

LANGUAGE THEORY WITH APPLICATIONS 2012

LTA 2012

PLACE & DATE:

FIT BUT, Brno, Czech Republic, December 10-13, 2012

COVERAGE:

LTA 2012 offers a variety of scientific talks on formal language theory and its computer-related applications at MSc and PhD levels. A special attention is paid to modern applications related to the language translation. Most of the talks results from the students' work in the TID, VYPE, and GAL classes taught at FIT BUT.

AUDIENCE:

Everybody is welcome to attend this event without any prior notice. There is no payment.

ORGANIZERS:

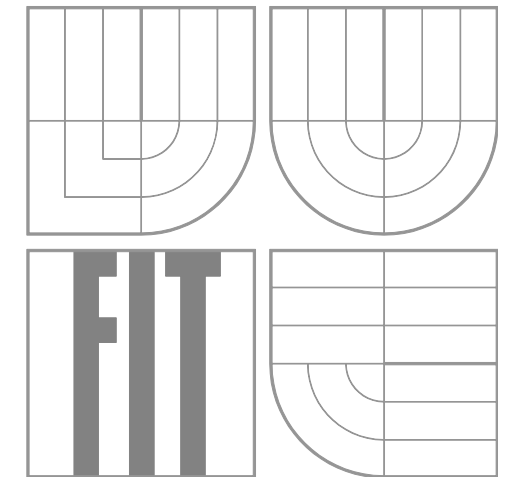
- (1) The TID, VYPE, and GAL teaching teams, FIT BUT
- (2) Formal Model Research Group, FIT BUT
- (3) Department of Information Systems, FIT BUT

COMMITTEE:

- ALEXANDER MEDUNA (CHAIR)
- ZBYNĚK KŘIVKA
- PETR ZEMEK
- LUKÁŠ VRÁBEL
- PETR HORÁČEK

WEBSITE:

<http://www.fit.vutbr.cz/~meduna/work/lta>



SCHEDULE

SESSION 1 – OPENING TALK

MONDAY, DECEMBER 10, 2012, 12:30 – 13:50, ROOM G202, CHAIR: ALEXANDER MEDUNA

Meduna Alexander, Zemek Petr: Jumping Finite Automata

SESSION 2 – MODERN THEORETICAL COMPUTER SCIENCE

TUESDAY, DECEMBER 11, 2012, 09:00 – 13:00, ROOM G202, CHAIR: PETR ZEMEK

- 09:00 – 09:40 Klubal Ondřej: Smart cards protocols
09:40 – 10:20 Kazzaz M. Mohamed: Semantic description of Petri Nets Services
10:20 – 11:00 Dvořák Milan: Suitable abstract model for representing the market data feed format of different exchanges
11:00 – 11:40 Maliulin Valerii: Lexicalized Tree Adjoining Grammar
11:40 – 12:20 Ondel Lucas: Indexing WFST for Spoken Term Detection

SESSION 3 – MODERN THEORETICAL COMPUTER SCIENCE

WEDNESDAY, DECEMBER 12, 2012, 09:00 – 11:15, ROOM E104, CHAIR: LUKÁŠ VRÁBEL

- 09:00 – 09:40 Kollár Matej: Firewall Rules Discovery and Generation
09:40 – 10:20 Karel Szurman: Finite automata synchronization
10:20 – 11:00 Petr Šimon: Unconventional electronics in computing systems
11:00 – 11:15 Surovič Marek (BP): Non-returning Turing machines

SESSION 4 – GRAPHS

WEDNESDAY, DECEMBER 12, 2012, 11:20 – 13:00, ROOM A112, CHAIR: ZBYNĚK KŘIVKA

- 11:20 – 11:35 Toth Róbert: Dantzig's Shortest Path Algorithm
11:35 – 11:50 Sák Vladimír: Goldberg-Radzik Algorithm
11:50 – 12:05 Horníček Ondřej: Max-Flow Min-Cut theorem
12:05 – 12:20 Chaloupka Jan: Ramsey theory - Ramsey theorem
12:20 – 12:35 Kuklínek Lukáš: Register Allocation via Graph Colouring

SESSION 5 – COMPILERS

THURSDAY, DECEMBER 13, 2012, 10:00 – 13:00 PM, ROOM E104, CHAIR: ZBYNĚK KŘIVKA

- 10:00 – 10:10 Fibich Ondřej, Olejník Marek: Lexical/syntactical structures in Fortran and its history
10:10 – 10:20 Navrátil Ondřej, Novotný Pavel: Parsing Techniques
10:20 – 10:30 Moreno Serrano María José: Symbol Tables and Run-Time Storage Organization
10:30 – 10:40 Pála Milan, Sochor Jakub: Code Generation: Intermediate Languages
10:40 – 10:50 Kotásek Marek, Kozák Filip: Code Generation: Symbol Table
10:50 – 11:00 Novosád Adrián, Rohovský Tomáš: Declarations
11:00 – 11:10 Hudec Lukáš, Korgo Tomáš: Expressions
11:10 – 11:20 Mrázek Petr, Šálek Jiří: Statements and Control Flow
11:20 – 11:30 Odaloš Matej, Polesný Ondřej: Optimization Strategies

- 11:40 – 11:50 Klapuchová Mirka, Woś Radek: lex & yacc: Advanced Features
11:50 – 12:00 Dvořák Petr, Pačes Jan: Yacc Ambiguities and Conflicts
12:00 – 12:10 Janečka Pavel, Kuklínek Lukáš: Xtext of Eclipse Text Modeling Framework
12:10 – 12:20 Kopecký Jiří, Kučera Martin: Introduction to Small Device C Compiler
12:20 – 12:30 Baručák Robert, Šulek Jakub: Introduction to LLVM Compiler Infrastructure
12:30 – 12:40 Matula Peter: Reconstruction of Data Types for Decompilation

SESSION 6 – COMPILERS

THURSDAY, DECEMBER 13, 2012, 13:00 – 14:00, ROOM A112, CHAIR: PETR HORÁČEK

- 13:00 – 13:10 Chaloupka David, Chaloupka Jan: Foundations of Data-Flow Analysis & Constant Propagation
13:10 – 13:20 Barteček Jakub, Kanich Ondřej: Loops in Flow Graphs
13:20 – 13:30 Fešar Marek, Fiedor Tomáš: Interprocedural Analysis: Basic Concepts & Why?
13:30 – 13:40 Horníček Ondřej: Context-Insensitive Interprocedural Analysis & Context-Sensitive Pointer Analysis