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Matematický ústav AV ČR
zve všechny zájemce
na přednášku

From generic continuity to Galvin's conjecture

kterou prosloví

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v 10:30 hod.

ve velké posluchárně

Matematického ústavu AV ČR,

Žitná 25, Praha 1.



Jde o šestnáctou přednášku konanou
v rámci cyklu reprezentačních přednášek
organizovaných na počest

prof. Eduarda Čecha,

jednoho z nejvýznamnějších českých
matematiků novodobé historie
a zakladatele

Matematického ústavu AV ČR.

Tomáš Vejchodský, ředitel

From generic continuity to Galvin's conjecture

A compactum K satisfies Namioka's generic continuity principle if for every separately continuous function $f: K \times B \rightarrow \mathbb{R}$, where B is some Baire space, there is a dense G_δ subset G of B such that f is jointly continuous on $K \times G$ (recall that Baire space is a topological space in which no nonempty open set is meager). When B is a complete metric space this principle is true for every compact space K , a famous theorem of I. Namioka. The more general principle was introduced as a useful tool for comparing weak and strong topologies on Banach spaces which in turn is needed when studying Fréchet differentiability, the Radon-Nikodým property, or the existence of smooth renormings in this context.

The lecture will first survey a solution to a problem of Richard Haydon from the 1980's about Namioka's generic continuity principle that led us isolate the general notion of universally meager space and connect it with ideas from a quite different areas of mathematics, the theory of large cardinals. In very recent joint work with D. Raghavan we have further explored this connection showing that it can be applied to an even older conjecture of F. Galvin from the topological Ramsey theory. Some ideas from this work will be presented as well as a list of problems that could be reachable using the new methods.

