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**EE Faculty Hiring Seminar**
Columbia University Electrical
Engineering Department**Logan Horowitz*****University of California, Berkeley*****Date:** Thursday, Feb. 13**Time:** 11:40 am - 12:40 pm**Location:** CEPSR 750**Seminar:** Driving the Future:
Enabling Electric Vehicles and
Hyper-Efficient Data Centers
through Advanced Power
Electronics*Electrical Engineering Faculty Hiring Seminar Series***Driving the Future: Enabling Electric Vehicles and Hyper-Efficient Data Centers
through Advanced Power Electronics**

As the world transitions to sustainable energy solutions, the demand for electric vehicles and hyper-efficient data centers has soared. Advanced power electronics play a critical role in addressing the challenges of energy efficiency, performance, and scalability in both sectors. In this talk, I detail our recent efforts toward the development of power converters achieving unprecedented performance through novel topologies, improved modeling, optimal component selection, and innovative design. Advanced thermal management strategies are essential to dissipate heat effectively and ensure reliability. I will highlight our recent progress in both of these domains, explore their synergistic impact on improving system performance, and outline promising future directions. Integration of these technologies is pivotal for realizing the future of sustainable transportation and energy-efficient computing, driving both economic and environmental benefits on a global scale.

About Logan Horowitz

Logan Horowitz is currently a Ph.D. student in the Pilawa Group at the University of California, Berkeley. He received his BS degree in Electrical and Computer Engineering from Cornell University in 2019. His work focuses on the analysis and design of advanced power electronics, the development of thermal management techniques for electronics, and the theoretical comparison of power converter topologies. Logan received the ARCS Fellowship to fund his doctoral work and was a recipient of the ELI Award which funded undergraduate research. To date, he has received 2 Best Presentation Awards, 2 Best Demonstration Awards, 1 Best Poster Award, and has mentored 1 undergraduate student receiving a Best Presentation Award.