Rational solutions of the Boussinesq equation

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Abstract:

In this talk I shall discuss special polynomials associated with rational solutions of the Boussinesq equation, which is a soliton equation solvable by the inverse scattering method. These rational solutions, which are derived through a bilinear equation, are bounded, depend on two parameters and have an interesting structure. Further the rational solutions of the Boussinesq equation have similar appearance to rogue-wave solutions of the nonlinear Schr̈dinger equation studied in [1]–[5].

References:

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