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Preface

This issue is devoted to papers based on invited talks at the special sessions in Recursion Theory (13–16 August 1995) at the ASL Summer Meeting, Logic Colloquium '95 held in Haifa, Israel, 9–17 August 1995. There were eleven invited talks which included the announcements of solutions to several important open problems. Of these talks, five are represented in this issue. The list of all the speakers with references to the work discussed is as follows:

A. Arslanov, on relative recursive enumerability (the degrees which are both 2-*REA* and ω -r.e. are also d-r.e.) will appear in the *J. Symbolic Logic* as “Relative enumerability in the difference hierarchy”, A. Arslanov, G. LaForte and T. Slaman.

P. Cholak, on the existence of two computably enumerable sets which are automorphic in the lattice of c.e. sets by a Δ_4^0 but not by a Δ_3^0 automorphism will appear elsewhere.

C.T. Chong, on the equivalence of the existence of maximal sets and Σ_2^0 induction will appear in the *J. Symbolic Logic*, “ Σ_2 induction and infinite injury priority arguments, Part I: maximal sets and the jump operator”, C.T. Chong and Y. Yang. A sequel appears here as “ Σ_2 induction and infinite injury priority arguments, Part II: tame Σ_2 codings”, C.T. Chong and Y. Yang.

P. Fejer, on decision problems for distributive upper semi-lattices of degree structures will appear in the *J. Symbolic Logic* as “Decidability of the two quantifier theory in the recursively enumerable weak truth-table degrees and other distributive upper semi-lattices”, K. Ambos-Spies, P. Fejer, S. Lempp and M. Lerman.

S. Goncharov, on Morely’s problem for decidable models is expected to appear in *Algebra and Logic*.

M. Groszek, on the existence of a Π_1^0 class all of whose members have minimal Turing degree appears here as “ Π_1^0 classes and minimal degrees”, M. Groszek and T. Slaman.

V. Harizanov, on frequency computable sets is a work still in progress.

E. Hermann, on the undecidability of the theories of the structures of Boolean pairs (Δ_n^0, Δ_m^0) for $n > m$ appears here as “Boolean pairs formed by the Δ_n^0 -sets”, E. Hermann.

J. Knight, on results related to the Ash–Nerode theorem (giving conditions for externally defined relations on computable structures to fall at various levels of the hyperarithmetical hierarchy) is covered in a series of papers the latest of which appears here as “Possible degrees in recursive copies II”, C. Ash and J. Knight.

M. Kummer, on Kolmogorov and instance complexity of r.e. sets will appear in the *SIAM J. Comput.* as “Kolmogorov complexity and instance complexity of recursively enumerable sets”, M. Kummer.

M. Lerman, on the existence of a finite lattice which contains no critical triple but nonetheless is not embeddable in the r.e. degrees appears here as “A finite lattice without critical triple that cannot be embedded into the enumerable Turing degrees”, S. Lempp and M. Lerman.

In addition to these invited talks at the special session, there were three plenary invited talks in Recursion Theory and a three session tutorial: B. Cooper (Beyond Gödel’s theorem – the failure to capture information content); R. Downey (Low_2 r.e. degrees); A. Nies (Coding in distributive structures); and T. Slaman (Recent developments in Recursion Theory – three lectures). Papers based on plenary talks will appear as a volume in the ASL/Springer series Lecture Notes in Logic edited by V. Harnik and J.A. Makowsky. There were also a number of contributed talks in the Recursion Theory sessions. Abstracts will appear in the *Bull. Symbolic Logic* along with a listing of all the talks at the Colloquium and all the other submitted abstracts for the full colloquium. Information about the publications based on the conference talks can be found at the following website: <http://www.cs.technion.ac.il/logic95/proceedings.html>

The entire meeting was very successful and the speakers and participants all owe a dept of gratitude to the organizers and especially to J. Makowsky, the chair of the organizing committee.

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