



Frank Reidy Research Center for Bioelectrics Seminar Series

Non-thermal Plasma for Surface Decontamination

Speaker: Johanna Neuber

Frank Reidy Research Center for Bioelectrics
Department of Electrical and Computer Engineering
Old Dominion University

When: 9:00 AM, Tuesday, March 29, 2016

Where: 1st floor conference room, IRP II

Abstract:

Non-thermal atmospheric pressure plasma has received much interest for bacterial inactivation applications in heat-sensitive environments. Though the precise mechanisms are not well known, reactive species generated in the plasma plume contribute to the deleterious effect of plasma upon many different pathogens, including drug-resistant bacterial strains. This seminar will give a brief introduction to non-thermal plasma and its application for medical uses and will discuss current work on the optimization of a plasma brush for large area surface disinfection and a plasma needle for endodontic use in the inactivation of bacterial biofilms.

Biosketch:

Johanna Neuber is currently a Master's student in Electrical Engineering at Old Dominion University, graduating this spring. She holds a B.S. degree in Electrical Engineering from the University of Texas at Austin (2014) and will begin studies for a Ph.D. in Biomedical Engineering at ODU in the fall of 2016. She is currently working at the Frank Reidy Research Center for Bioelectrics with Dr. Chunqi Jiang on the development and testing of non-thermal plasma sources for use in bacterial decontamination applications, particularly in root canals and on surfaces.

