Public lecture with mathematician Cédric Villani at Georgia Tech on April 22

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- When: Monday, April 22 at 4 pm
- Where: 801 Atlantic Drive, Atlanta, GA 30332-0280, Klaus 1116, Georgia Tech
- Public lecture in English

This is the story of the encounter of three fields: non-Euclidean geometry, gas dynamics and economics. Some of the most fundamental mathematical tools for these theories have close connections revealed at the turn of the twentieth century that have grown remarkably since then.

Cédric Villani, Laureate of the 2010 Fields Medal (equivalent of the Nobel Prize in mathematics), is first and foremost a man like any other. Born in 1973 in Brive-la-Gaillarde (famous city in Corrèze known for its market square that was renamed « Place Georges Brassens »), he is the father of two children and gladly shares his family joys.

A man like any other... ? Not quite, because he has no equal when it comes to sharing his passion and explaining his mathematical discoveries to the public. To listen to a lecture by Cédric Villani is to go on a journey and to forget for a moment the worries of daily life. If his ability and passion to pass on his knowledge does not turn you into a mathematician, you will at least not be able to escape the pleasure of listening to him!

But what is Cédric Villani doing in Atlanta? First, he's coming back, having previously been a visiting professor at Georgia Tech during the fall of 1999. Then, he's coming to work, to share and exchange with his colleagues. Mathematics does not suffer from international competition: all advances result in incessant global exchanges. Cédric Villani tells the story that led him to being awarded with the Fields Medal in a book like no other: "Theorem alive." This book is a true "open door" to the ivory tower of mathematicians.

But what's the point of all this? The theories developed by Cédric Villani serve notably to establish the stability of plasmas. Plasma is the « fourth state of matter » next to solids, liquids, and gas. It is made up of charged particles (like electrons and protons), generally at a very high temperature (several thousand degrees). It's through plasma that surrounds the Earth that auroras shine. But it's also the control of plasma that is at the heart of “the energy of the future” obtained by hydrogen fusion. This new energy is the object of intense research, especially through an international consortium ITER. Don’t forget that it’s in France, in Cadarache located in the south of the Alpine massif, that is found the largest reactor ever constructed for fusion. Its anticipated success will be an unprecedented revolution with regards to energy production.

The Fields Medal of Cédric Villani is perhaps not unrelated to this issue. Come listen one and all!

See also: http://www.consulfrance-atlanta.org/spip.php?article3830