## 2018 IEEE International Power Modulator and High Voltage Conference



Contribution ID: 39

Type: Poster Presentation

## Improving the voltage modulation depth and RF power generated on Nonlinear Transmission lines

Wednesday 6 June 2018 13:30 (1h 30m)

Nowadays Nonlinear Transmission Lines-NLTL have been studied for RF generation to be applied in different systems of communications such as satellite, military and biomedical applications. NLTL is built by using a network composed by inductors and capacitors, where at least one of these components need to have a nonlinear behavior. One limiting factor for applications is in the peak power range, and a way to increasing this is improving voltage modulation depth -VMD, which is main goal of this work. In this work, it is simulated and built three configurations of NLTLs using ceramic capacitors to improve VMD and consequently the RF power generated at the output. As shown by the results the cross-link configuration is the best method due to the highest VMD generated.

Author: Dr SILVA NETO, Lauro Paulo (Federal University of São Paulo)

**Co-authors:** Dr ROSSI, Jose (National Institute for Space Research); Dr BARROSO, Joaquim Jose (Aeronautic Institute of Technology ); Prof. SCHAMILOGLU, Edl (University of New Mexico)

Presenter: Dr SILVA NETO, Lauro Paulo (Federal University of São Paulo)

Session Classification: Poster 3 - Power Modulator Systems and Applications