

Professor Ana V. Stankovic of Electrical and Computer Engineering Department, Cleveland State University established a cooperative agreement with General Electric Lighting, Nela Park Cleveland, Ohio in January 2000.

This cooperative agreement established funding for graduate students doing research in the area of Power Electronics. Since its inception seven students have participated in the program. Six students received their Master of Science degree in electrical engineering from Cleveland State University and Master thesis research topics were chosen to enhance existing General Electric products. One student received Doctor of Engineering Degree from Cleveland State University. In addition research developments led to the introduction of several new products.

This effort produced three journal and four well received conference publications. The experience gained and the research capability demonstrated led to their direct hiring of five in General Electric Lighting and General Electric Medical Systems.

As a part of this well established cooperation, master's degree student, Sergey Vernyuk was supported with Edison Award during the 2003/2004 academic year. Under Dr. Stankovic's and Dr. Lou Neron's supervision, he worked on the project: "Analysis and Implementation of a Synchronous Buck Converter for HID Ballast".

Since 2000 Master of Science and Doctoral students have completed the following projects:

1. 1. Nayem Sayed, "Low Cost High Power Factor Electrolyticless Ballast For Fluorescent Lamps".
2. Sergey V. Vernyuk, "Analysis and Implementation of a Synchronous Buck Converter used as an Intermediate Stage of an HID Ballast".
3. Haiyan Wang, "A Discrete Dimming Ballast for Linear Fluorescent Lamps".
4. Marius Marita, "Ripple Current Cancellation Technique for Electronic Ballasts".
5. Divya Uppala, "Design, Analysis and Optimization of a Universal Power Factor Correction Circuit for Linear Fluorescent Lamps".
6. Wei Xiong, "Analysis and Design of the Complementary Class D Self Oscillating Inverter for Compact Fluorescent lamps".