TUTORIAL: A BRIEF INTRODUCTION TO SOLITON THEORY IN SOME NONLINEAR PDE’s

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Over the past twenty years, there has been great interest in nonlinear phenomenon ranging from shallow water waves to optical pulses in glass fibers. The goals of this tutorial are: (1) to give the general listener an introduction to solitons and how they arise in nature, (2) to discuss how nonlinear and dispersion effects play a crucial role in soliton theory and (3) to give one a sense of the excitement in studying these types of problems.