Jean-Baptiste Tristan

PERSONAL
INFORMATION

Email	jean.baptiste.tristan@gmail.com
Phone	(617) 997-1404
Citizenship	French, permanent resident of the United States

EDUCATION

Ph.D. computer science, 2009
University of Paris 7, Paris, France
- Title: Formal Verification of Translation Validators
- Performed at INRIA (French Institute for Research in Computer Science and Automation)

M.Sc. computer science, 2006
Ecole Normale Superieure, Paris, France

Undergraduate studies
I obtained several French diplomas that do not correspond well to US diplomas
- "DEUG" in mathematics and computer science (University of Paris 7)
- "License" in computer science (University of Paris 7)
- "Magistere" in mathematics and computer science (Ecole Normale Superieure of Paris)

AWARDS/HONORS

Recipient of the **2011 La Recherche award in Information Sciences** along with Sandrine Blazy, Zaynah Dargaye, and Xavier Leroy for our work on the CompCert verified C compiler.

Senior member of the ACM.

Invited to the IFIP working group on Functional Programming and the IFIP working group on programming languages.

RESEARCH
EXPERIENCE

Oracle labs, Burlington, Massachusetts USA	
Research team lead, Machine Learning group	**10/2017-present**
Oracle labs, Burlington, Massachusetts USA	
Principal Member of Technical Staff	**10/2015-present**
Oracle labs, Burlington, Massachusetts USA	
Senior Member of Technical Staff	**11/2011-10/2015**
Harvard University, Cambridge, Massachusetts USA	
Postdoctoral fellow	**11/2009 - 11/2011**
Microsoft research-INRIA joint center, Saclay, France	
Intern	**Fall 2009**
Harvard University, Cambridge, Massachusetts USA	
Intern	**Summer 2005**
Exalead R&D, Paris, France	
Intern	**Summer 2004**
University of Paris, 7, Paris, France	
Intern	**Summer 2003**

TEACHING
EXPERIENCE

Harvard University, Cambridge, Massachusetts USA	
Visiting Lecturer, CS 153: Compiler Construction	**Fall 2015**
Harvard University, Cambridge, Massachusetts USA	

Teaching fellow, CS51: Introduction to computer science II   **Spring 2011**
Harvard University, Cambridge, Massachusetts USA
Teaching fellow, CS50: Introduction to computer science I   **Fall 2010**

THESIS & JOURNAL   *Adding Approximate Counters*
PUBLICATIONS   Guy L. Steele Jr., Jean-Baptiste Tristan
                   In **TOPC'17**: ACM Transaction on Parallel Computing, 2017.

                   Formal Verification of Translation Validators
                   Jean-Baptiste Tristan
                   Ph.D. dissertation

CONFERENCE   *Flexible Compilation of Probabilistic Programs*
PUBLICATIONS   Daniel Huang, Jean-Baptiste Tristan, Greg Morrisett.
                   In **PLDI'17**: ACM SIGPLAN Conference on Programming Language Design and Implementation,
                   2017.

                   Using Butterfly-Patterned Partial Sums to Optimize GPU Memory Accesses for Drawing from Discrete Distributions
                   Guy Steele, Jean-Baptiste Tristan.
                   In **PPOPP'17**: ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming,
                   2017.

                   Exponential Stochastic Cellular Automata for Massively Parallel Inference
                   Manzil Zaheer, Michael Wick, Jean-Baptiste Tristan, Alex Smola, Guy Steele.
                   In **AISTATS'16**: International Conference on Artificial Intelligence and Statistics, 2016.

                   Adding approximate counters
                   Guy Steele, Jean-Baptiste Tristan.
                   In **PPOPP'16**: ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming,
                   2016.

                   Efficient Training of LDA on a GPU by Mean-for-Mode Estimation
                   Jean-Baptiste Tristan, Joseph Tassarotti, Guy Steele.
                   In **ICML'15**: International Conference on Machine Learning, 2015.

                   Augur: Data-Parallel Probabilistic Modeling
                   Jean-Baptiste Tristan, Daniel Huang, Joseph Tassarotti, Adam Pocock, Stephen J. Green, Guy
                   Steele.
                   In **NIPS'14**: Annual Conference on Neural Information Processing Systems, 2014. **Spotlight**

                   Parallel programming with big operators
                   Changhee Park, Guy Steele, Jean-Baptiste Tristan.
                   In **PPOPP'13**: ACM SIGPLAN Symposium on Principles and Practice of Parallel Programming,
                   2013.

                   RockSalt: Better, Faster, Stronger SFI for the x86
                   Greg Morrisett, Gang Tan, Joseph Tassarotti, Jean-Baptiste Tristan, Edward Gan.
                   In **PLDI '12**: ACM SIGPLAN Conference on Programming Language Design and Implementation,
                   2012.

                   Evaluating Value-Graph Translation Validation for LLVM

Jean-Baptiste Tristan, Paul Govereau, Greg Morrisett.
In **PLDI '11**: ACM SIGPLAN Conference on Programming Language Design and Implementation, 2011.

A simple, verified validator for software pipelining
Jean-Baptiste Tristan, Xavier Leroy.
In **POPL '10**: ACM SIGACT-SIGPLAN Symposium on Principles of Programming Languages, 2010.

Verified Validation of Lazy Code Motion
Jean-Baptiste Tristan, Xavier Leroy.
In **PLDI '09**: ACM SIGPLAN Conference on Programming Language Design and Implementation, 2009.

Formal verification of translation validators: A case study on instruction scheduling optimizations
Jean-Baptiste Tristan, Xavier Leroy.
In **POPL '08**: ACM SIGACT-SIGPLAN Symposium on Principles of Programming Languages, 2008.

WORKSHOP
PUBLICATIONS

Enforcing Output Constraints via SGD: A Step Towards Neural Lagrangian Relaxation
Jay-Yoon Lee, Michael L. Wick, Jean-Baptiste Tristan, Jaime Carbonell
In **AKBC'17**: Workshop on Automated Knowledge Base Construction, 2017.

Sketchy LDA: Towards Streaming Inference
Jean-Baptiste Tristan, Michael L. Wick, Joseph Tassarotti
In **ML Systems'17**: Workshop on ML Systems, 2017.

Comparing Gibbs, EM and SEM for MAP Inference in Mixture Models
Manzil Zaheer, Michael Wick, Satwik Kottur, Jean-Baptiste Tristan.
In **OPT'15**: Optimization for Machine Learning, 2015.

Exponential Stochastic Cellular Automata for Massively Parallel Inference
Manzil Zaheer, Michael Wick, Jean-Baptiste Tristan, Alex Smola, Guy Steele.
In **LearningSys'15**: Workshop on Machine Learning Systems, 2015. **Spotlight**.

ACADEMIC SERVICE

Program Committee: HOPL 4 PC member, PLDI'18 PC member, PPS'18 PC member, IBM PL day 2016 PC member, SNAPL 2017 PC Member, PAPI 2016 PC Member, PPOPP 2016 PC Member, POPL 2012 External Reviewing Committee, Coq Workshop 2012 PC Member.

Referee: ACM Transactions On Parallel Computing, Communication of the ACM, ACM Transations On Programming Languages and Systems, ACM Transaction on Architecture and Code Optimization, Software Practice & Experience, Information Processing Letters, Higher-Order and Symbolic Computation.

Reviewer: AISTATS, SOCC, NIPS, ICML, POPL, PLDI, PPOPP, DISC, PPDP, SSV, CAV.

Other: National Science Foundation panelist in 2013, 2014, 2015. Treasurer for ICFP 2013.

PATENTS

Sparse and data-parallel inference method and system for the latent Dirichlet allocation model
Jean-Baptiste Tristan, Joseph Tassarotti, Guy L. Steele Jr.