

Rendezvous numbers and von Neumann's mini-max theorem

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School of Physical and Mathematical Sciences

A rendezvous number for a metric space M is a number a such that, for every finite subset Q of M , there is an element p in M , such that the average distance from p to the elements in Q is a . O.Gross showed in 1964 that every compact connected metric space has precisely one rendezvous number. This result is a consequence of von Neumann's mini-max theorem in game theory. In an article in the American Math. Monthly 93 (1986) 260-275 J.Cleary and A.A.Morris asked if a (more) elementary proof of Gross' result exists. In this talk, I shall formulate a mini-max result for real matrices which immediately implies these results of Gross and von Neumann.

The proof is easy and involves only mathematical induction.

Speaker Biography

Prof. Cartsten Thomassen is a Professor at Technical University of Denmark and received his PhD from the University of Waterloo in 1976. His research is mainly focused on Discrete Mathematics where he has over 190 papers published. He was an invited speaker at the International Congress of Mathematicians in Kyoto in 1990. In 1993, he received the Lester R. Ford Award from the Mathematical Association of America. He is a Member of the Royal Danish Academy of Sciences and Letters and also the Editor-in-Chief of Journal of Graph Theory (since 1989) and Electronic Journal of Combinatorics (since 2002). He sits on the editorial board as a member of several other prestigious journals, including Combinatorica, Journal of Combinatorial Theory, Ser B, Discrete Mathematics, and European Journal of Combinatorics.

Host: Division of Mathematical Sciences, School of Physical and Mathematical Sciences

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