# Report

According to my original proposal, my aim in this visit was to work with Prof. Boban Veličković on applications of set-theory to problems in topology. In our work we concentrated on a new method of forcing that uses finite epsilon chains of elementary submodels of mixed sizes, both countable and of cardinality $\omega_1$, as side conditions to construct certain objects of size $\omega_2$. We showed that this method could greatly simplify a recent forcing construction of a compact not first countable space that contains no converging $\omega_1$-sequence. We also tried to strengthen this result to obtain a non-metrizable compact space with small diagonal, such a space must have weight at least $\omega_2$. To achieve this goal, however requires further efforts.

During my visit I gave a minicourse of three lectures at the Group of Mathematical Logic, Department of Mathematics, University of Paris 7. The topic of these lectures was resolvability of topological spaces, with special emphasis on connections with large cardinals.

Istvan Juhasz