E-mail: rpiaggio@iastate.edu
http://www.cs.iastate.edu/~rpiaggio

Raul R. Piaggio-Talice

Interests Overview

- Theory of Computation, particularly computational complexity, computational randomness, and information complexity (and relationship with Information Theory).
- Evolution, particularly phylogenetics (with emphasis on algorithmic methods) and ecosystems (their emergence and dynamics).
- Complex Adaptive Systems.
- Algorithm Design and Analysis, including Parallel Algorithms.

Education

Aug 2002 – Present ***Iowa State University*** Ames, IA
Computer Science, PhD Student
Bioinformatics and Computational Biology, PhD Student

- Major Advisor: Dr. Oliver Eulenstein.
- Co-Major Advisor: Dr. Drena Dobbs.
- Current GPA: 4.0

1994 - 2001 ***Universidad Católica del Uruguay*** Montevideo, Uruguay
Ingenierio en Informática

Research affiliations

Fall 2002 - Present *Computational Biology Lab*
Computer Science Department
Iowa State University
Dr. Oliver Eulenstein / Dr. David Fernandez-Baca

Phylogenetic algorithms: supertrees and phyloinformatics.
- Quartet supertree method.

Summer 2003, Summer 2004 *Sanderson Lab*
Section of Evolution and Ecology
U.C. Davis
Dr. Mike Sanderson

Several phylogenetic projects, mainly related to supertrees and phyloinformatics.
- Grove theory behind PhyLoTA project (www.phylota.org).

Summer 2005 *Bioinformatics and Exploratory Research Group*
Pioneer Hi-Bred International
Dr. David Selinger

Functional study of the Alpha-Amylase Inhibitor/Seed Storage/Lipid-Transfer Protein superfamily in plants.

Teaching

Fall 2003 Iowa State University Ames, IA
Teaching Assistant, Design and Analysis of Algorithms (Graduate level)

Fall 2001 Universidad Católica del Uruguay Montevideo, Uruguay
Instructor, Emergent and Evolutionary Computation

Computer Skills

- **Programming Languages**:
  Extensive use of C, C++, Prolog, Haskell and VB.
  Good familiarity with Java, C# and Perl.
- **Platforms/technologies**:
  Development of Windows (traditional and .NET) and Unix applications.
  Development of web applications (HTML, CGI, XML, ASP).
  Development of database oriented applications (SQL).
  Development of network applications (Berkeley sockets).

Selected Employment

1997-2002 ***ARTech S.A.*** Montevideo, Uruguay
GeneXus Development Team Member

- Worked in several aspects of the development of GeneXus, an information system RAD tool (http://www.genexus.com/).
- Implementation of database and internet oriented frameworks in multiple platforms involving UNIX, AS/400 and Windows operating systems; and DB2, Oracle, Informix and SQL Server database systems.

Awards/Affiliations

2002-2005 ***J. William Fulbright Student Scholarship***
U.S. Department of State

2002-2005 ***Full Graduate Tuition Scholarship***
Graduate College / Iowa State University

2004 ***John Vincent Atanasoff Graduate Student Award***
Computer Science Department / Iowa State University

2004-2005 ***Pioneer Hi-Bred Graduate Research Fellowship***
Pioneer Hi-Bred / Baker Center, Iowa State University

Member of the Upsilon Pi Epsilon Computer Science Honor Society

Publications

Piaggio-Talice, Raul; Burleigh, Gordon; Eulenstein, Oliver. 2004. **Quartet Supertrees**, in *Bininda-Emonds, Olaf R.P.* (ed), Phylogenetic Supertrees: Combining Information to Reveal the Tree of Life, pp. 173-191. *Kluwer Academic*, Dordrecht, the Netherlands.

Jorge, Fernando; Piaggio-Talice, Raul. 2001. **Evolving problem-solving Cellular Automata with the use of Genetic Algorithms,** creative component towards B.S. degree.

Technical Reports

Ané, Cécile; Eulenstein, Oliver; Piaggio-Talice, Raul. 2005. **Phylogenetic Compression and Model Selection: An Improved Encoding Scheme**. TR05-07, Computer Science, Iowa State University.

Software

2003 Quartet Suite

- A set of programs to build supertrees by using quartet decomposition. Available freely at http://genome.cs.iastate.edu.

Poster presentations

Ané, Cécile; Eulenstein, Oliver; Piaggio-Talice, Raul. 2005. **Evolutionary History Model Selection via Improved Phylogenetic Compression**. Mathematics of Evolution and Phylogenetics, Paris.

References

Dr. Oliver Eulenstein
Dept. of Computer Science
Iowa State University
Ames, IA 50011, US
Phone: (1) 515-294-2407
Email: oeulenst@cs.iastate.edu

Dr. David Fernández-Baca
Dept. of Computer Science
Iowa State University
Ames, IA 50011, US
Phone: (1) 515-294-2168
Email: fernande@cs.iastate.edu

Dr. Michael J. Sanderson
Section of Evolution and Ecology
University of California, Davis
Davis, CA 95616
Phone: (1) 530-754-9229
Email: mjsanderson@ucdavis.edu

Dr. Dave Selinger
Pioneer Hi-Bred International
7100 NW 62nd Avenue
PO BOX 1014
Johnston, IA 50131-1014
Phone: (1) 515 248-4800
Email: david.selinger@Pioneer.com

Language Fluency

	Listen	Speak	Read	Write
English	☑	☑	☑	☑
Spanish	☑	☑	☑	☑
French	☑	☑	☑	☑
Italian	☑	☑	☑	