

LadHyX Seminar – September 12, 10:45

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How can mathematics help us keep the world clean?

World cleaning applies to air, water and land: In the wake of the pandemic and the potential for future pandemics, how can we predict the risk of catching a virus in an indoor setting and how do antiviral air purifiers mitigate this risk?; The continued increase in water scarcity prompts us to seek better ways of providing clean water; And the novichok chemical warfare incident in 2018 motivates questions on how one adequately cleans up a chemical spill. In this talk, we use a variety of mathematical modelling techniques - some simple, others more complicated - to provide answers to these questions and others as we seek strategies to keep our world clean.