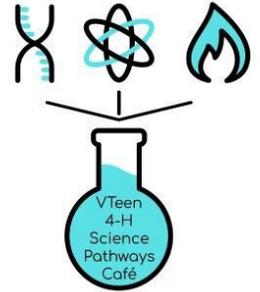




# VTeen Science Explorations



## Mitigating Climate Change in Electrical Engineering

Wednesday, September 16, 2020, 3:30-4:45 pm

Open to all youth entering grades 7-12 in VT and across the country!

Register@ [www.uvm.edu/extension/youth/announcements](http://www.uvm.edu/extension/youth/announcements)

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According to the United Nations, numerous scientific reports, and the majority of Americans, climate change is a global challenge that we must solve sooner rather than later. One major path forward to mitigate climate change is to install lots and lots of new renewable generation: wind turbines and solar PV arrays. However, as seen in California these days, it is not easy to install lots of renewables and then manage the electric grid well. In fact, the grid must become more flexible to absorb the more windy and sunny days and responsive to the less sunny and windy days. Mads Almassalkhi will present the electrical engineering science behind what makes a grid flexible and how core engineering concepts and technologies are used to make the grid responsive to the ebb and flow of power from solar PV and wind turbines. He will also share how these ideas can be brought into the real world via climate tech startup companies, including one he co-founded in 2016 in Burlington, VT.

### ABOUT OUR SPEAKER

**Mads Almassalkhi** is an assistant professor in the Department of Electrical and Biomedical Engineering (EBE) at the University of Vermont, director of Vermont’s new center for sustainable, resilient, and autonomous systems (VECTORS), and co-founder of tech startup Packetized Energy. His research interests lie at the intersection of power systems, mathematical optimization, and controls and focus on improving responsiveness and resilience of power systems. Prior to joining the University of Vermont,, he received his PhD from the University of Michigan in Electrical Engineering (EE): Systems in 2013, and a dual major in Electrical Engineering and Applied Mathematics at the University of Cincinnati in Ohio in 2008.

**What is a Virtual Teen Science Café?** It is a free, fun way for teens to explore science, engineering and technology with local scientists, engineers and technology experts. Teens will “meet a scientist”, learn about their work, and be able to participate in informal discussions.

**Questions?** Contact [lauren.traister@uvm.edu](mailto:lauren.traister@uvm.edu)

*To request a disability-related accommodation to participate in this program, please contact the 4-H Office at 802-888-4972 or [lauren.traister@uvm.edu](mailto:lauren.traister@uvm.edu) by September 9, 2020 so we may assist you.*



[www.uvm.edu/extension/youth](http://www.uvm.edu/extension/youth)