Mathematics, Physics & Computer Science Seminar Series

November 23, 2022 from 4:30 PM at Governor's Palace, Moravské náměstí 1a, Baroque Hall

 Menachem Magidor

Taming the Monster of Independence

Abstract:

Mathematicians feel that every genuine mathematical problem has a solution. Gödel's incompleteness theorem is a major challenge to this feeling, because it claims that every rich enough mathematical theory contains a statement that can not be proved or disproved by this theory. Namely: the problem is independent of present theory. The result of the last half a century showed that many problems in many subfields of Mathematics are independent of the usual axiom system mostly used by mathematicians: ZFC. The most famous one is the Continuum Hypothesis, CH. Discovering that a problem you spent a lot of time and effort with, is independent, is very frustrating for the working mathematician. This is the source of the expression " the monster of independence" . Can the " ugly monster of independence" be tamed? Can we still find ways of settling problems that seem to be independent? In the talk we shall explore several approaches to this challenge.

Menachem Magidor is an Israeli mathematician who specializes in mathematical logic, in particular, set theory at the Hebrew University's Einstein Institute of Mathematics. He served as President of the Hebrew University of Jerusalem, was President of the Association for Symbolic Logic from 1996 to 1998, and is currently the President of the Division for Logic, Methodology and Philosophy of Science and Technology of the International Union for History and Philosophy of Science (DLMPST/IUHPS; 2016-2019). In 2016 he was elected an honorary foreign member of the American Academy of Arts and Sciences. In 2018 he received the Solomon Bublick Award.

MUNI Seminar Series

Taming the Monster of Independence

NOVEMBER 23 2022, 4:30 P.M. (COFFEE BREAK FROM 3:45 P.M.)

MÍSTODRŽITELSKÝ PALÁC, MORAVSKÉ NÁMĚSTÍ 1A, BAROQUE HALL

MENACHEM MAGIDOR

The Hebrew University of Jerusalem

Mathematicians feel that every genuine mathematical problem has a solution. Gödel's incompleteness theorem is a major challenge to this feeling, because it claims that every rich enough mathematical theory contains a statement that can not be proved or disproved by this theory. Namely: the problem is independent of present theory. The result of the last half a century showed that many problems in many subfields of Mathematics are independent of the usual axiom system mostly used by mathematicians: ZFC. The most famous one is the Continuum Hypothesis, CH. Discovering that a problem you spent a lot of time and effort with, is independent, is very frustrating for the working mathematician. This is the source of the expression " the monster of independence" . Can the " ugly monster of independence" be tamed? Can we still find ways of settling problems that seem to be independent? In the talk we shall explore several approaches to this challenge.

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