香港城市大學
City University of Hong Kong
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DEPARTMENT OF MATHEMATICS

City University of Hong Kong

S E M I N A R

Shock Formation For 3d Quasilinear Wave Equation

by

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Date: 8 Jan. 2018 (Monday)
Time: 2:30-3:30 pm
Venue: B5-309, Blue Zone, Level 5,
Yeung Kin Man Academic Building (AC1), CityU

ABSTRACT

In this talk, I will present a geometric perspective on shock formation for a class of 3d quasilinear wave equations, which admit global-in-time solutions with small initial data. We exhibit a family of smooth initial data leading to breakdown of smoothness of the solution. The work combines ideas from previous works on fluid dynamics (e.g. shock formation for 3d Euler equation) and general relativity (e.g. formation of trapped surfaces). The physical background of the equation and some recent progress along this direction will be also discussed. Part of the work is joint with Pin Yu from Tsinghua University.

~ALL ARE WELCOME~