

**5th INTERNATIONAL PhD SCHOOL
IN FORMAL LANGUAGES AND APPLICATIONS 2005-2007**

Rovira i Virgili University
Research Group on Mathematical Linguistics
Tarragona, Spain

**Awarded with the Mark of Quality (Mención de Calidad) by the
Spanish Ministry for Education and Science, MCD2003-00820**

COURSES AND PROFESSORS 1st TERM (MARCH–JULY 2006)

Languages	Alexander Okhotin, Tarragona
Combinatorics on Words	Tero Harju, Turku
Regular Grammars	Masami Ito, Kyoto
Context-Free Grammars	Manfred Kudlek, Hamburg
Context-Sensitive Grammars	Victor Mitrana, Tarragona
Mildly Context-Sensitive Grammars	Henning Bordihn, Potsdam
Finite Automata	Sheng Yu, London ON
Pushdown Automata	Hendrik Jan Hoogeboom, Leiden
Turing Machines	Holger Petersen, Stuttgart
Varieties of Formal Languages	Jean-Éric Pin, Paris
Computational Complexity	Markus Holzer, Munich
Descriptional Complexity of Automata and Grammars	Detlef Wotschke, Frankfurt
Patterns	Kai Salomaa, Kingston ON
Infinite Words	Juhani Karhumäki, Turku
Two-Dimensional Languages	Kenichi Morita, Hiroshima
Grammars with Regulated Rewriting	Jürgen Dassow, Magdeburg
Contextual Grammars	Carlos Martín-Vide, Tarragona
Parallel Grammars	Henning Fernau, Hertfordshire
Grammar Systems	Erzsébet Csuhaj-Varjú, Budapest
Tree Automata and Tree Languages	Magnus Steinby, Turku
Tree Transducers	Zoltán Fülöp, Szeged
Tree Adjoining Grammars	James Rogers, Richmond IN
Automata and Logic	Franz Baader, Dresden
Formal Languages and Concurrent Systems	Jetty Kleijn, Leiden
Petri Net Theory and Its Applications	Hsu-Chun Yen, Taipeh
Graph Grammars and Graph Transformation	Hans-Jörg Kreowski, Bremen
Restarting Automata	Friedrich Otto, Kassel
Decision Problems of Rational Relations	Christian Choffrut, Paris

COURSES AND PROFESSORS 2nd TERM (SEPTEMBER–DECEMBER 2006)

Parameterized Complexity	Jörg Flum, Freiburg
Formal Power Series	Werner Kuich, Vienna
Fuzzy Formal Languages	Claudio Moraga, Dortmund
Cellular Automata	Martin Kutrib, Giessen
DNA Computing: Theory and Experiments	Mitsunori Ogihara, Rochester NY
Splicing Systems	Paola Bonizzoni, Milan
Aqueous Computing	Tom Head, Binghamton NY
Biomolecular Nanotechnology	Max Garzon, Memphis TN
Quantum Automata	Jozef Gruska, Brno
Unification Grammars	Shuly Wintner, Haifa
Context-Free Grammar Parsing	Giorgio Satta, Padua
Probabilistic Parsing	Mark-Jan Nederhof, Groningen
Categorical Grammars	Michael Moortgat, Utrecht
Weighted Automata	Manfred Droste, Leipzig
Grammatical Inference	Colin de la Higuera, Saint-Étienne
Mathematical Foundations of Learning Theory	Satoshi Kobayashi, Tokyo
Natural Language Processing with Symbolic Neural Networks	Risto Miikkulainen, Austin TX
Text Retrieval: Foundations	Maxime Crochemore, Marne-la-Vallée
Text Retrieval: Applications	Ricardo Baeza-Yates, Barcelona
Mathematical Evolutionary Genomics	David Sankoff, Ottawa ON
Cryptography	Valtteri Niemi, Nokia, Helsinki
String Complexity	Lucian Ilie, London ON
Data Compression	Wojciech Rytter, Warsaw
Image Compression	Jarkko Kari, Turku
Algebraic Techniques in Language Theory	Zoltán Ésik, Tarragona
Topics in Asynchronous Circuit Theory	John Brzozowski, Waterloo ON
Grammar-Theoretic Models in Artificial Life	Jozef Kelemen, Opava
Automata-Theoretic Techniques for Verification and Other Decision Problems	Oscar Ibarra, Santa Barbara CA

<http://www.grlmc.com>

STUDENTS:

Candidate students for the programme are welcome from around the world. Most appropriate degrees include: Computer Science and Mathematics. Other students (for instance, from Linguistics, Logic or Engineering) could be accepted provided they have a good undergraduate background in discrete mathematics. At the beginning of the first term, a few lessons on discrete mathematics advanced pre-requisites will be offered, in order to homogenize the students' mathematical background.

In order to check eligibility for the programme, the student must be certain that the highest university degree s/he got enables her/him to be enrolled in a doctoral programme in her/his home country.

TUITION FEES:

1,700 euros in total, approximately.

DISSERTATION:

After following the courses, the students enrolled in the programme will have to write and defend a research project and, later, a dissertation in English in their own area of interest, in order to get the so-called European PhD degree (which is a standard PhD degree with an additional mark of quality). All the professors in the programme will be allowed to supervise students' work.

FUNDING:

During the teaching semesters, funding opportunities will be provided, among others, by the Spanish Ministry for Foreign Affairs and Cooperation (Becas MAEC), and by the European Commission (Alban scheme for Latin American citizens). Additionally, the university will have a limited amount of economic resources itself for covering the tuition fees and full-board accommodation of a few students.

Immediately after the courses and during the writing of the PhD dissertation, some of the best students will be offered 4-year research fellowships, which will allow them to work in the framework of the host research group.

PRE-REGISTRATION PROCEDURE:

In order to pre-register, one should post (not fax, not e-mail) to the programme chairman:

- a xerocopy of the main page of the passport,
- a xerocopy of the highest university education diploma,
- a xerocopy of the academic record,
- full CV,
- letters of recommendation (optional),
- any other document to prove background, interest and motivation (optional).

SCHEDULE:

Announcement of the programme:	August 22, 2005
Pre-registration deadline:	October 31, 2005
Selection of students:	November 7, 2005
Starting of the 1st term:	March 27, 2006
End of the 1st term:	July 24, 2006
Starting of the 2nd term (tentative):	September 4, 2006
End of the 2nd term (tentative):	December 22, 2006
Defense of the research project (tentative):	September 14, 2007
DEA examination (tentative):	April 27, 2008

QUESTIONS AND FURTHER INFORMATION:

Please, contact the programme chairman, Carlos Martín-Vide, at carlos.martin@urv.net

POSTAL ADDRESS:

Research Group on Mathematical Linguistics
Rovira i Virgili University
Pl. Imperial Tàrraco, 1
43005 Tarragona, Spain

PHONE: +34-977-559543, +34-977-554391

FAX: +34-977-559597, +34-977-554391