Mathematical Colloquium

Mathematical Institute (http://www.mi.sanu.ac.rs)

of the Serbian Academy of Sciences and Arts (https://www.sanu.ac.rs/)

PROGRAM

ὅδε οἶκος, ὦ ἑταῖρε, μνημεῖον ἐστιν ζῴων τῶν σοφῶν ἀνδρῶν, καὶ τῶν ἔργων αὐτῶν

ODELJENJE ZA MATEMATIKU

MATEMATICKOG INSTITUTA SANU

OPSTI MATEMATICKI SEMINAR

NA MATEMATICKOM FAKULTETU U BEOGRADU

-- PROGRAM ZA NOVEMBAR 2006 --

Petak, 10. novembar 2006. u 14h, sala 2 MI SANU: ()

Vladimir Filipovic, Matematicki fakultet, Beograd
GA INSPIRED HEURISTIC FOR UNCAPACITATED SINGLE ALLOCATION HUB LOCATION PROBLEM

Abstract: The results achieved by applying GA-inspired heuristic on Uncapacitated Single Allocation Hub Location Problem (USAHLP) are discussed. Encoding scheme with two segments is implemented, with appropriate objective functions and modified genetic operators. The article presents several computational tests which have been conducted with ORLIB instances. Procedures described in related work round distance matrix elements to few digits, so rounding error is significant. Due to this fact, we developed exact branch-and-bound method for solving subproblem with fixed hubs, named Hub Median Single Allocation Problem (HMSAP). Computational tests demonstrate that GA-inspired heuristic reach all best solutions for USAHLP that are previously obtained and verified branch-and-bound method for HMSAP. Proposed heuristic successfully solved some instances that were unsolved before.

Petak, 17. novembar 2006. u 14h, sala 2 MI SANU: ()

Miroslav Martinovic, Department of Computer Science , The College of New Jersey
DIZAJN, IMPLEMENTACIJA I EVALUACIJA SISTEMA ZA PRETRAZIVANJE INFORMACIJA

Sadrzaj: U okviru predavanja ce se govoriti o teoriji i praksi pretrage teksta i bibliografskih informacija. Teme koje ce biti pokrivene ukljucuju automatsko indeksiranje, statisticke i lingvisticke modele, klasifikaciju teksta, Bulovske i probabilisticke pristupe indeksiranju, formulaciji upita i rangiranju izlaza, filtraciju i usmeravanje informacija, detekciju i pracenje tematika, kao i metrike efikasnosti pretrage (relevantnost, korisnost, kvantitet laznih alarma). Tehnike za poboljsanje efikasnosti pretrage diskutovane u ovom izlaganju ukljucuju povratnu informaciju o relevantnosti, reformulaciju upita, leksikone, ekstrakciju koncepata i automatsku sumarizaciju. Eksperimentalni algoritmi (Text Retrieval Conferences (TREC)) i savremeni sistemi za pretrazivanje (Google, Yahoo, itd.) se takodje razmatraju u kontekstu gore spomenutih tematika.

Petak, 24. novembar 2006. u 14h, sala 2, MI SANU BGD: ()

Christian Pech, Departman za matematiku, Prirodno'matemati?ki fakultet, Novi Sad
COHERENT CONFIGURATIONS AND ASSOCIATION SCHEMES. GALOIS CORRESPONDENCE BETWEEN COHERENT CONFIGURATIONS AND PERMUTATION GROUPS.

Abstract: Let X be a fixed finite set. On this set we consider from one hand the set of all permutations S(X) and from the other hand the set of all binary relations P(X^2). Between these two classes we can define in a natural way a binary relation I \subseteq S(X) × P(X^2) as follows: If \pi\in S(X) and R \subseteq X2, then (\pi ,R) \in I if and only if \pi is an automorphism of the graph with vertex set X and with arc-set R. The triple (S(X),P(X2), I) defines a context, and such a context in turn defines a Galois-Correspondence between sets of permutations and sets of binary relations on X, respectively. This Galois-Correspondence defines two closure-operators - one on sets of permutations and the other on sets of binary relations. It turns out that the Galois closed sets on one hand are the two-closed permutation groups. On the other hand the Galois closed sets of binary relations correspond to certain coherent configurations - the so called Schurian coherent configurations. In the first part of the talk we will introduce this Galois-Correspondence and study a few of its properties. In the second part of the talk we will consider a refinement of the above

mentioned closure operator on sets of binary relations - the coherent closure. In the fourth part of the talk I will shortly treat the problem of computing the coherent sub-configurations (the fusions) of a given coherent configuration. The next part of the talk will deal with a generalization of the above mentioned problem of computing fusions. The last part of the talk will be concerned with the examination of the structure of the lattice of coherent configuration on a fixed base set X.

Rukovodioci Odeljenja za matematiku Matematickog instituta SANU i Opsteg matematickog seminara na Matematickom fakultetu u Beogradu, Stevan Pilipovic i Sinisa Vrecica predlazu zajednicki program rada naucnih sastanaka.
Predavanja ce se odrzavati na Matematickom Institutu (sala 2), petkom sa pocetkom u 14 casova. Odeljenje za matematiku je opsti seminar sa najduzom tradicijom u Institutu.

Svakog meseca, jedno predavanje ce biti odrzano na Matematickom Fakultetu u terminu koji ce biti posebno odredjen.

Molimo sve zainteresovane ucesnike u radu naucnih sastanaka da posebno obrate paznju na vreme odrzavanja svakog sastanka. Na Matematickom fakultetu su moguce izmene termina.

Obavestenje o programu naucnih sastanaka ce biti objavljeno na oglasnim tablama MI (Beograd), MF (Beograd), PMF (Novi Sad), PMF (Nis) i PMF (Kragujevac).

Odeljenje za matematiku Matematickog instituta SANU

Stevan Pilipovic

Opsti matematicki seminar na Matematickom fakultetu u Beogradu,

Sinisa Vrecica

Ako zelite da se obavestenja o Vasim naucnim skupovima pojave u Newsletter of EMS (European Mathematical Society) i na Internetu na lokaciji EMS, onda se obratite na emsvesti@mi.sanu.ac.yu gde cete dobiti format obavestenja.

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Design & Development: Aleksandra Arsić, Aleksandra Zdravković

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