



# David M. Beams, Ph.D., PE (Wisconsin)

## Associate Professor of Electrical Engineering The University of Texas at Tyler



### Education:

- PhD University of Wisconsin at Madison, 1997
- MSEE University of Illinois at Urbana-Champaign, 1977
- BSEE University of Illinois at Urbana-Champaign, 1974

### Honors and Awards:

- Alpha Chi (national college honor society) Outstanding Faculty Award in the College of Engineering (1999)
- UT Tyler Department of Electrical Engineering Outstanding Faculty Award (2005, 2010)
- Recognized as “Pillar of the College” (2013)
- Holder or co-holder of four US Patents

### Research Interests:

Wireless power transfer and applications  
Implantable and wearable electronics  
Materials and methods for teaching electronics  
Convergence between engineering and fine/performing arts





# Areas of Research Interest

## Wireless power transfer:

- Development and validation of numerical models for resonant wireless power transfer networks
- Development of wireless power transfer systems for implantable devices

## Implantable and wearable electronics:

- Development of implantable sensors for diagnostic purposes
- Minimization of power-consumption in implantable or wearable electronics

## Engineering Education:

- Practical application of theoretical concepts
- Development of laboratory experiments and apparatus to give real-world experience
- Exploring connections between engineering and the arts

## Selected Publications:

Pacemaker sense amplifiers” in J. G. Webster (ed.), *Design of cardiac pacemakers*. Piscataway, NJ: IEEE Press (1995).

D. M. Beams and V. Nagoorkar. *Design and simulation of networks for midrange wireless power transfer*. Presented at the 56<sup>th</sup> IEEE Midwest Symposium on Circuits and Systems (MWSCAS 2013), Columbus, OH, August 4-7, 2013.

D. M. Beams and A. Papasani. *State-variable analysis of wireless power transfer networks for linear and nonlinear loads*. Presented at the 56<sup>th</sup> IEEE Midwest Symposium on Circuits and Systems (MWSCAS 2013), Columbus, OH, August 4-7, 2013.

D. M. Beams and H. A. Ochoa. *An Inexpensive Curve Tracer for Introductory Electronics Laboratory Courses*. Proceedings of the 2015 Annual Conference of the American Society for Engineering Education, Seattle, WA, June 14-17, 2015.

