Systems-Driven Power Semiconductor Education

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There is a huge disconnect in today's education system that is preventing us from adequately training next generation of practicing engineers and scientists to address daunting challenges facing power semiconductor and power electronics industries [1,2]. This paper will discuss these challenges and proposes a new power semiconductor curriculum that effectively integrates with power electronics systems-driven curriculum that is already well-established [3].

[1] E. McShane, M. Trivedi, and K. Shenai, "An Improved Approach to Application-Specific Power Electronics Education–Curriculum Development," IEEE Trans. Education, Volume 44, Issue 3, pp 282-288, August 2001.

[2] M. Trivedi, E. McShane, R. Vijayalakshmi, A. Mulay, S. Abedinpour, S. Atkinson, and K. Shenai, "An Improved Approach to Application-Specific Power Electronics Education—Part II: Switch Characterization and Modeling," IEEE Trans. Education, Vol. 45, Issue 1, pp. 57-64, Feb. 2002.

[3] http://cusp.umn.edu/