An Old Problem in Topology Coming Back to Life

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The box products problem, whether the countable box product of the real line is a normal space, is one of the few problems, if not the oldest, in general topology left unsolved. The question has consistent affirmative answers and it is unknown whether there is a model of ZFC where such space fails to be normal.

Judy Roitman made the last progress in this direction and collected literature in a survey and added two combinatorial statements, MH and Delta, that imply the normality of such space. Some recent findings of these combinatorial statements give this old problem another shot to keep it alive among topologists and set theorists.

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