven surface waves. *B<sup>2</sup>waves 2018, Marseille, France*.



11. Husain, N., M. P Buckley, K. Yousefi, T. Hara, **F. Veron** and P. P. Sullivan, 2018, Wind turbulence over surface waves in a strongly forced condition – LES and observation, *Ocean Sciences, Portland*.
12. Kukulka, T, and **F. Veron** 2018, Lagrangian Investigation of Wave Effects on Turbulence in the Ocean Surface Boundary Layer, *Ocean Sciences, Portland*.
13. Buckley, M.P., J. Horstmann, J.R. Carpenter, and **F. Veron** 2018, Fine Scale structure of the Airflow above Waves, *Ocean Sciences, Portland*.
14. Davies, A., M. Oliver, and **F. Veron** 2018, Biofloat observations of a naturally occurring phytoplankton bloom and carbon export event in the Drake Passage, *Ocean Sciences, Portland*.
15. Yousefi, K., M. Buckley, **F. Veron**, N. Husain, and T. Hara, 2017, Wave-Induced Momentum Flux over Wind-driven Surface Waves, *APS DFD, Denver*.
16. Yousefi, K., M. Buckley, **F. Veron**, N. Husain, and T. Hara, 2017, Viscous and Turbulent Stress Measurements over Wind-driven Surface Wave, *AGU, New Orleans*.
17. Hara, T., N. Husain, M. Buckley, K. Yousefi, F. Veron, and P. Sullivan, 2017, Wave boundary layer turbulence over surface waves in a strongly forced condition – LES and observation, *IUTAM Wind Waves, London, UK*
18. **Veron, F.**, and L. Mieussens: 2017, A kinetic model for rain falling on water waves, *European Geophysical Union, Vienna, Austria*
19. **Veron, F.**, Y. Ma, M. Buckley, A. Tejada-Martinez, and A. Hafsi : 2016, Laboratory measurements of the inception and evolution of centimeter-scale Langmuir Turbulence, *ICTAM2016, Montreal, CA*
20. Buckley, M., and **F. Veron**, 2016, Structure of the airflow above surface gravity waves, *ICTAM2016, Montreal, CA*
21. **Veron, F.**, and L. Mieussens: 2016, A kinetic model for particle-surface interaction applied to rain falling on water waves, *AMS 20th Conference on Air-Sea Interaction, Madison, WI, USA*
22. Buckley, F., M., and **F. Veron**, 2016, Small scale airflow dynamics above waves, *AMS 20th Conference on Air-Sea Interaction, Madison, WI, USA*
23. **Veron, F.**, Y. Ma, M. Buckley, A. Tejada-Martinez, and A. Hafsi : 2016, Laboratory measurements of the inception and evolution of centimeter-scale Langmuir Turbulence, *AMS 20th Conference on Air-Sea Interaction, Madison, WI, USA*
24. Buckley, M., and **F. Veron**, 2016, Structure of the airflow above wind waves, *Ocean Science, New Orleans, LA*.
25. Buckley, M., and **F. Veron**, 2015, Laboratory and field investigation of the wind stress above waves, *Warnemunde Turbulence days, Warnemunde , Germany*.
26. Buckley, M., and **F. Veron**, 2015, Influence of wave age on the structure of the airflow above surface waves., *American Physical Society Meeting, Division of Fluid Dynamics, Boston MA*
27. Hafsi, A., A. Tejada-Martinez, Y. Ma, and **F. Veron**, 2015, DNS of scalar transfer across an air-water interface during inception and growth of Langmuir circulation, *American Physical Society Meeting, Division of Fluid Dynamics, Boston MA*
28. Ma, Y., and **F. Veron**, 2015, Laboratory measurements of the inception and evolution of Langmuir Turbulence, *American Physical Society Meeting, Division of Fluid Dynamics, Boston MA*
29. Buckley, M., and **F. Veron**, 2015, Experimental study of the wind stress above waves., *American Meteorological Society Meeting, Phoenix, AZ*.
30. Hafsi, Y. Ma, M. Buckley, A.E. Tejada-Martinez, and **F. Veron**, 2015: DNS and measurements of scalar transfer across an air-water interface during inception and growth of Langmuir circulation, *The International Symposium on Gas Transfer at Water Surfaces, Seattle, USA*

31. **Veron, F.**, and **M. Buckley**, 2014, Airflow above surface waves, *American Physical Society Meeting, Division of Fluid Dynamics, San Francisco CA*
32. Hafsi, A., A.E. Tejada-Martinez and **F. Veron**, 2014, Direct numerical simulation of scalar transfer across a wind-driven air-water interface, *American Physical Society Meeting, Division of Fluid Dynamics, San Francisco CA*
33. **Davies A.R.**, **F. Veron**, and M. J. Oliver 2014, Kinetic Energy, Blooms and carbon export in the Drake Passage, *American Geophysical Union Meeting, San Francisco, USA.*
34. **Buckley M.**, and **F. Veron**, 2014, Experimental study of the wind stress above waves, *American Meteorological Society Meeting, Phoenix AZ.*  
**Award:** *Best student Presentation* (first place: **Buckley**).
35. **Buckley M.**, and **F. Veron**, 2013, Measurements of turbulence in the airflow above surface wave, *American Physical Society Meeting, Division of Fluid Dynamics, Pittsburg PA*
36. **Veron, F.**, and **J. Mueller**, 2013, Impact of Sea Spray on Air-Sea Fluxes, *American Physical Society Meeting, Division of Fluid Dynamics, Pittsburg PA*
37. **Buckley M.**, and **F. Veron**, 2012: Laboratory study of the wind structure above waves, *American Meteorological Society meeting, Boston, USA.*  
**Award:** *2<sup>nd</sup> Best student Presentation* (**Buckley**).
38. **VanKirk, Z.**, **F. Veron**, L. Lenain, and W.K Melville, 2012: Deep Water Surface Gravity Wave Statistics from Stereo Imagery, *American Meteorological Society meeting, Boston, USA.*
39. **Buckley M.**, and **F. Veron**, 2012: Airflow separation over surface gravity waves, *International Conference on Theoretical and Applied Mechanics, Beijing, China.*
40. **Veron F.**, and **M. Buckley**, 2012: Laboratory study of the structure of the airflow and separation above surface waves *American Physical Society Meeting, Division of Fluid Dynamics, San Diego, CA.*
41. M. S. Long, **F. Veron**, R. Sander, H. Riede, and W. Keene, 2012, Simulated Chemical Interactions and Air-sea Fluxes Associated with Spume Droplets under High Wind Conditions. *American Meteorological Society meeting, Boston, USA*
42. Veron; D.E., F. A. Newton, **F. Veron**, A. C. Trembanis, D.C. Miller, 2012: Exploring Marine Science through the University of Delaware's TIDE camp. *American Geophysical Union Meeting, San Francisco, USA*
43. **Buckley M.**, and **F. Veron**, 2011, Laboratory study of the wind structure over surface waves. *American Physical Society Meeting, Division of Fluid Dynamics, Baltimore, MD.*
44. **Harrison, E.L.**, and **F. Veron**, 2011, Rain-induced momentum exchange at the ocean surface under low wind speed conditions, *American Physical Society Meeting, Division of Fluid Dynamics, Baltimore, MD.*
45. **Harrison, E.L.**, and **F. Veron**, 2011, rain effect on air-sea gas transfer, *SOLAS Summer School, Corsica, France.*
46. **Harrison, E. L.**, P. M. Orton, S. Eggleston, **F. Veron**, W. R. McGillis and D. T. Ho, 2010: Wind and Rain Effects on Air-Water Gas Transfer. *The 6th International Symposium on Gas Transfer at Water Surfaces. Kyoto, Japan.*
47. Orton, P.M., W.R. McGillis, D.T. Ho, **F. Veron**, **E.L. Harrison** and S. Eggleston, 2010: Laboratory Estimates of Air-Water CO<sub>2</sub> Exchange under Wind and Rain Conditions: A Comparison of Mass Balance and Profile Methods, *The 6th International Symposium on Gas Transfer at Water Surfaces, Kyoto, Japan.*
48. **Buckley, M.** and **F. Veron**, 2010, Dynamics of the airflow above breaking and non-breaking waves. *American Meteorological Society meeting, Annapolis, USA.*
49. **Harrison, E.L.**, and **F. Veron**, 2010: Measuring rain-induced momentum exchange at the ocean surface under low wind speed conditions. *American Meteorological Society meeting, Annapolis, USA.*

**Award:** 2<sup>nd</sup> Best student Presentation (Harrison).

50. Mueller J., and **F. Veron**, 2010: Impact Sea spray effects on the air-sea fluxes at moderate and high wind speeds. *American Meteorological Society meeting*, Annapolis, USA.
51. Buckley M., F. Bernard, and **F. Veron**, 2010: Donut-shaped Bubbles Formed by Raindrops. *American Physical Society Meeting, Division of Fluid Dynamics, Long Beach, USA*.
52. Eggleston, S., E.L. Harrison, D.T. Ho, and **F. Veron**, 2010: Combined Effects of Wind and Rain on Air-Water Gas Exchange, Abstract B31F-0375, *Fall Meeting, AGU*, San Francisco, Calif.
53. VanKirk, Z., J. Mueller and **F. Veron**, 2009: Sea State dependent air-sea gas flux parameterization. *American Meteorological Society meeting*, Phoenix, USA.
54. Mueller J., and **F. Veron**, 2009: Impact of sea spray on air-sea fluxes: a physical model. *American Meteorological Society meeting*, Phoenix, USA.
55. Harrison, E.L., M. Buckley and **F. Veron**, 2009: Quantifying rain-induced momentum exchange at the ocean surface. *American Meteorological Society meeting*, Phoenix, USA.  
**Award:** 2<sup>nd</sup> Best student Presentation (Harrison).
56. Buckley, M., Mueller J. and **F. Veron**, 2009: Airflow separation above wind waves. *American Meteorological Society meeting*, Phoenix, USA.
57. **Veron, F.**, J. Mueller, and M. Buckley, 2008: Air-flow separation above wind-waves. ICTAM 2008, Adelaide, Australia.
58. **Veron, F.**, and W.K. Melville, 2007: Wave Modulated Turbulent Fields at the Ocean Surface and Related Air-Sea Fluxes. *39th International Liege Colloquium on Ocean Dynamics*. Liege, Belgium.
59. **Veron, F.**, G. Saxena, and S Misra, 2007: Airflow separation above wind waves. *American Meteorological Society meeting*, Portland, USA.
60. Mueller J., and **F. Veron**, 2007: Air-sea surface stress in the presence of air flow and surface separation. *American Meteorological Society meeting*, Portland, USA.
61. **Veron F.**, and W.K. Melville, 2007: Wave-coherent Air-Sea heat flux. *American Meteorological Society meeting*, Portland, USA.
62. Harrison, E.L., and **F. Veron**, 2007: The effects of rainfall on the ocean surface at low wind speed. *American Meteorological Society meeting*, Portland, USA.  
**Award:** 2<sup>nd</sup> Best student Presentation (Harrison).
63. **Veron, F.**, W.K. Melville, and L. Lenain, 2006. Wave-Modulated Air-Sea Fluxes and Ocean Surface Turbulence. *NCAR Geophysical Turbulence Program Workshop*. Boulder, USA.
64. **Veron, F.**, 2006 Wave coherent air-sea heat flux. *American Geophysical Union annual meeting*. San Francisco, USA.
65. Misra, S.K., J.T. Kirby, M. Brocchini, **F. Veron**, M. Thomas, and C. Kambhamettu, 2005: Coherent turbulent structures in a quasi-steady spilling breaker, *Waves'05*. Madrid, Spain.
66. Ho, D.T., W.R. McGillis, **F. Veron**, N. Scott, 2005: Rain and Wind-induced air-water gas exchange, *37<sup>th</sup> International Liege Colloquium on Ocean Dynamics; Gas Transfer At Water Surfaces*. Liege, Belgium.
67. **Veron F.**, and W.K. Melville, 2005: The influence of waves and turbulence on the heat flux at the surface of natural water bodies. *American Physical Society Meeting, Division of Fluid Dynamics, Chicago, USA*.
68. Saxena G., and **F. Veron**, 2005 Air Flow Separation over Unsteady Breaking Wind Waves. *American Physical Society Meeting, Division of Fluid Dynamics, Chicago, USA*.
69. Mueller J., and **F. Veron**, 2005 A Lagrangian Turbulent Dispersion Model of Evolving Sea Spray Droplets over the Ocean. *American Physical Society Meeting, Division of Fluid Dynamics, Chicago, USA*.

70. **Veron, F.**, and W.K. Melville, 2005 The influence of waves and turbulence on the oceanic heat flux. *American Meteorological Society annual meeting*. Atlanta USA.
71. **Veron F.**, and W.K. Melville, 2004: Influence of surface kinematics on air-sea heat flux, *American Physical Society Meeting, Division of Fluid Dynamics*, Seattle, USA.
72. **Mueller J.**, and **F. Veron**, 2004: A Lagrangian Turbulent Dispersion Model of Evolving Sea Spray Droplets Over the Ocean, *American Physical Society Meeting, Division of Fluid Dynamics*, Seattle, USA.
73. Misra, S.K., J. T. Kirby, M. Brocchini, M. Thomas, **F. Veron**, and C. Kambhamettu, 2004: Extra strain rates in spilling breaking waves. *Int. Conf. Coastal Eng.*, Lisbon, Portugal.
74. **Veron, F.**, and W. K. Melville, 2003: Measurements of ocean surface kinematics and surface turbulence effects on air-sea heat flux. *Euromech, Fluid Mechanics Conference*, Toulouse France.
75. **Veron, F.**, and W.K. Melville, 2003: Measurements of ocean surface kinematics and heat flux. *American Physical Society Meeting, Division of Fluid Dynamics*, Meadowlands, USA.
76. **Veron, F.**, and W.K. Melville, 2002: The Effects of Langmuir Circulations and Turbulence on the Sea-surface Temperature and Heat Fluxes. *AGU Ocean Sciences*, Honolulu, USA.
77. **Veron, F.**, and W.K. Melville, 2002: Measurements of ocean surface kinematics and heat transfer. *American Physical Society Meeting, Division of Fluid Dynamics*, Dallas, USA.
78. **Veron, F.**, and W.K. Melville, 2001: Remote observations of the initial generation of surface waves. *IGARSS symposium*, Sydney. Australia.
79. **Veron, F.**, G.I. Ierley, and W.K. Melville 2001: The initial generation of waves in an accelerated coupled air-water flow. *American Physical Society*, San Diego CA, USA.
80. **Veron, F.**, and W.K. Melville, 2000: The generation of Langmuir circulations, and surface waves, *American Geophysical Union*, San Antonio, USA.
81. **Veron, F.**, and W.K. Melville, 2000: Experiments on the initiation of Langmuir circulations and surface waves. *IUTAM Congress*, Chicago, USA.
82. Melville, W. K., **F. Veron**, and C. White, 2000: Coherent structures and turbulence under breaking waves. *IUTAM Congress*, Chicago, USA.
83. **Veron, F.**, and W. K. Melville, 2000: Laboratory and field experiments on the stability of wind driven water surfaces. *American Physical Society*, Washington DC, USA.
84. **Veron, F.**, and W.K. Melville, 2000: On the stability of an accelerated coupled air-water flow. *American Physical Society*, Washington DC, USA.
85. **Veron, F.**, and W.K. Melville, 1999: Laboratory measurements of the generation of Langmuir circulations, *American Physical Society*, New Orleans, USA.
86. Melville, W.K., and **F. Veron**, 1998: The initial generation of wind waves and Langmuir circulations. *IUTAM Symposium on Three-Dimensional Aspects of Air-Sea Interaction*. Nice, France.

### ***INVITED PRESENTATIONS***

1. **Veron, F.**, and L. Mieussens: 2019: A kinetic approach to estimate air-sea exchanges driven by sea spray in high winds. *Ed Monahan Symposium, UConn*.
2. **Veron, F.**, 2019: The Role of Breaking waves in air-sea interactions. *Xiamen University workshop*. Xiamen, China.
3. **Veron F.**, **K. Yousefi**, M. Buckley, N. Hussain, and T. Hara, 2018: Turbulent and Wave-Induced velocity fields over Wind-driven Surface Waves, *B' WAVES2018*. University of Marseille, France.

4. **Veron F.** 2017: sea spray: how small water drops can have global scale impact. *Osher Lifelong learning Institute*. Wilmington.
5. **Veron F.** 2016: Airflow over Ocean surface waves. *Distinguished Lecturer for Silberman award ceremony*. St. Anthony Falls Laboratory – University of Minnesota.
6. **Veron F.** 2016: Near-surface turbulence induced by rainfall, *Invited seminar* – MathOcean. University of Bordeaux, France.
7. **Veron F.** 2016: Airflow over waves, *Invited seminar* – *B' WAVES2016*. University of Bergen, Norway.
8. **Veron F.** 2015: The turbulent airflow above ocean waves, *Invited seminar* – *TREAT (Turbulence Research for Environmental & Astrophysical Transport)*. University of Delaware, Newark, DE, USA.
9. **Veron F.** 2014: Ocean Spray. Lorentz center; Rainfall and marine snow workshop. Leiden, Netherlands. *Invited seminar* – *Keynote speaker*
10. **Veron F.** 2014: Ocean Spray. *Invited seminar* – Princeton University, Princeton, NY, USA
11. **Veron F.** 2014: Ocean Spray. *Invited seminar* – University of Notre Dame. South Bend, IN, USA
12. **Veron F.** 2014 Experimental measurements of air flow above breaking waves, B'Waves, University of Bordeaux, France. *Invited seminar* – *Keynote speaker*
13. **Veron F.** 2014 Air-flow Separation and Sea Spray, *Invited seminar* – Carderock, Bethesda, MD, USA.
14. **Veron F.** 2013: The Role of Sea Spray in Air-sea Interaction. John Hopkins University, Baltimore, MD, USA. *Invited seminar*
15. **Veron F.** 2012: The Role of Water Droplets in Air-sea Interaction: Rain and Sea Spray. NCAR, Boulder, CO, USA. *Invited seminar* – *Keynote speaker*
16. **Veron F.** 2011: Air-flow separation and spray generation above short and steep waves at high wind speeds. *Invited seminar*. Oregon State University, OR, USA.
17. **Veron F.** 2011: Air-flow separation and spray generation above short and steep waves at high wind speeds. *Invited seminar*. University of California, San Diego, CA, USA.
18. **Veron F.** 2011: Air-flow separation and spray generation above short and steep waves at high wind speeds. *Invited seminar*. University of Delaware, Newark, DE, USA.
19. **Veron F.** 2010: Sea spray contributions to the air-sea fluxes at moderate and hurricane wind speeds. *Invited contribution*. *AGU Ocean Sciences*, Portland, USA
20. **Veron F.** 2010: Interaction air-mer: les phénomènes petite échelles qui connectent l'océan et l'atmosphère. EPOC. *Invited seminar*, Université de Bordeaux, France.
21. **Veron F.** 2010: Sea spray contributions to the air-sea fluxes at moderate and hurricane wind speeds. *Invited contribution*. Workshop on air-sea interactions under tropical cyclones (hurricanes), RI, USA.
22. **Veron F.** 2010: Air-flow separation and spray generation above short and steep waves at high wind speeds. *Invited seminar*. University of Rhode Island Graduate School of Oceanography, RI, USA.
23. **Veron F.** 2009: Interaction air-mer: les phénomènes petite échelles qui connectent l'océan et l'atmosphère. TREFLE, Université de Bordeaux, France.
24. **Veron F.** 2008: Wave modulation of air-sea heat fluxes. *Invited seminar*. Howard University, Washington DC, USA. USA.
25. **Veron F.** 2006: Wave modulated air-sea heat flux and ocean surface turbulence. *Invited seminar*. UConn, Avery point. USA.

26. **Veron F.** 2005: The influence of waves and turbulence of the heat flux at the surface of natural water bodies. *Invited seminar*, Cornell University, Ithaca, USA.
27. **Veron F.** 2005: The influence of waves and turbulence on the air-sea heat flux. *Invited seminar*. WHOI, Woods hole, USA.
28. **Veron F.**, 2004: Wind generated mixing and turbulence at the surface of natural water bodies, *Invited seminar*, Massachusetts Institute of Technology, Cambridge, USA.
29. **Veron F.**, 2004: Wind generated mixing and turbulence at the surface of natural water bodies, *Invited seminar*, John Hopkins University, Baltimore, USA.
30. **Veron F.**, 2004: Wind generated mixing and turbulence at the surface of natural water bodies, *Invited seminar*, Old Dominion University, Norfolk, USA.
31. **Veron, F.**, 2002: The initial generation of waves in an accelerated coupled flow. *Invited seminar*, University of Maryland, College Park. Baltimore, USA.
32. **Veron, F.** 2001: Mixing and turbulent transition at the surface of natural water bodies: Langmuir circulations. *Invited seminar*, Purdue University, West Lafayette, USA.
33. **Veron, F.** 2001: Turbulent transition at the surface of natural water bodies: Langmuir circulations. *Invited seminar*, University of Delaware, Newark, USA.
34. **Veron, F.** 2001: Mixing and turbulence the surface of natural water bodies. *Invited seminar*, University of California, Santa Cruz, USA.
35. **Veron, F.** 2001: Stability and transition of wind-driven water surfaces *Invited seminar*, University of Adelaide, Adelaide. Australia.
36. **Veron, F.** 2000: Mixing and turbulence in natural water bodies: Langmuir circulations. *Invited seminar*, Caltech, Pasadena, USA.
37. **Veron, F.** 2000: Turbulent transition at the surface of natural water bodies. *Invited seminar*, Massachusetts Institute of Technology, Cambridge, USA.
38. **Veron, F.** 2000: Stability and transition of wind-driven water surfaces. *Invited seminar*, Caltech, Pasadena, USA.
39. **Veron, F.**, and W. K. Melville, 1998: Coherent acoustic Doppler measurements of turbulence under breaking waves in the laboratory and field. *Invited presentation. Free Surface Turbulent Flows Workshop*, Caltech, Pasadena, USA.
40. Melville, W. K., R. Shear, and **F. Veron**, 1998: Laboratory measurements of Langmuir circulations. *Invited presentation, American Geophysical Union*. San Diego, USA.
41. **Veron, F.**, 1997: Near-shore turbulence measurements. *Invited seminar*. University of Toronto, Canada.

## RESEARCH GRANT SUPPORT

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### CURRENTLY FUNDED GRANTS

1. Title: Collaborative Research: Droplet transport in the vicinity of breaking waves: Experiments and simulations  
PI: Veron, F., (Co-PI: Richter, D)  
  
Period: 10/01/2018 - 03/30/2021  
Sponsor: NSF  
Amount: \$494,079  
Details: An experimental study of sea spray spume droplet generation by breaking waves. Collaboration with D/ Richter at the University of Notre Dame, who will perform numerical modeling.
2. Title: Collaborative Research: Influence of wind and bottom generated turbulence on air-sea gas exchange in shallow water environments  
PI: Veron, F., (Co-PI: Ho, D., and Pawlak, G.)  
Period: 10/01/2018 - 03/30/2021  
Sponsor: NSF  
Amount: \$347,203  
Details: This project is a collaborative field study aimed at evaluating Air-sea Carbon fluxes in shallow water environment with rough bottom. The experiments will take place in a coral reef environment where the carbon cycle is also important to the ecosystem.
3. Title: The structure of the air-flow above surface waves  
PI: Veron, F.,  
Period: 09/01/2016 - 08/31/2019  
Sponsor: NSF  
Amount: \$215,415  
Details: This project is student support to analyze existing data from a comprehensive experiment aimed at measuring turbulence in the airflow above surface waves.
4. Title: Collaborative Research: Airflow separations over wind waves and their impact on air-sea momentum flux  
PI: Veron, F., (Co-PI: Hara, T)  
Period: 3/01/2015 - 02/28/2020  
Sponsor: NSF  
Amount: \$398,861 (of \$754,000)  
Details: This project is a collaborative proposal aimed at combining numerical modeling and experimental data of the airflow above breaking waves in order to improve our understanding of the air-sea momentum flux provided by short strongly forced waves.

### COMPLETED PROJECTS

5. Title: Collaborative Research: DNS and high resolution measurements of scalar transfer across an air-water interface during inception and growth of Langmuir circulation

PI: Veron, F., (Co-PI: A. Tejada-Martinez).  
Period: 9/15/2013 - 08/31/2017  
Sponsor: NSF  
Amount: \$354,016 (of \$678,000)  
Details: This project is a collaborative proposal in which we will study the details of the molecular boundary layer at the ocean surface using a combination of experimental and numerical approaches.

6. Title: Ocean surface waves attenuation by falling rain: modelling, numerical simulations and laboratory data analysis

PI: Lubin, P. Veron, F., Glockner, S., Mieussens, L

Period: 9/15/2012 - 08/31/2015

Sponsor: Labex - France

Amount: \$258,000 (188,000 Euros)

Details: This project is a collaborative proposal in which we will study the details of the rain impact at the ocean surface using a combination of experimental and numerical approaches.

7. Title: Improving atmospheric models for offshore wind resource mapping and prediction using LIDAR, aircraft, and in-ocean observations

PI: Veron D., C. Archer, F. Veron, B. Colle. W. Kempton.

Period: 10/01/11 - 09/30/16

Sponsor: DOE

Amount: \$294,255

Details: This project proposes a multi-faceted approach to study the marine atmospheric boundary layer and improve upon its parameterization to better serve offshore power potential assessment. In this project, we will instrument in situ meteorological tower, conduct sampling from airplanes, and use modeling to study the wind and potential wind power in the marine atmospheric boundary layer offshore of New England.

8. Title: Spume droplet source function: Measurement and Theory

PI: Veron, F.

Period: 03/01/09 - 02/3/11

Sponsor: NSF

Amount: \$208,307

Details: The proposed research program is concerned with the role of sea-spray in influencing the heat and moisture flux at the surface of the oceans. In particular, this work directly measured the source function for the large spray droplets (spume) and study the details of their generation mechanism. We have observed large supra-millimeter drops not currently accounted for in models.

9. Title: FLIP Experiments in support of: "Surface Waves, Wave Breaking and Wave-Modulated Air-Sea Fluxes"

PI: Veron, F.

Period: 01/01/08 - 12/31/13



Sponsor: ONR (sub-contract through SIO-UCSD)  
Amount: \$552,893  
Details: The work was performed in support of the program titled "Surface Waves, Wave Breaking and Wave-Modulated Air-Sea Fluxes" proposed by Melville as an expansion proposal for the ONR Hi-Res Wave-Air-Sea DRI. We used optical, active and passive IR, and associated laser and laser and ultrasonic altimetry techniques to image and measure the small scale waves and turbulence at ocean surface. We have deployed the instruments from the port and starboard booms of R/P FLIP during the field test and main experiments in 2009 and 2010 respectively.

10. Title: CAREER: Airflow separation above wind-waves.  
PI: Veron, F.  
Period: 01/01/08 - 12/31/13  
Sponsor: NSF  
Amount: \$583,671  
Details: This Career proposal is an integrated program of research and education aimed at improving our understanding of the effects airflow separation above the ocean surface waves on the air-sea flux of momentum,. The project also exposed minority high school students to geosciences fields. We performed laboratory and field experiments to study the airflow separation above wind waves. We also developed a physical oceanography curriculum to be taught to promising minor high school students. NSF career awards are competitive and prestigious.

11. Title The Role of Rainfall in the Transfers of Energy between the Atmosphere and the Ocean.  
PI: Veron, F.  
Period: 06/08/07 - 06/07/08.  
Sponsor: University of Delaware Research foundation  
Amount: \$25,000  
Details: This grant represents seeds money for purchasing equipment and performing some preliminary experiments on the generation of turbulence and the consequent transfers of energy between the atmosphere and the ocean in rainy conditions.

12. Title Collaborative Research: Wind, Waves, Rain and Their Effects on Air-Water Gas and Momentum Exchanges.  
PI: Veron, F., (Co-PI: Ho, D.T., and Mc Gillis, W. R.)  
Period: 03/01/07 - 02/31/11.  
Sponsor: NSF  
Amount: Veron - \$311,429 (of \$696,174)  
Details: In this work, we performed laboratory experiments to directly measure the turbulence generated by rainfall along with the air-water gas and momentum exchange rates. The dynamic effects of rain-induced stresses on the surface waves was also investigated.

13. Title Generation and Transport of Marine Aerosols in the Residential/Recreation Coastal Zone.  
PI: Veron, F.

Period: 02/01/07 - 01/31/09.

Sponsor: NOAA Sea Grant

Amount: \$72,442

Details: This project was concerned with the study of the generation and transport of marine aerosol and sea salt in the coastal and habited area. The work spanned experimental work on the generation of sea spray and numerical studies of the dispersion for the spray as is evaporates and is transported inland.

14. Title Dynamic Effects of Airborne Water Droplets on Air-Sea Interactions: Sea-Spray and Rain.

PI: Veron, F.

Period: 06/01/05 - 05/31/08.

Sponsor: ONR- Young Investigator Program

Amount: \$310,787

Details: This project was focused on the numerical study of the impact of sea pray and rain on the air-sea exchange of momentum, heat, and mass. This grant allowed the PI to purchase the largest computer cluster in the college which was made available to other college PIs based on availability. This grant resulted from a competitive selection and is quite prestigious.

15. Title Longshore Sediment Transport in Surf and Swash Zones.

PI: Kobayashi, N., (Co-PI: Veron, F.)

Period: 02/01/03 - 01/31/05.

Sponsor: NOAA Sea Grant

Amount: \$80,484 (of \$160,968)

Details: This project dealt with the laboratory study of wave generated turbulence on a sloping bottom and its effects on the suspension of sediment. Veron was in charge of performing experiments on the generation of turbulence.

16. Title The Influence of Small Scale Turbulence and Coherent Structures on Air-Sea Heat Flux.

PI: Melville, W. K (Co-PI: Veron, F)

Period: 10/01/01 - 09/30/05.

Sponsor: NSF

Amount: \$330,486 (of \$733,850)

Details: This project was concerned with the study of the effect of the small scale turbulence on the disruption of the thermal molecular layer at the surface of the ocean and the effect on the oceanic hat flux. Veron was responsible for designing and conducting the large field experiments that took place from R/P Flip and Scripps pier. A total of 36 days (at sea) and more than 4 months (on Scripps pier) of data were acquired.

## TEACHING AND STUDENT MENTORING

### CLASSROOM TEACHING

| Year | Course                   | Credits | Enrollment &<br>Notes                        | Student Evaluations |      |
|------|--------------------------|---------|--|---------------------|------|
|      |                          |         |  | IQ                  | CQ   |
| 2017 | Fluid Dyn. Mar. Syst.    | 4       | Enrollment: 18                               | 4.9                 | 4.6  |
| 2016 | Waves in the Marine Env. | 3       | Enrollment: 3                                |                     |      |
| 2016 | Analyt. Tech. Mar. Sc.   | 3       | Enrollment: 6                                | 4.60                | 4.40 |
| 2016 | POSE seminar             | 1       | Enrollment: 17                               | 4.71                | 4.86 |
| 2015 | Fluid Dyn. Mar. Syst.    | 4       | Enrollment: 13                               | 4.71                | 4.71 |
| 2015 | Waves in the Marine Env. | 3       | Enrollment: 8                                | 4.00                | 4.20 |
| 2014 | TIDE* Summer camp        |         | Enrollment: 12<br>3 Lectures, Lab Activities | N/A                 |      |
| 2014 | Intro to Phys. Oceanogr. | 3       | Enrollment: 12                               | 4.36                | 4.00 |
| 2013 | Waves in the Marine Env. | 3       | Enrollment: 8                                | 5.00                | 5.00 |
| 2013 | TIDE Summer camp         |         | Enrollment: 18<br>3 Lectures, Lab Activities |                     |      |
| 2013 | Intro to Phys. Oceanogr. | 3       | Enrollment: 21<br>Incl. 9 undergrads         | 3.89                | 4.17 |
| 2012 | Waves in the Marine Env. | 3       | Enrollment: 6                                | 5.00                | 5.00 |
| 2012 | TIDE Summer camp         |         | Enrollment: 17<br>4 Lectures, Lab Activities |                     |      |
| 2012 | Intro to Phys. Oceanogr. | 3       | Enrollment: 11                               | 4.20                | 3.80 |
| 2011 | Special Problem          | 3       | Enrollment: 3                                |                     |      |
| 2011 | Waves in the Marine Env. | 3       | Enrollment: 6                                | 5.00                | 4.75 |
| 2011 | TIDE Summer camp         |         | Enrollment: 16<br>3 Lectures, Lab Activities |                     |      |
| 2011 | Intro to Phys. Oceanogr. | 3       | Enrollment: 8                                | 4.33                | 4.17 |
| 2011 | POSE Seminar             | 1       | Enrollment: 6                                | N/A                 | N/A  |
| 2011 | Special Problem          | 3       | Enrollment: 3                                |                     |      |
| 2010 | TIDE Summer camp         |         | Enrollment: 17<br>3 Lectures, Lab Activities |                     |      |
| 2010 | Ocean Fluid Dynamics     | 4       | Enrollment: 16                               | 4.67                |      |
| 2009 | TIDE Summer camp         |         | Enrollment: 14<br>3 Lectures, Lab Activities |                     |      |
| 2009 | Waves in the Marine Env. | 3       | Enrollment: 3                                | N/A                 |      |
| 2008 | Ocean Fluid Dynamics     | 4       | Enrollment: 6                                | 4.50                |      |
| 2008 | TIDE Summer camp         |         | Enrollment: 10<br>3 Lectures, Lab Activities |                     |      |
| 2008 | Waves in the Marine Env. | 3       | Enrollment: 6                                | N/A                 |      |
| 2007 | Ocean Fluid Dynamics     | 4       | Enrollment: 4                                | 5.00                |      |
| 2006 | Ocean Fluid Dynamics     | 4       | Enrollment: 9                                | 5.00                |      |
| 2006 | Waves in the Marine Env. | 3       | Enrollment: 6<br>co-taught with M. Badiey    | 3.75                |      |
| 2005 | Ocean Fluid Dynamics     | 4       | Enrollment: 8                                | 5.00                |      |
| 2003 | Ocean Fluid Dynamics     | 4       | Enrollment: 10                               | 4.50                |      |
| 2002 | Ocean Fluid Dynamics     | 4       | Enrollment: 6<br>co-taught with P. Huq       | 4.80                |      |

Student evaluations reported are IQ: Instructor Quality and CQ: Course Quality. They are based on UD's standard questions and scores range from 1(worst) to 5 (best); N/A indicates no evaluations were returned. Fall 2016 reviews are not yet available

\* TIDE Summer camp is a residential 2-week camp for high school juniors and seniors organized by SMSP and taught by SMSP faculty.

## **GRADUATE ADVISEES**

### **Current**

- 2017 - **Robert Jaquette**  
*Thesis: Measuring Breaking induced sea spray generation function.*
- 2016 - **Kianoosh Yousefi** (Ph.D. Mechanical Eng. Department)  
*Thesis: Turbulence in the atmospheric wave boundary layer*

### **Former** (including last known position)

- 2014 - 2016 **Yi Ma** (M.S.)  
*Data Analyst, JP Morgan Chase*  
*Thesis: High resolution measurements of scalar transfer across an air-water interface during inception and growth of Langmuir circulation.*  
*Awards: • POSE fellowship 2014.*
- 2008 - 2015 **Marc Buckley** (Ph.D.)  
*NSF Post Doc Fellow – Helmholtz center, Geesthacht, Germany.*  
*Thesis: Effects of airflow separation on the surface stress and the structure of the turbulence above surface waves. (Defense scheduled for July 17 2015)*  
*Awards: • Best Student Presentation (1<sup>st</sup>) - American Meteorological Society meeting - Phoenix, 2015.*  
*• 2<sup>nd</sup> Best Student Presentation - American Meteorological Society meeting - Boston, 2012.*  
*• Awarded an NSF award (AGS-PRF: Air-Sea Momentum flux at High Wind Speeds in the North Sea). \$98K/year for 2 years in support of a Post-Doc.*
- 2010 - 2015 **Alex Davies** (M.S.) (Co-advised with Dr. M. Oliver)  
*Research Engineer, US Naval Academy*  
*Thesis: Mesoscale kinetic energy as a control on phytoplankton abundance and the biological pump in the Drake Passage.*  
*Awards: • POSE fellowship 2010*
- 2012 - 2013 **Hunter Brown** (Ph.D. left before graduating)  
*Engineer, SMSP/US*  
*Status: Hunter left the program for personal reasons*
- 2011 - 2012 **DeAnna Sewel** (M.S.)  
*Aero Thermal Engineer, Private Industry, Florida*  
*Thesis: Wave load on multi-member offshore wind turbine sub-structures*
- 2007 - 2013 **Zackary VanKirk** (M.S.)  
*Mathematics Teacher*

*Thesis: Wave statistics from stereo imaging*

- 2005 - 2012 **Emily Harrison** (Ph.D.)  
*Researcher, Naval Surface Warfare Center, Carderock Division, MD.*  
*Thesis: The effects of rainfall on the ocean surface at low to moderate wind speed*  
*Awards:*
- 2<sup>nd</sup> Best Student Presentation - American Meteorological Society meeting - Annapolis, 2010.
  - 2<sup>nd</sup> Best Student Presentation - American Meteorological Society meeting - Phoenix, 2009.
  - 2<sup>nd</sup> Best Student Presentation - American Meteorological Society meeting - Portland, 2007.
  - Outstanding REU student - Chosen and sponsored for participation in the annual ASLO meeting, 2005.
- 2004 - 2006 **Gaurav Saxena** (M.S.)  
*Analyst, JP Morgan Chase*  
*Thesis: Airflow separation above wind waves*  
*Awards:*
- Frances Severance Academic Council awards. Best POSE thesis in 2006
- 2004 - 2008 **James Mueller** (Ph.D.)  
*Director of Research, Solar Institute, George Washington University*  
*Thesis: Lagrangian Model of Sea-Spray Dispersion and Evaporation over Complex Seas.*  
*Awards:*
- POSE student fellowship - 2005
  - Best Student Presentation (1<sup>st</sup>) - American Meteorological Society annual meeting - Atlanta 2005.
  - UD Severance Thesis Award 2011
- 2002 - 2004 **Miyuki Kikuchi** (M.S. left before graduating)  
*Independent translator, MKD translation, Japan*  
*Status: Miyuki left the program to move to Europe with her husband.*

### **POST-DOC ADVISEES**

- 2013 - 2015 **Mathieu Coquerelle** (co-supervised with P. Lubin, U. Bordeaux)  
*Current position: Assistant Professor, University of Bordeaux, France*

### **UNDERGRADUATE RESEARCH SUPERVISIONS**

- 2019 **Schuyler Moss**  
*Research subject: Particle tracking velocimetry of nascent sea spray droplets b wind-ruffled breaking waves.*
- 2018 **Paul Ernst**  
*Research subject: Sea Spray and airflow separation*
- 2014 - 2016 **Robert Jaquette**  
*Research subject: Turbulence in the atmospheric boundary layer at the cape wind site in Nantucket sound*
- 2015 - 2016 **Mary Edmondson**  
*Senior Thesis: Rain drop impact on still free surfaces*

- 2013 & 2014 **Gilles Bouille**  
*Research subject: Inception of wind wave and subsequent development of Langmuir Circulations*
- 2012 **Margaux Lopez**  
*Research subject: Jet and Film drop generation*
- 2012 **Jacob Steinberg**  
*Research subject: A Laboratory Investigation of Sea Spray Spume as Produced by wind and Breaking Waves.*
- 2011 **Madeline Foster** NSF REU  
*Research subject: Whitecap coverage of small wind waves.*
- 2010 **Florian Bernard**  
*Research subject: Mechanics of drop impacts.*
- 2010 **Kate Foco** NSF REU  
*Research subject: Wave measurements under heavy rainfall.*
- 2009 **Chelsea Hopkins** NSF REU  
*Research subject: Generation and measurement of Sea Spray at high wind speed.*  
 Awards: Outstanding REU student - Chosen and sponsored for participation in the annual ASLO meeting - February 2010
- 2008 **Dewi Lebars**  
*Research subject: Rain splash products and their influence of the air-sea heat flux.*
- 2008 **Cara Tacoma** NSF REU  
*Research subject: Generation of Sea Spray at high wind speed.*
- 2006 **Leeanne Hazzard** NSF REU  
*Project: Outreach in Oceanography*
- 2006 & 2007 **Marc Buckley**  
*Research subject: Rain induced momentum and turbulent kinetic energy fluxes*
- 2006 **Zackary VanKirk**  
*Research subject: Vortex ring generation by falling drops.*
- 2004 **Emily Harrison** NSF REU  
*Research subject: Rain induced mixing: a PIV experiment.*  
 Awards: Outstanding REU student - Chosen and sponsored for participation in the annual ASLO meeting - February 2005
- 2004 **Florian Coant**  
*Research subject: Air-flow separation over wind generated waves.*
- 2003 **Clark Paterson** NSF REU  
*Research subject: Rain induced mixing and wave damping.*  
 Awards: Outstanding REU student - Chosen and sponsored for participation in the annual ASLO meeting - February 2004.  
*Senior Thesis: Particle Image Velocimetry analysis of rain induced mixing of the oceanic boundary layer. Linfield college, OR.*
- 2003 & 2004 **James Mueller**  
*Research subject: Lagrangian model of sea spray dispersion.*
- 2003 **Daniel Vairet**  
*Research subject: Theoretical development of the damping of surface waves by rain.*

## **GRADUATE COMMITTEES**

### **Current**

Dong Wang (SMSP - M.S. Student with Dr. Kukulka)  
Tingting Zhu (CEE - Ph.D. Student with Dr. Hsu)  
Winston Wu (SMSP - Ph.D. Student with Dr. Archer)

### **Former**

2019 Dong Wang (SMSP – Ph.D. Student with Dr. Kukulka)  
2018 Ken Haulsee (SMSP - M.S. Student with Dr. Trembanis – left before graduating)  
2017 Amine Hafsi (USF - Ph.D. with Dr. Tejada Martinez)  
2017 Reviewer for Arvin Saket PhD (with Dr. Pierson) . Univ. New South Wales,  
Australia  
2017 Julien Deborde (University of Bordeaux, Ph.D. Student with Dr. P. Lubin)  
2017 Zheguang Zou (SMSP-Xiamne University - Ph.D. Student with Dr. Badiy)  
2016 Joseph Brodie (SMSP - Ph.D. Student with Dr. D.Veron)  
2016 Zhifei Dong (CEE - Ph.D. Student with Dr. Kirby)  
2015 Morteza Derakhti (CEE - Ph.D. Student with Dr. Kirby)  
2014 Kelsey Brunner (SMSP - M.S. Student with Dr. Kukulka)  
2014 Thijs Lanckriet (CEE - Ph.D. Student with Dr. Puleo)  
2014 Zheyu (Nancy) Zhou (CEE - Ph.D. Student with Dr. Hsu)  
2014 Jia-Lin Chen (CEE - Ph.D. Student with Dr. Hsu)  
2013 Reviewer for Nazanin Khezri PhD (with Dr. Chanson) University of Queensland,  
Australia  
2013 Tyler Rabe (SMSP - M.S. Student with Dr. Kukulka)  
2013 Carter Duval (Geology - M.S. Student with Dr. Trembanis)  
2012 Gangfeng Ma (CEE -Ph.D. Student with Dr. Kirby)  
2010 Matthew D. Grossi (SMSP - M.S. student with Dr. Oliver)  
2010 Gina Henderson (Geography - Ph.D. Student with Dr. Leathers)  
2010 Jens Figlus (CEE - Ph.D. Student with Dr. Kobayashi)  
2010 Ali Farhadzadeh (CEE - Ph.D. Student with Dr. Kobayashi)  
2009 Philip Muscarella (SMSP - Ph.D. student with Drs. Kirwan and Lipphardt)  
2005 Letise Houser (SMSP - Ph.D. student with Dr. Epifanio)  
2005 Michael Weed (SMSP - M.S. student with Dr. Kirwan)  
2004 Bob Heitsenrether (SMSP - M..S student with Dr. Badiy)  
2003 Micah Sklut (Geography - M.S. student with Dr. Hanson)

## **SERVICE**

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### ***SERVICE TO THE UNIVERSITY***

- 2016 - 2017 Committee on committee and nominations.
- 2003 - 2017 Committee on Instructional, Computing and Research Support Services.
- 2010 - 2012 University Graduate Council
- 2010 - 2013 University Research Council
- 2008 - 2012 Student and faculty honors committee.
- 2004 - 2007 University Library committee.
- 2004 Faculty search committee - Coastal Eng. (Civ. Eng.).
- 2003 Faculty search committee - Coastal Eng. (Civ. Eng.).
- 2002 Faculty search committee - Coastal Eng. (Civ. Eng.).
- 2002 Faculty search committee - Environmental science (Civ. Eng.).

### ***SERVICE TO THE COLLEGE AND SCHOOL***

- 2016 - 2017 SMSP Promotion and Tenure committee
- 2011 - 2017 POSE program director
- 2010 - 2017 School of Marine Science and Policy Academic Council
- 2017 Instructor in the summer TIDE program
- 2016 Instructor in the summer TIDE program
- 2014 - 2015 SMSP Faculty search committee
- 2008 - 2014 Instructor in the summer TIDE program.
- 2014 SMSP Promotion and Tenure committee
- 2010 Interim POSE Director
- 2009 Faculty search committee - POSE. (CEOE).
- 2003 - 2008 POSE seminar coordinator.
- 2008 Faculty search committee - POSE. (CEOE).
- 2007 College of Earth, Ocean, and Environment, ad hoc strategic planning committee.
- 2007 Presentations to the REU summer interns.
- 2007 POSE curriculum sub-committee.
- 2007 College of Earth, Ocean, and Environment, web committee.
- 2006 CEOE representative for UD discovery days.
- 2005 College of Earth, Ocean, and Environment Futures II committee.
- 2005 College of Earth, Ocean, and Environment Web committee.
- 2004 Participant in the College of Earth, Ocean, and Environment Retreat.
- 2004 Presentations to the REU summer interns.
- 2003 - 2003 College of Earth, Ocean, and Environment Web committee.
- 2003 College of Earth, Ocean, and Environment Web committee.
- 2002 - 2003 College of Earth, Ocean, and Environment Futures committee.



## **SERVICE TO THE PROFESSION**

### *Journal articles and proposal reviews:*

~ 100 manuscripts in the following Journals:

Journal of Physical Oceanography

Journal of Geophysical Research

Journal of Fluid Mechanics

Measurement Science Technology

Experiments in Fluids

Physics of Fluids

Ocean Modeling

Environmental Fluid Mechanics

Journal of Fluid Engineering

Atmospheric Chemistry and Physics

~ 60 proposals for the following agencies:

National Science Foundation (NSF)

National Science and Engineering Research Council of Canada (NSERC)

German-Israeli Foundation for Scientific Research and Development

~ 100 proposals for a National Science Foundation Panel

~ 10 Career Proposals (Educational and Science Components -2017)

Reviewer for Smith Prize, University of Miami, RSMAS (2017)

### *Session Chair*

2017 Organizing committee – Bwaves 2018

2016 International Conference on Theoretical and Applied Mechanics, Montreal, Canada

2014 American Physical Society Meeting, San Francisco, CA.

2012 International Conference on Theoretical and Applied Mechanics, Beijing China

2007 American Meteorological Society, Portland OR. 2007

2002 American Physical Society Meeting, Division of Fluid Dynamics, Dallas TX. 2002

2001 American Physical Society Meeting, San Diego, CA. 2001

### *Conference organizing*

2019 Session convener, Ocean Science Meeting, San Diego

2016 Symposium celebrating the Career of Ken Melville, SIO, Oct 2016

2016 Organizing committee for B'Waves 2016, Bergen, Norway.

2012 Session convener, American Geophysical Society Meeting, San Francisco, CA. special session on Education and Research at the K-12 levels

2011 Organizing committee for APS/DFD Annual meeting, Baltimore, 2011

### *Editorial Committees*

2016 -Now Editorial Board for Journal of Water Waves (Springer)

### SERVICE TO THE PUBLIC

- 2008 - Now TIDE Camp instructor: Gave lectures to campers every year, Organized visits and demonstrations at the air-sea interaction laboratory, housed informal gathering in Lewes in Newark for campers.
- 2004 - Now Regular public tours and demonstrations at the air-sea interaction laboratory including some arranged by the docent group and other in coordination with the DE port authority.
- 2017 Presentation to *Osher Lifelong Learning Institute*. Sea spray: how small water drops can have global scale impact. Wilmington.
- 2012 Gave Lab tour to US Navy Cadets, August 2012
- 2011 Gave public address lecture part of the DNREC “lunch and learn” lecture series. Lewes DE, Dec 2011. Perspective on air-sea interactions.
- 2007 Gave public address lecture part of the “Ocean Currents” lecture series. Lewes DE, August 2007. Where the ocean meets the atmosphere: perspective on air-sea interactions.
- 2006 Developed and [posted outreach and teaching material](#).
- 2006 Participated in Coast-Day. ~ 40 people visited the laboratory. Setup demonstrations on surface wave, wind and sea spray.
- 2005 Participated in Coast-Day, ~ 40 people visited the laboratory. Setup demonstrations on surface wave, wind and rain.
- 2004 Participated in Coast-Day, ~ 40 people visited the laboratory. Setup demonstrations on surface wave and wind.
- 2004 Arranged for a visit and demonstration at the air-sea interaction laboratory for minority high school seniors and juniors participating in the Fame/Unite/Merit program at UD.
- 2003 Participated in Coast-Day and opened the Air-Sea Interaction Laboratory facility for the first time since my arrival at UD. ~40 people visited the laboratory. Setup demonstrations on wind and waves.

#### *In the News:*

- 2019 Featured article in Delaware Beach Life.  
<https://www.delawarebeachlife.com/our-content/262-making-waves>
- 2016 Interview on local NPR station – Sea spray and 2016 Physics Today article.
- 2016 Breakers in the atmosphere. Udaily article about 2016 Physics Today article.  
<http://www.udel.edu/udaily/2016/november/ocean-spray-weather-climate/>
- 2014 TIDE Camp: High school students participate in CEOE’s summer camp, UDaily, 20 August 2014, ([www.udel.edu/udaily/2015/aug/tide-camp-082014.html](http://www.udel.edu/udaily/2015/aug/tide-camp-082014.html).)
- 2013 <http://www1.udel.edu/udaily/2013/jan/antarctica-data-011613.html>
- 2013 High school students participate in UD’s marine science summer camp. UDaily, 9 August 2013. ([www.udel.edu/udaily/2014/aug/tide-camp-080913.html](http://www.udel.edu/udaily/2014/aug/tide-camp-080913.html))
- 2012 High school students experience marine science at a two-week summer camp at UD, UDaily, 23 August 2012, ([www.udel.edu/udaily/2013/aug/ceoe-tide-camp-082312.html](http://www.udel.edu/udaily/2013/aug/ceoe-tide-camp-082312.html).)
- 2012 AGU research highlights (Veron et al.)

- 2012 AGU research highlights (Harrison et al.)
- 2010 Camp introduces high school students to marine science, Sea Grant Website, August 31, 2010, ([www.deseagrant.org/news/camp-introduces-high-school-students-marine-science](http://www.deseagrant.org/news/camp-introduces-high-school-students-marine-science))
- 2010 Summer TIDE – Kids take an interest in estuary, Southern Delaware, spring 2010, p 41-42. <http://www.udel.edu/ocm/publications/SDG'2010.pdf>, pp.41-42.
- 2008 New summer program to introduce high schoolers to Delaware Bay, UDaily, 30 May 2008 ([www.udel.edu/PR/UDaily/2008/may/tide053008.html](http://www.udel.edu/PR/UDaily/2008/may/tide053008.html))
- 2008 College of Earth, Ocean, and Environment press release
- 2008 University of Delaware Press Release 2008
- 2005 WBOC local news interview ([www.youtube.com/user/airsealab/videos](http://www.youtube.com/user/airsealab/videos))
- 2005 Cape Gazette (Lewes DE) article
- 2005 College of Earth, Ocean, and Environment press release
- 2005 University of Delaware Press Release
- 2005 Interviewed for Messenger article
- 2004 Interviewed for San Diego Union Tribune
- 2003 Interviewed for Messenger article

#### ***OTHER NOTEWORTHY ACTIVITIES***

- 2018 Hosted Pr. Mieussens over a period of 10 days at UD
- 2017 Hosted Pr. Mieussens over a period of 15 days at UD
- 2017 Visiting Scholar, University of Bordeaux I2M/IMB while on semester sabbatical
- 2016 Visiting Scholar, University of Bordeaux I2M/IMB
- 2016 Hosted Pr. Mieussens over a period of 15 days at UD
- 2014 Visiting Scholar, University of Bordeaux I2M/IMB
- 2014 Hosted Pr. P. Lubin over a period of 5 months at UD
- 2014 Hosted Pr. Mieussens over a period of 1 month at UD
- 2009 - 2010 On sabbatical at the University of Bordeaux; Collaborated with Pr. P. Lubin and Pr. Luc Mieussens. That work that led to a long-lasting and fruitful work relationship between UD and U-Bordeaux. It led to funding opportunities and team supervision of Post-Doc and students.
- 2008 Consulting for SL-Ross; Mineral Management Services; Performed experiments of breaking waves and surface turbulence on oil dispersal at the surface.

#### ***LEADERSHIP ACTIVITIES AS DEPUTY DEAN***

##### ***FALL 2017***

Chair of Academic council

Eco entrepreneurship (D. Levia)

Changes to Marine Science and Marine Studies curriculum (D. Veron)

Climate Scholar program (J Merrill)

GIS 4+1 (D. Levia)

Research Dean Duties

Reviewers for  
EPSCOR proposals  
UDRF-SI proposals  
NSF MRI proposals (internal to UD)  
GUR proposals (internal to UD)  
Cluster Hire proposal writing and discussion leader  
14 white papers with CEOE involvement  
State legislative priority funding  
Attended Global Leadership Coalition (Senator Coons, Congresswoman Blunt Rochester, Mark Green, director USAID) (Oct 2017)  
Review committee and charge for Director Moline  
Chair of space committee  
Review of reclassification for CEOE personnel  
Review of organizational chart for CEOE leadership, faculty and staff  
Leading AGU-TV effort  
University of Tsukuba, Japan Meeting and MOU  
Search committee for GIS (Geography)  
Search committee for UD cluster on Data Science - application  
Steering committee for UD cluster on Data Science

### ***SPRING 2018***

Chaired academic council  
Review of GIS 4+1  
Review of GEOL P&T documents  
Review of GEOG P&T documents  
Review committee and charge for Director Moline  
Attend National Council for Science and Environment annual meeting (DC)  
Review of P&T procedure in College.  
Research Dean Duties  
Review of Cluster hire proposals 65 proposals  
Review of Cluster hire proposals 10 full proposals  
Nanofab science and core facility meeting with C. Rjordan  
Attended National Council for Science and the Environment (DC) (Jan 2018)  
Setup Data management task force (research office)  
Setup faculty pool for internal proposal review (research office)  
Helped with Power US consortium – brought COE onboard  
Review of UNIDEL proposals  
Attended meeting at UD and Brookhaven for BNL partnerships.  
Attended DOD security meeting  
Professional development  
Attended ULEAD Class and training (all year)  
Mentoring Graduate Students: Strategic Initiatives to Ensure They Persist & Succeed  
Closing the Opportunity Gap in STEM Through Mentorship,

Search committee for GIS (Geography)  
Search committee for UD cluster on Data Science - application  
Steering committee for UD cluster on Data Science  
Search committee Chair for Marine Advisory Service Director  
Strategic Planning committee (Co-Chair)  
Faculty mentoring  
    Met with Junior Faculty  
    Review of P&T Procedure  
    Setup Faculty mentoring seminars and workshops  
Attending Consortium for Ocean Leadership (DC)  
Attended Sea Grant Knauss fellow dinner (DC)  
Hosted Xiamen delegation in Delaware  
Budget meeting preparation for provost presentation  
MAS director search committee chair  
Reviewed PT documents SMSP  
Reviewed Policy documents CEOE  
Participation and opening address at Convocation  
Robinson Renovations & Space moves  
Attended Chairs meetings  
Attended Leadership meetings  
Created CEOE policy documents:  
    Course buy out policy  
    Code of conduct (coordinated with AAUP reps and OEI)  
Attended several Dean Meetings  
Attended High performance computing Trabant  
Attended President's Executive Committee  
Attended/Participated in DAC meeting  
Attended UD Advance meeting

### ***FALL 2018***

Research Dean Duties  
    Review of UNIDEL proposals  
    Attended meeting at UD and Brookhaven for BNL partnerships.  
    NSF MRI proposal review and selection  
    UDRF research Dean meetings  
    Attended DOD security meeting  
Chaired academic council  
    Reviewed SMSP new structure bylaws including P&T (several documents)  
    Review of MMS proposal  
    Review of CEOE bylaws  
    Renaming of two departments  
Onboarding of new faculty  
Faculty mentoring program (setup mentors for new faculty in SMSP)

Setup Professional development seminar and events for Junior Faculty including a student mentoring workshop and a research office orientation workshop  
Attended MMS workshop  
Participated in the “Bridge to the Doctorate-Cohort XVII Program” proposal  
Participate in interviews for HR Vice Provost  
Teaching annex Lewes meetings  
Setup David Lawson and Ratcliffe foundation link  
Setup Ratcliffe foundation and interested faculty meeting  
Attended Leadership retreat  
Attended Xiamen conference and workshop (Xiamen China)  
Janis Lopez Exit interview  
Professional development  
    Attended ULEAD Class and training (all year)  
    Cade webinar LGBT  
    Webinar on AGU’s Ethics and Equity Center  
    Overcome Unconscious Bias & Racial Tension,  
    Mentoring Students of Color: Build Relationships That Foster Cross-Cultural Understanding, Trust and Accountability to Ensure Their Success.  
Hosted Xiamen delegation in Delaware (Minhan Dai)  
Attended Concur Training  
Setup and oversee review committee for Dr. Sturchio  
Strategic Planning committee (Co-Chair)  
Attended Chairs meetings  
Attended Leadership meetings  
Attended Faculty of Color roundtable  
Interview human geography faculty  
Attended AGU and Alumni event  
Interview with Dean’s assistant replacements  
Serve on Campus master plan: Translational Campus Committee  
Serve on Campus master plan: Connected Campus Committee  
Pursued Ratcliffe foundation links with interested faculty

### **SPRING 2019**

Conducted elections for COEO Senators  
Conducted elections for COEO Graduate councilors  
Co-Chair of the Search committee for College Chief Business Officer  
Attended PEC retreat  
Budget meeting with provost  
Hiring meeting with provost  
Attended President’s roundtable  
Selected Alison Award nominee  
Gave presentation to Parent and Family Weekend Presentation  
Brokered Cold room usage in LDL

Oversee GIS lab renovations  
Oversee Penny 011 and 012 renovations  
Academics & Library Technical Committee  
Attending Learning Spaces committee meeting  
Professional development:  
    Webinar: How Lehigh's Engineering and Applied Science College Customized the Student Experience Through Peer Mentorship  
    AGU Chair meeting in Austin TX: Summit on Improving Geoscience Graduate Student Preparedness  
    Attended ULEAD Class and training (all year)  
Led CEOE Convocation events (opening address)  
Participate in all UD commencement events  
Attended Chairs meetings  
Attended Leadership meetings  
Attended High performance computing Trabant  
Attended President's Executive Committee  
Attended/Participated in DAC meeting

***FALL 2019***

Onboarding of new faculty  
Faculty mentoring program (setup mentors for new faculty in SMSP)  
Strategic Planning committee (Co-Chair)  
Attended Chairs meetings  
Attended Leadership meetings  
Drafted MOU with KIMST  
Academic council Chair  
College P&T (election and training)  
Member of DBI advisory committee  
Serve on Committee to examine F&A distribution practices at UD  
Oversee Renovations in Robinson 101  
Serve as Research Dean for CEOE  
Serve on Campus master plan: Translational Campus Committee  
Serve on Campus master plan: Connected Campus Committee  
Pursued Ratcliffe foundation links with interested faculty  
Faculty mentoring  
    Met with Junior Faculty  
    Review of P&T Procedure  
    Setup Faculty mentoring seminars and workshops  
Attended President's Executive Committee  
Reviewed Policy documents CEOE  
Attended Global Coalition Leadership meeting  
Attended UD Advance meeting