



MATHEMATICAL EXPLORATIONS SEMINAR SERIES

[Seminar talks designed for undergraduate students]

A Glimpse of Soliton Theory

Professor Alex Kasman

Wed., Mar. 2, 2016 at 3:10 pm, 104 RS Small

In 1834, a ship designer saw an unusual wave of water on a canal in Scotland, but he was ridiculed by the scientific community when he tried to study it scientifically. It was an idea which was ahead of its time. It was not until the late 20th century, using ideas from quantum physics and cutting-edge mathematics research, that we finally understood its significance. Soliton Theory, the subject that has grown around these ideas, combines algebra and geometry with the study of waves and elementary particles. Not only does it provide us with a better look at a side of both math and theoretical physics which was previously beyond our view, it has found applications in diverse fields such as molecular biology and telecommunications. This talk will use animations and anecdotes to tell the history of this subject and to give an idea of its surprising and beautiful mathematical structure.



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346 RS Small at 2:45 pm.