



### Why Johnny Struggles When Familiar Concepts Are Taken To A New Mathematical Domain

*By Igor' Kontorovich*

Date: Tues 10th April 2018

Time: 3.30 pm to 4.30 pm

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In teaching and curriculum, we often highlight the structure and connectedness of mathematics. This talk is concerned with the opposite instances to some extent - with concepts that appear multiple times in the mathematics education landscape, when their definitions and properties may radically change from one domain to another (e.g., divisibility of integers and polynomials, multiplication of numbers and vectors, roots of real and complex numbers). In the talk, Igor' will introduce a theoretical approach for making sense of students' struggles with such cross-curricular concepts. Post-exchanges from an online forum will be used for illustrating the potential of the approach for indicating possible sources of students' misconceptions and meta-ways of thinking that might make students aware of their mistakes

Dr. Igor' Kontorovich is a mathematics education researcher based in New Zealand and with experience from Russia, Israel, and Canada. His research is concerned with how people teach, learn, discover, and think about interesting mathematics.

*All are welcome!*