**Personal Qualification Summary - Michael Lawson**

**Education and Training**

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| --- | --- | --- | --- | --- |
| Virginia Tech | Blacksburg, VA | Degree | B.S. | 2005 |
| Virginia Tech | Blacksburg, VA | Degree | M.S. | 2006 |
| Penn State | State College, PA | Degree | Ph.D. | 2010 |

**Professional Experience**

2017 – current Senior Scientist, National Renewable Energy Laboratory, Boulder, CO

2015 – 2017 Technical Advisor (M&O), U.S. DOE Wind and Water Power Office, Washington, D.C.

2012 – 2014 Scientist, National Renewable Energy Laboratory, Boulder, CO

2010 – 2012 Post-Doctoral Researcher, National Renewable Energy Laboratory, Boulder, CO

2007 Aerodynamics Engineer, BMW, Munich Germany

**Selected Publications**

1. Kelley, M., Tom, N., Yu, Y., Wright, A., Lawson, M., 2020, "Annual Performance of the Second-Generation Variable-Geometry Oscillating Surge Wave Energy Converter", Submitted to Renewable Energy.
2. **Thomas, S., Ananthan, S., Yellapantula, S., Hu, J., Lawson, M., Sprague, M.,** 2019, "A Comparison of Classical and Aggregation-Based Algebraic Multigrid Preconditioners for High-Fidelity Simulation of Wind Turbine Incompressible Flows", SIAM Journal on Scientific Computing, <https://doi.org/10.1137/18M1179018>.
3. Fleming, P, Annoni, J., Churchfield, M., Martinez, T., Gruchalla, K., Lawson, M., 2018, “From wake steering to flow control”, Wind Energy Sciences, <https://doi.org/10.5194/wes-3-243-2018>.
4. **Tom N., Yu, Y., Wright, A., Lawson, M.**, 2017, "Balancing Power Absorption Against Structural Loads With Viscous Drag and Power-Takeoff Efficiency Considerations", IEEE Journal of Oceanic Engineering, <https://doi.org/10.1109/JOE.2017.2764393>.
5. Tom N., Lawson, M., Yu, Y., Wright, A., 2016. “Spectral Modeling of an Oscillating Surge Wave Energy Converter with Control Surfaces”. Applied Ocean Research, <https://doi.org/10.1016/j.apor.2016.01.006>.
6. Tom N., Lawson, M., Yu, Y., Wright, A., 2016. “Development of a Nearshore Oscillating Surge Wave Energy Converter with Variable Geometrys”. Renewable Energy, [https://doi.org/10.1016/j.renene.2016.04. 016](https://doi.org/10.1016/j.renene.2016.04.%20016).
7. Lawson, M., Li, Y., and Sale, D., 2011. "Development and Verification of a Computational Fluid Dynamics Model of a Horizontal-Axis Tidal Current Turbine". Proceedings of the 30th International Conference on Ocean, Offshore, and Arctic Engineering, Paper No. OMAE2011-49863, <https://doi.org/10.1115/OMAE2011-49863>.
8. Bir, G., Lawson, M., and Li, Y., 2011. "Structural Design of a Horizontal-axis Tidal Current Turbine Composite Blade". Proceedings of the 30th International Conference on Ocean, Offshore, and Arctic Engineering, Paper No. OMAE2011-50063, <https://doi.org/10.1115/OMAE2011-50063>.
9. Lawson, M., Craven, B., Paterson, E., and Settles, G., 2012. “A Computational Study of Odorant Transport and Deposition in the Canine Nasal Cavity: Implications for Olfaction”. Chemical Senses, <https://doi.org/10.1093/chemse/bjs039>.

**Relevant Patents**

1. Wave Energy Conversion Incorporating Actuated Geometry, 2018, US Patent Number 10066595 B2