KOMUNIKAČNÍ A INTERAKTIVNÍ PLATFORMA TEXTILNÍHO A ODĚVNÍHO PRŮMYSLU

Kit TOP

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INVITATION

CAN PROBABILITY THEORY SAVE OUR WORLD?

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Time and date: 9:00, 13. 10. 2011

Place: FT TUL, IC building,
(Husova 75, Liberec 461 17)

Annotation:
Probability theory is one field of mathematics that models and analyzes uncertain phenomena in the world. In fact, probability theory has long been used in various disciplines. Mathematical statistics is based on probability theory. I will talk about the disaster at the Nuclear Power Plant (NPP) in Fukushima, Japan, in March this year, from the point of view of probability theory. Everything was set in motion with the earthquake and tsunami, which were the biggest in the recorded history of Japan. The magnitude of the earthquake itself, M9.0, was the 4th biggest in the world since 1900. Until the 1990s, an NPP was judged to be safe if the system satisfied "certain conditions". This is a "deterministic" idea. In terms of NPP accidents, US researchers have developed probabilistic methods based on the Three Mile Island (1979) and Chernobyl (1986) accidents. The risk is not just in the hardware, but also in the software, which includes human judgment, weather conditions, communications, etc. US government's idea of NPPs has changed and the rule has also been changed to one based on probability theory. (Nuclear Regulation Committee, Severe Accident Risks: An Assessment for five US Nuclear Power Plants, NUREG-1150, Second draft, Vol.1, 1990.)
Now, what was the situation in Japan?

More information: web site of FT TUL
http://www.ft.tul.cz/index.cgi?sou=studenti/seminar_doktorandu.htm

V Liberci, dne: 3.10. 2011   Ing. Gabriela Krupincová
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