
Applied Mathematics Seminar



Jan Sieber

College of Engineering, Mathematics and Physical Sciences, University of Exeter

Joint work with Zaid Ahsan and Harry Dankowicz (both University of Illinois, Urbana-Champaign)

Numerical experiments on optimizing responses of systems with delay

The standard approach to constrained optimization to differential equations with delay (DDEs) leads to extended systems of DDEs that involve positive and negative delays and discontinuous solutions. The extension involves all parts of the adjoint problem of the DDE. Harry Dankowicz et al have recently implemented an automated way to generate extended systems suitable for optimization of boundary-value problem solutions for ordinary differential equations in coco (a platform for numerical continuation). The presentation reports some initial demonstrations how the extended system looks like and how it can be implemented in coco. One example involves the optimization of a quasi-periodic response.

Wednesday, 23.10.2019 · 16:00 · WGB G08

University College Cork · Western Road · Cork · T12 XF62