

# **Jean-Philippe VANDEBORRE, Ph.D.**

## **Associate Professor in Computer Science (Maître de Conférences de l'Institut TELECOM)**

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### **Personal:**

Born March 19, 1974, in Tourcoing, France.  
Married, two children.

### **Education:**

- **2002: Ph.D. in Computer Science, University of Sciences and Technologies of Lille (USTL), France.**  
1997 - November 22, 2002: Thèse de doctorat en Informatique de l'Université des Sciences et Technologies de Lille, France, under the supervision of Professor Christophe Chaillou and Professor Mohamed Daoudi. Dissertation title: “Modèles 3D : indexation, et habillage par textures extraites de photographies” [3D Models: indexing and texture mapping from photographs], at the LIFL (Laboratoire d'Informatique Fondamentale de Lille) UMR USTL/CNRS 8022 [The LIFL is a Research Laboratory in the Computer Science field of the University of Sciences and Technologies of Lille (USTL) linked to the National Center for Scientific Research (CNRS – Centre National de la Recherche Scientifique)], Lille, France.  
French and English thesis abstract at <http://www.telecom-lille1.eu/people/vandeborre/thesis.html>
- **1997: M. Sc in Computer Science, University of Sciences and Technologies of Lille (USTL), France.**  
1996 - 1997: Diplôme d'Etudes Approfondies (DEA) en Informatique.  
1995 - 1996: Maîtrise d'Informatique
- **1995: B. Sc in Computer Science, University of Sciences and Technologies of Lille (USTL), France.**  
1994 - 1995: Licence d'Informatique.  
1992 - 1994: Diplôme d'Études Universitaires Générales (DEUG) Sciences des Structures et de la Matière (SSM) option Mathématiques.

### **Employment:**

- Current position:  
**December 2002 - present: Associate Professor Institut TELECOM, at TELECOM Lille 1, Lille, France. Member of the FOX-MIIRE Research Group of the LIFL (UMR USTL/CNRS 8022), Lille, France.**  
Maître de Conférences de l'Institut TELECOM (ex-GET), à TELECOM & Management SudParis (ex-INT), en poste à TELECOM Lille 1.
- Previous positions:  
December 1999 - November 2002: full-time lecturer at TELECOM Lille 1 (ex-ENIC), Lille, France.  
September 1997 - December 1999: PhD student sponsored by the Ministère de l'Enseignement Supérieur et de la Recherche (bourse MESR), France.

### **Teaching:**

- M. Sc. in Computer Science, USTL: 3D model indexing and retrieval.
- TELECOM Lille 1: Computer graphics, TCP/IP networks, Unix usage, administration and programming.

### Research funding:

- 2008 - 2010: member and scientific manager (USTL partner) of the MADRAS project, supported by the Agence Nationale de la Recherche (project reference ANR-07-MDCO-015), Main Investigator.
- 2006 - 2008: member of the DELOS NoE (European Commission's IST – <http://www.delos.info>).
- November 2002 - January 2006: RNRT SEMANTIC-3D project Réseau National de la Recherche en Télécommunications, Co-Investigator (<http://liris.cnrs.fr/semantic-3d/>).
- 2001 - 2002: CNRS JEMSTIC, Co-Investigator.

### Ph.D. advising:

- Rachid El Khoury, September 2009 - present, “3D-mesh partial indexing”, TELECOM & Management SudParis / University Lille 1, France, co-advised with Pr. M. Daoudi.
- Halim Benhabiles, September 2008 - October 2011, “3D-mesh segmentation: automatic evaluations and a new learning-based method”, University Lille 1 (LIFL – Department of Computer Science), France, co-advised with Pr. M. Daoudi and Dr. G. Lavoué.
- Hedi Tabia, September 2008 - September 2011, “Contributions to 3D-shape matching, retrieval and classification”, University Lille 1 (LAGIS – Department of Automatic and Signal), France, in partnership with Pr. M. Daoudi and Pr. O. Colot, advisors.
- Julien Tierny, September 2005 - October 2008, “Reeb graph based 3D shape modeling and applications”, University Lille 1 (LIFL – Department of Computer Science), France, co-advised with Pr. M. Daoudi.
- Tarik Filali Ansary, September 2003 - October 2006, “3D-model retrieval using 2D characteristic views”, University Lille 1 (LIFL – Department of Computer Science), France, co-advised with Pr. M. Daoudi.

### Master's advising:

- Halim Benhabiles, January - July 2008, “Contribution à l'évaluation automatique des méthodes de segmentation de maillages 3D polygonaux” [Contribution to automatic evaluation of 3D-polygonal mesh segmentation methods], Department of Computer Science, LIFL / USTL, France.
- Julien Tierny, January - July 2005, “Hiérarchisation topologique de modèles 3D maillés” [Topological analysis of 3D meshes], Department of Computer Science, LIFL / USTL, France.
- Alexis Héloir, January - July 2004, “Indexation de pièces automobiles par graphes de Reeb mutirésolution” [CAD vehicle part indexing with multiresolution Reeb graphs], Department of Computer Science, LIFL / USTL, France.
- Adrien Theetten, January - July 2004, “Recherche des vues caractéristiques à l'aide d'enveloppes visuelles” [2D characterization of 3D models by visual hulls computation], Department of Computer Science, LIFL / USTL, France.
- Tarik Filali Ansary, January - July 2003, “Indexation et reconnaissance de modèles 3D de pièces mécaniques par une approche bayésienne” [CAD vehicle part indexing with a Bayesian approach], Department of Computer Science (FOX-MIIRE Research Group of the LIFL), LIFL / USTL, France.

### Most significant publications:

Complete list of publications: [http://www.telecom-lille1.eu/people/vandeborre/publications\\_en.html](http://www.telecom-lille1.eu/people/vandeborre/publications_en.html)

- Halim Benhabiles, Guillaume Lavoué, Jean-Philippe Vandeborre, Mohamed Daoudi, “Learning boundary edges for 3D-mesh segmentation”, Computer Graphics Forum - Eurographics Association - Ed. Blackwell, volume 30, issue 8, pp. 2170-2182, December 2011.
- Hedi Tabia, Mohamed Daoudi, Jean-Philippe Vandeborre, Olivier Colot, “A new 3D-matching method of non-rigid and partially similar models using curve analysis”, IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI), volume 33, number 4, pp. 852-858, April 2011.

- Halim Benhabiles, Jean-Philippe Vandeborre, Guillaume Lavoué, Mohamed Daoudi, “A comparative study of existing metrics for 3D-mesh segmentation evaluation”, *The Visual Computer - International Journal of Computer Graphics*, Springer Editions, volume 26, number 12, pp. 1451-1466, December 2010.
- Julien Tierny, Jean-Philippe Vandeborre, Mohamed Daoudi, “Partial 3D Shape Retrieval by Reeb Pattern Unfolding”, *Computer Graphics Forum - Eurographics Association - Ed. Blackwell*, volume 28, number 1, pp. 41-55, March 2009.
- Stefano Berretti, Mohamed Daoudi, Alberto del Bimbo, Tarik Filali Ansary, Pietro Pala, Julien Tierny and Jean-Philippe Vandeborre, “3D Object Indexing and Retrieval”, Chapter of the book “3D Object Processing: Indexing, Compression and Watermarking”, Jean-Luc Dugelay, Atilla Baskurt, Mohamed Daoudi (co-editors), John Wiley & Sons Editions, ISBN 978-0-470-06542-6, April 2008.
- Julien Tierny, Jean-Philippe Vandeborre, Mohamed Daoudi, “Enhancing 3D Mesh Topological Skeletons with Discrete Contour Constrictions”, *The Visual Computer – International Journal of Computer Graphics*, Springer Editions, volume 24, number 3, pp. 155-172, March 2008.
- Tarik Filali Ansary, Mohamed Daoudi, Jean-Philippe Vandeborre, “A Bayesian 3D Search Engine using Adaptive Views Clustering”, *IEEE Transactions on Multimedia*, volume 9, number 1, pp. 78-88, January 2007.  
On-line demonstration: <http://www-rech.telecom-lille1.eu/3dretrieval>
- Tarik Filali Ansary, Jean-Philippe Vandeborre, Mohamed Daoudi, “A framework for 3D CAD models retrieval from 2D image”, *Annals of Telecommunications*, special issue on "Technologies and tools for 3D imaging", November-December 2005, volume 60, number 11/12, pages 1337-1359.

**Skills:**

- Languages: French (native), excellent working knowledge of English.
- Computer skills: C language programming, Unix/Linux administration and every-day usage, TCP/IP network administration, VRML/X3D, XHTML/CSS,  $\text{T}_{\text{E}}\text{X}/\text{L}_{\text{A}}\text{T}_{\text{E}}\text{X}$ .

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