Hugues JUILLÉ

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Education

June 1994 - present	Ph.D. student in Computer Science, Brandeis University. Thesis advisor: Prof. Jordan B. Pollack. Research work: study of evolutionary inspired paradigms for the design of massively parallel algorithms applied to artificial intelligence, machine learning and combinatorial optimization.
May 1995	M.A. in Computer Science, Brandeis University.
June 1989	Diploma in Electrical Engineering from Ecole Supérieure d'Electronique de l'Ouest, Angers, France.
June 1986	DEUG de Sciences (major: Math and Physics), Angers University, France.

Professional

September 1993 - present

Teaching Assistant
Brandeis University. Tutored sessions for three courses: Languages and Compiler Designs, Operating Systems, Algorithms.

September 1990 - August 1993

Software Engineer, ALTEN Industrie, Paris, France.
I worked on contracts for different companies:

- SAGEM, Sights department (4 months).
  Development of a real-time tool for the validation of a navigation system.

- ALCATEL Radiotéléphone, Software department (15 months).
  Design and development of a 5Mb/s bus analysis tool. This system has been developed in response to the specific requirements for testing transceiver stations of the ECR 900 pan-European Cellular mobile system network.

- GEC-ALSTHOM, Transport department (12 months).
  Setting of a new procedure for documentation updating and for software validation and maintenance. Design and development of new functionalities for a railway running system.

- ENERDIS, Instrument department (4 months).
  Definition of a software development procedure for the department. Hardware and software design of a 68000 driven precision instrument for high current and voltage measurement.

August 1989 - July 1990	*Military Duties* 785th C.G.E (a company which controls Electronic War) in Rennes, France. As a scientist, I worked in the research department of this company. I was system manager and I developed a data base application.

Programming

Parallel machines:	KSR (C, Fortran), MasPar (MPL), workstation farming
Major languages:	C, C++, Lisp, Prolog, Fortran, Java, HTML, Pascal, Assembler (680x0 and 80x86)

Honors

November 1997	Winner of the "Abbadingo challenge", a scientific competition in machine learning based on grammar induction
June 1996	Santa Fe Institute Complex Systems Summer School Scholarship
September 1994 - present	Brandeis University Fellowship
September 1993 - present	Brandeis University Scholarship

Service

Program Committee

Genetic Programming Conferences (GP-96, GP-97 and GP-98).

Reviewing

Journals: Evolutionary Computation, Artificial Life.
Books: Advances in Genetic Programming II.

Publications

In Books

1. Hugues Juillé and Jordan B. Pollack, "Massively Parallel Genetic Programming". *Advances in Genetic Programming II*, Angeline & Kinnear (Eds.), Cambridge: MIT Press, 1996.

Refereed Conference Papers

1. Hugues Juillé and Jordan B. Pollack, "Coevolutionary Learning: a Case Study". Proceedings of the *Fifteenth International Conference on Machine Learning (ICML-98)*, Madison, Wisconsin, USA, July 24-26, 1998. To appear.

2. Hugues Juillé and Jordan B. Pollack, "A Sampling-Based Heuristic for Tree Search Applied to Grammar Induction". Proceedings of the *Fifteenth National Conference on Artificial Intelligence (AAAI-98)*, Madison, Wisconsin, USA, July 26-30, 1998. To appear.

3. Hugues Juillé and Jordan B. Pollack, "Coevolving the "Ideal" Trainer: Application to the Discovery of Cellular Automata Rules". Proceedings of the *Third Annual Genetic Programming Conference (GP-98)*, Madison, Wisconsin, USA, July 22-25, 1998. To appear.

4. Hugues Juillé and Jordan B. Pollack, "A Stochastic Search Approach to Grammar Induct ion". Proceedings of the *Fourth International Colloquium on Grammar Inference (ICGI-98)*, Ames, Iowa, USA, July 12-14, 1998. To appear.

5. Pablo Funes, Elizabeth Sklar, Hugues Juillé and Jordan B. Pollack, "Animal-Animat Coevolution: Using the Animal Population as Fitness Function". Proceedings of the *Fifth International Conference of The Society for Adaptive Behavior (SAB-98)*, Zürich, Switzerland, August 17-21, 1998. To appear.

6. Hugues Juillé and Jordan B. Pollack, "Dynamics of Co-evolutionary Learning". Proceedings of the *Fourth International Conference on Simulation of Adaptive Behavior (SAB-96)*, Cape Cod, MA, USA, September 9-13, 1996, MIT Press.

7. Hugues Juillé and Jordan B. Pollack, "Co-evolving Intertwined Spirals". Proceedings of the *Fifth Annual Conference on Evolutionary Programming (EP-96)*, San Diego, CA, USA, February 29-March 2, 1996, MIT Press.

8. Hugues Juillé, "Evolution of Non-Deterministic Incremental Algorithms as a New Approach for Search in State Spaces". Proceedings of the *Sixth International Conference on Genetic Algorithms (ICGA-95)*, University of Pittsburgh, PA, USA, July 15-19, 1995, Eshelman (Eds.), Morgan Kaufmann.

9. Hugues Juillé, "Incremental Co-evolution of Organisms: a New Approach for Optimization and Discovery of Strategies". Proceedings of the *Third European Conference on Artificial Life (ECAL-95)*, Granada, Spain, June 4-6, 1995, Moran (Eds.), Springer-Verlag, LNCS 929.

Invited Workshop Papers

1. Hugues Juillé and Jordan B. Pollack, "Parallel Genetic Programming on Fine-Grained SIMD Architectures". Working notes of the *AAAI Fall Symposium on Genetic Programming*, Massachusetts Institute of Technology, November 10-12, 1995.

Submitted Journal Papers

1. Hugues Juillé and Jordan B. Pollack, "Improved Algorithm for Sorting Network Design Validation". Submitted to *Theory of Computing Systems*.

2. Hugues Juillé and Jordan B. Pollack, "SAGE: a Sampling-based Heuristic for Tree Search". Submitted to *Machine Learning*.

Invited Talks

1. "Techniques for Massively Parallel Artificial Intelligence", Laboratoire d'Informatique de Paris 6 (LIP6), Université Pierre et Marie Curie, France, December 1, 1997.

2. “A Stochastic Approach to Massively Distributed Search Algorithms”, Laboratoire d’Informatique Fondamentale de Lille (LIFL), Université des Sciences et Technologies de Lille, France, May 14, 1998.
3. “Coevolutionary Learning with Adaptive Agents: Case Studies in Cellular Automata Rules and Inductive Classification”, Santa Fe Institute, New Mexico, USA, June 9, 1998.

References

Jordan B. Pollack	Computer Science Department Brandeis University Waltham, Massachusetts, 02254-9110 e-mail: pollack@cs.brandeis.edu
Marty Cohn	Computer Science Department Brandeis University Waltham, Massachusetts, 02254-9110 e-mail: marty@cs.brandeis.edu
Melanie Mitchell	Santa Fe Institute 1399 Hyde Park Road Santa Fe, NM 87501 e-mail: mm@santafe.edu

Personal

Age:	31
Nationality:	French
Family status:	Married, one child

Extracurricular

Hobbies:	Chess, Go, Classical music and Jazz concerts, Aquariums, Astronomy and Science Fiction books. Tennis, Jogging.