

# Eric TANTER

## PhD in Computer Science

French nationality  
Regular resident in Chile  
Born August 3rd, 1977  
Single



*Mail address:*  
DCC, University of Chile  
Blanco Encalada 2120 - of 313  
Santiago, Chile

*Phone:* +56 2 978 43 65  
*Fax:* +56 2 689 55 31

etanter at dcc.uchile.cl

<http://www.dcc.uchile.cl/~etanter>

Currently **Assistant Professor** at the Computer Science Department, University of Chile  
and **Scientific Collaborator**, PROG Lab, Vrije Universiteit Brussel, Belgium

Formerly **Post-Doctorate Researcher** at the Center for Web Research (U.Chile)  
Formerly **PhD Student** both at the INRIA OBASCO research group (U.Nantes) and at the Center for Web Research (U.Chile)

### EDUCATION

**University of Nantes (OBASCO EMN/INRIA)**  
**University of Chile (DCC/CWR)**

**Nantes, France**  
**Santiago, Chile**

*Academic years 2000-2004*

**PhD** in Computer Science (defended November 8th, 2004)  
Coadvised by Prof. Pierre Cointe and Dr. Jacques Noyé (EMN) and Prof. José Piquer (DCC)  
Reported by Prof. Theo d'Hondt (VUB, Belgium) and Prof. Shigeru Chiba (TITECH, Japan)  
**Greatest distinction.**

**Vrije Universiteit Brussel (VUB)**

**Brussels, Belgium**

*Academic year 1999-2000*

**Master of Science** in Computer Science.  
European Master in Object-Oriented and Software Engineering Technologies, EMOOSE, in  
collaboration with Ecole des Mines de Nantes, France, and the SENSO network.  
**Ranked first, greatest distinction.**

**Ecole des Mines de Nantes (EMN)**

**Nantes, France**

*Academic years 1996-2000*

**Engineering** degree.  
Specialization in Computer Systems Engineering.  
**Ranked first.**

**Technical University of Denmark (DTU)**

**Copenhagen, Denmark**

*First semester 1999*

Courses followed in the regular Computer Science program.

## SKILLS

<b>Languages</b>	<b>French:</b> Mother tongue --- <b>English:</b> Fluent --- <b>Spanish:</b> Fluent
<b>Computational fields</b>	Programming languages, aspect-oriented programming, reflection and metaprogramming Object-oriented software architecture and design Concurrency, distribution, code mobility
<b>Programming languages</b>	Java (expert), Smalltalk (advanced), C/C++ (average), Scheme
<b>Enterprise computing</b>	J2EE, EJB, JSP, Servlets, Apache, MS-IIS, MS-TS, ASP, VB
<b>Operating systems</b>	Mac OSX, Linux, Unix, Windows
<b>Interpersonal skills</b>	Leadership, team work, communicative, reactive and open

## RESEARCH PROJECTS

**Vrije Universiteit Brussel, PROG Lab** **Brussels, Belgium**

2006 - 2007

Bilateral collaboration project ORION, co-financed by Flemish government and CWR.  
Definition of an open reflective infrastructure for open networks in the context of AmbientTalk.

**Chile-Korea IT Collaboration Center** **Santiago, Chile**

2004 - 2005

Principal researcher heading the project *Programming Environments for the Grid* (DCC-Chile/MIC-Korea)  
Leveraging the benefits of AOP in the context of Grid programming.

**INRIA Sophia-Antipolis, OASIS group** **Nice, France**

2004 - 2005

Researcher in the **OSCAR** project (Conicyt-Chile/INRIA-France)  
Study of a concurrency model and work on AOP for distributed computing.

**INRIA Sophia-Antipolis, OASIS group** **Nice, France**

2003 - 2004

Researcher in the **ProXiMoS** project (Conicyt-Chile/INRIA-France).  
Development of a reflective system and study of a concurrency model.

**Ecole des Mines de Nantes, OCM group** **Nantes, France**

June-September 2002

Research assistant.  
Involved in the various problematic of the group (reflection and aspect-oriented programming, and components).

**Ecole des Mines de Nantes, OCM group** **Nantes, France**

September-November 2000

Research engineer.

Prototyping for a project with France Telecom R&D dealing with *Reflection for Adaptable Mobility*.

Under the supervision of Prof. Pierre Cointe and Dr. Noury Bouraqadi.

## TEACHING/TUTORIALS

**Chilean Computer Science Society Conference** Valdivia, Chile

November 2005

4-hours tutorial on *From Metaprogramming to Aspect-Oriented Programming*.

**Universidad Diego Portales, Escuela de Postgrado** Santiago, Chile

June 2005 and November 2005

Course on *Programming Mobile Systems* in the Master in Information Technologies.

**University of Chile, Computer Science Department** Santiago, Chile

May 2005

Course on *Objects and Design with Smalltalk* in the engineering curricula.

**Ecole des Mines de Nantes / Vrije Universiteit Brussel** Nantes, France

December 2004

Course on *Concurrent Objects* in the EMOOSE MSc Program (European Master in Object Orientation and Software Engineering).

**University of Nantes** Nantes, France

October 2003

Intervention in the "DEA" (eq. MSc), in the course of Prof. Pierre Cointe on *Tendencies of Post-Object Orientation: the Generative Approach*. Class given on the *Reflex MOP*.

**University of Chile, Computer Science Department** Santiago, Chile

March-July 2003

Course for last year engineering students on *Post Object-Oriented Technologies* (reflection, metaprogramming, aspect-oriented programming).

**University of Chile, Computer Science Department** Santiago, Chile

June 2003 - June 2004 - June 2005

Course on *Advanced Separation of Concerns* in the post-graduate program on software engineering organized by the computer science department, dedicated to senior industry professionals willing to actualize their academic knowledge in computer science.

**Chilean Computer Science Society Conference** Copiapó, Chile

November 2002

4-hours tutorial on *Reflection and Metaprogramming*

**CIMPA - INRIA - CNRS - UNESCO School**

Merida, Venezuela

January 2002

Invited lecturer. Course given on **Reflection and Metaprogramming**.

In collaboration with Prof. Pierre Cointe, EMN.

Scientific director: Denis Caromel, INRIA Sophia-Antipolis, France.

**University of Chile, Computer Science Department**

**Santiago, Chile**

March-July 2001

10-units course for last year engineering students on **the Java programming language**.

## INDUSTRY

**Paperless Chile S.A.**

**Santiago, Chile**

March-December 2004

Part-time consultant and architect for a J2EE project dealing with electronic billing in Chile.

**Kibernum S.A.**

**Santiago, Chile**

November 2002 - June 2003

Part-time consultant and architect for the Redcrea INA project, using J2EE.

**Pragma Informática**

**Santiago, Chile**

April-June 2002

Part-time development engineer.

Design and implementation of an EJB-based application for an insurance company (ING), using the JBoss application server and the Apache MVC framework, Struts.

**Infosys Technologies Limited**

**Bangalore, India**

May-August 1999

Engineering internship.

Architecture of a web-based application for an international mutual funds company, using Microsoft technologies (IIS, MTS, VB).

## PUBLICATIONS

- **International conferences and journals**

Martin Bravenboer, Éric Tanter, Eelco Visser

**Declarative, Formal, and Extensible Syntax Definition for AspectJ - A Case for Scannerless Generalized-LR Parsing**

Proceedings of the 21st ACM SIGPLAN Conference on Object-Oriented Programming Systems, Languages, and Applications (**OOPSLA 2006**), October 2006, Portland, USA.

*To appear.*

**acceptance rate: 16%**

David Röthlisberger, Marcus Denker, Éric Tanter

**Unanticipated Partial Behavioral Reflection**

Proceedings of the 14th European Smalltalk User Group Research Conference (**ESUG 2006**),  
LNCS, Springer-Verlag.  
September 2006, Praga, Czech Republic.  
*To appear.*

Marcus Denker, Stéphane Ducasse, Éric Tanter  
**Runtime Bytecode Manipulation for Smalltalk**

Journal of **Computer Languages, Systems and Structures**  
Vol.32, number 2-3, pp.125-139, July 2006, Elsevier.

Éric Tanter and Rodolfo Toledo  
**A Versatile Kernel for Distributed AOP**

Proceedings of the 6th IFIP International Conference on Distributed Applications and Interoperable Systems (**DAIS 2006**)

LNCS 4025, pp. 316-331, Springer-Verlag. June 2006, Bologna, Italy.

*Best Paper Award of the three DisCoTec 2006 Conferences*

**acceptance rate: 23%**

Éric Tanter  
**Aspects of Composition in the Reflex AOP Kernel**

Proceedings of the 5th International Symposium on Software Composition (**SC 2006**)

LNCS 4089, pp.98-113, Springer-Verlag. March 2006, Vienna, Austria.

**acceptance rate: 35%**

Éric Tanter, Kris Gybels, Marcus Denker, Alexandre Bergel  
**Context-Aware Aspects**

Proceedings of the 5th International Symposium on Software Composition (**SC 2006**)

LNCS 4089, pp.227-249, Springer-Verlag. March 2006, Vienna, Austria.

**acceptance rate: 35%**

Wolfgang De Meuter, Éric Tanter, Stijn Mostinckx, Tom Van Cutsem, Jessie Dedecker

**Flexible Object Encapsulation for Ambient-Oriented Programming**

Proceedings of the ACM Dynamic Language Symposium (**DLS 2005**)

October 2005, San Diego, USA.

**acceptance rate: 36%**

Éric Tanter and Jacques Noyé  
**A Versatile Kernel for Multi-Language AOP**

Proceedings of the ACM SIGPLAN/SIGSOFT Conference on Generative Programming

and Component Engineering (**GPCE 2005**), LNCS, Springer-Verlag, September 2005, Tallin, Estonia.

**acceptance rate: 29%**

Marcus Denker, Stéphane Ducasse, Éric Tanter  
**Runtime Bytecode Manipulation for Smalltalk**

Proceedings of the 13th European Smalltalk User Group Research Conference (**ESUG 2005**),

August 2005, Brussels, Belgium.

**acceptance rate: 38%**

Leonardo Rodriguez, Éric Tanter, Jacques Noyé  
**La Réflexion Comportementale Partielle comme Infrastructure de  
Programmation par Aspects: Étude de Cas des Coupes Dynamiques**

**L'Objet**, 2005

*RSTI L'objet, Programmation par Aspects, pp. 31-52, 2005*

Leonardo Rodriguez, Éric Tanter, Jacques Noyé  
**Supporting Dynamic Crosscutting with Partial Behavioral Reflection: A Case  
Study**

Proceedings of the XXIV International Conference of the Chilean Computer Science  
Society (**SCCC 2004**),

pp. 48-58, IEEE Computer Science Press, November 2004, Arica, Chile.

**acceptance rate: 50%**

Denis Caromel, Luis Mateu, Éric Tanter

**Sequential Object Monitors**

Proceedings of the 18th European Conference on Object-Oriented Programming  
(**ECOOP 2004**),

M. Odersky (Ed.), LNCS 3086, pp. 316-340, Springer-Verlag,  
June 2004, Oslo, Norway.

**acceptance rate: 19%**

Éric Tanter, Jacques Noyé, Denis Caromel, Pierre Cointe

**Partial Behavioral Reflection: Spatial and Temporal Selection of Reification**

Proceedings of the 18th Annual ACM SIGPLAN Conference on Object-Oriented  
Programming, Systems, Languages, and Applications (**OOPSLA 2003**), R. Crocker  
and G. L. Steele, Jr (Eds.), pp. 27-46, ACM Press, October 2003, Anaheim, USA  
*Also published as: ACM SIGPLAN Notices*, volume 38, number 11, November  
2003.

**acceptance rate: 18%**

Éric Tanter, Marc Ségura-Devillechaise, Jacques Noyé, José Piquer

**Altering Java Semantics via Bytecode Manipulation**

Proceedings of the ACM SIGPLAN/SIGSOFT Conference on Generative  
Programming

and Component Engineering (**GPCE 2002**),

affiliated with Principles, Logics and Implementations of High-Level Programming  
Languages (PLI 2002),

D. Batory, C. Consel & W. Taha (Eds.), LNCS 2487, pp. 283-298, Springer-Verlag,  
October 2002, Pittsburgh, PA, USA.

**acceptance rate: 46%**

Éric Tanter and José Piquer

**Managing References upon Object Migration: Applying Separation of  
Concerns**

Proceedings of the XXI International Conference of the Chilean Computer Science  
Society (**SCCC 2001**),

IEEE Computer Science Press, November 2001, Punta Arenas, Patagonia, Chile.

**acceptance rate: 51%**

Éric Tanter, Noury Bouraqadi, Jacques Noyé

**Reflex -- Towards an Open Reflective Extension of Java**

Proceedings of the Third International Conference on Metalevel Architectures and  
Separation of Crosscutting Concerns (**Reflection 2001**), A. Yonezawa & S.

Matsuoka (Eds.), LNCS 2192, pp. 25-43, Springer-Verlag,  
September 2001, Kyoto, Japan.

**acceptance rate: 25%**

- **International workshops**

Éric Tanter

**On Dynamically-Scoped Crosscutting Mechanisms**

In Proceedings of the 3rd European Workshop on Aspects in Software (EWAS 2006)

September 2006, Twente, The Netherlands.

*To appear.*

Dieter Standaert, Éric Tanter, Tom Van Cutsem

**Design of a Multi-Level Reflective Architecture for Ambient Actors**

In ECOOP Workshop on Object Technology for Ambient Intelligence and Pervasive Computing (OT4Aml 2006)

July 2006, Nantes, France.

Benoit Kessler, Éric Tanter

**Analyzing Interactions of Structural Aspects**

In ECOOP Workshop on Aspects, Dependencies and Interactions (ADI 2006)

July 2006, Nantes, France.

Éric Tanter

**An Extensible Kernel Language for AOP**

In AOSD Workshop on Open and Dynamic Aspect Languages (ODAL 2006),

March 2006, Bonn, Germany.

Éric Tanter

**Metalevel Facilities for Multi-Language AOP**

In 2nd European Interactive Workshop on Aspects in Software (EIWAS 2005),

September 2005, Brussels, Belgium.

Éric Tanter

**Mirror Methods - Reconciling Reflection and Extreme Encapsulation**

In ECOOP Workshop on Object Technology for Ambient Intelligence (OT4Aml 2005)

July 2005, Glasgow, Scotland.

Éric Tanter and Jacques Noyé

**Motivation and Requirements for a Versatile AOP Kernel**

In 1st European Interactive Workshop on Aspects in Software (EIWAS 2004),

September 2004, Berlin, Germany.

Peter Ebraert and Éric Tanter

**A Concern-based Approach to Software Evolution**

In AOSD Dynamic Aspects Workshop (DAW 2004)

March 2004, Lancaster, UK.

Éric Tanter and Peter Ebraert

**A Flexible Approach to Interactive Runtime Inspection**

In ECOOP Workshop on Advancing the State-of-the-Art in Runtime Inspection (ASARTI 2003),

July 2003, Darmstadt, Germany.

Éric Tanter, Michael Vernailen, José Piquer

## **Towards Transparent Adaptation of Migration Policies**

In 8th ECOOP Workshop in Mobile Object Systems (EWMOS 2002),  
June 2001, Malaga, Spain.

Éric Tanter

## **Runtime Metaobject Protocols: the Quest for their Holy Application**

In 12th ECOOP Workshop of PhD Students in Object-Oriented Systems (PhDOOS 2002),  
June 2001, Malaga, Spain.

- **National conferences**

Éric Tanter, Noury Bouraqadi, Jacques Noyé

## **Reflex : une extension réflexive de Java portable, souple et performante** (*in French*)

Actes de Langages et Modèles à Objet (LMO'2001), L'Objet, vol. 7, p. 165-180,  
Hermes Science,  
January 2001, Le Croisic, France.

- **Theses, technical reports and others**

Éric Tanter

## **From Metaobject Protocols to Versatile Kernels for Aspect-Oriented Programming**

PhD thesis, University of Nantes, France, and University of Chile, Chile. November 2004.

Éric Tanter and Jacques Noyé

## **Versatile Kernels for Aspect-Oriented Programming**

INRIA Research Report RR-5275, July 2004

Éric Tanter

## **Reflex, a reflective system for Java -- application to flexible resource management in mobile object systems**

MSc thesis, Vrije Universiteit Brussels, Belgium - University of Chile, Chile, August 2000