

Name of current  
research group and  
affiliation  
(RLE/LEES/CSAIL/MTL)

XXXXXX Research Group  
Laboratory for Electromagnetic and Electronic Systems



Massachusetts Institute of Technology  
77 Massachusetts Avenue, 10-061  
Cambridge, Massachusetts 02139-4307

Current  
positions/titles

Your Name  
PhD Candidate  
Communication Lab Advisor

Phone  
Email  
<http://>: Your personal URL

November 15, 2018

ECE Faculty Search Committee  
University of Texas at Austin ECE Department  
2501 Speedway, C0803  
Austin, TX 78712

Specifies position,  
summarizes research  
area in one sentence,  
and clearly  
demonstrates  
commitment to the  
target university

To the Faculty Search Committee,

I am writing to apply for the position of assistant professor in the electrical engineering department starting in the 2019-2020 academic year, as advertised on the department website. I am a Ph.D. candidate at the Massachusetts Institute of Technology where I will complete my thesis and graduate in June 2019. My research directions in power electronics, magnetics, and energy systems would complement and extend UT Austin's impact in the area of power and energy while increasing the intellectual diversity in the teaching curriculum. In addition, my experience and interest in the scholarship of teaching and learning would be an excellent fit at UT Austin with its commitment to excellent and inclusive teaching.

Dives into the impact of past research; illustrates how future research is relevant to the target department

My research has been impactful in power electronics and its applications. My work on magnetic materials for power conversion in the MHz regime has created new opportunities for high-frequency power conversion, for which I was awarded the William M. Portnoy Best Paper award. The techniques and conclusions from that work are now being used in industry to characterize high frequency materials and close the design loop on developing materials with even higher performance. My further research into high-frequency magnetic structures has shown exciting performance opportunities by leveraging new materials and new design approaches and has likewise been of great interest to industry, generating new funded research projects investigating the structure's use in high-power RF applications. I believe that my research strengths in magnetics and high-frequency, high-density power conversion complements and enhances UT Austin's existing power electronics efforts in circuits and power devices. This combined expertise will create additional internal synergy would strengthen UT Austin's place as a front-and-center leader in the power electronics field and in its impact on society.

Provides a sense of how good the applicant will be at teaching and mentoring at the target university

My commitment to teaching would also be an excellent fit at UT Austin. For example, I have conducted much of my research by mentoring undergraduates for which I was awarded the 2018 MIT Outstanding UROP mentor award. I have also sought formal coursework and training in pedagogical best practices and have put them into practice in the classroom where I received very high course evaluations. I have also contributed to the scholarship of STEM education through my work in the MIT Communication Lab, which was presented at the American Society for Engineering Education annual conference in 2017. I will make strong contributions as a teacher and to the scholarship of teaching and learning at UT Austin while leveraging the Faculty Innovation Center and collaborating with the recently-renamed UT STEM Center.

Demonstrates willingness and commitment to serving the community

I likewise have a record of service to my home institutions and my disciplinary community. I was awarded the 2018 MIT EECS Paul L. Penfield student service award for my work as an advisor in the MIT Communication Lab, as a co-chair for the Microsystems Annual Research Conference (MARC), and for outstanding service to the department. Through this service, I have also sought to improve diversity and inclusion within MIT. Having identified that attendance to MARC split along departmental lines, I began initiatives to improve the intellectual diversity of the conference and make all members feel welcome. I have also served the MIT Laureates and Leaders program, where I have helped underrepresented undergraduates navigate the choice of going to graduate school, finding advisors and changing labs, and generally succeeding in their careers.

Summary paragraph  
create bonds between  
applicant and target  
university

I believe my research record and direction will be an excellent fit at UT Austin. I likewise see great opportunity for my dedication to evidence-based teaching to flourish at UT Austin.

Thank you for your time and attention. I look forward to speaking with you.

Sincerely,

Signature

*Name*

*Research group name*

*Current Institution*