ALPEN-ADRIA UNIVERSITÄT KLAGENFURT

Invitation to a Guest Lecture

Prof. William Rundell

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"Reconstructing reaction-diffusion equations: an anatomy lesson"

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Abstract

Reaction diffusion equations form the mathematical building block of a wide variety of applications and it is remarkable how such a relatively simple class of differential equations can model such a degree of physical breadth and complexity. As elegant as this is, it also illustrates the potential difficulties with reversing the process; namely, given a measured state of the model, try to determine what exact equation could have produced this outcome. This latter question is the subject of this talk and we will attempt to dissect the structure of such equations in order that we may reconstruct the underlying components such as the coefficients of the assumed differential operators.

Barbara Kaltenbacher and the Department of Mathematics look forward to seeing you at the talk!