

# Marie-Claude FRASSON

## Computer Graphics Research Engineer

14 ave Saint-Jean, Villa Bel Azur, 06400, Cannes  
Tel: (+33) 4-93-39-13-64 Cell: (+33) 6-61-59-00-75  
[mcfrosso@sophia.inria.fr](mailto:mcfrosso@sophia.inria.fr)

### INTERESTS

Various interests in the field of Computer Graphics and related areas. Seeking a position with responsibilities in Research and/or Development in the imaging industry or in new technologies. Knowledge or particular interest in:

- Bringing technology research results into industrial applications.
- Image-based modeling, rendering and texturing (Masters subject). Augmented reality. Virtual reality.
- Animation techniques, IK, virtual actors, motion editing techniques, constraints, deformations.
- Computer vision. Image analysis and image processing techniques. 2D image techniques.
- Texturing techniques (processing, analysis, synthesis).
- 3D modeling techniques, multi-resolution modeling.
- Using computer graphics for real-world applications.

### EDUCATION

- 02/2002-Now Ph.D. Computer Science** – [INRIA](#), Sophia-Antipolis – Specialized in [Computer Graphics](#)  
“Decoupling Structure and Appearance for Example-Driven Detail Synthesis”: How to recover shape and aspect parameters of real-world structured textures to synthesize virtual similar structures.  
Advisor: [George Drettakis](#). Thesis Defended on *June 24<sup>th</sup> 2005*
- 1996-1998 M.Sc. Computer Science** - [University of Montreal](#) - Specialized in [Computer Graphics](#).  
["Reconstruction interactive de scènes tridimensionnelles à partir d'images"](#) - Cf. [1] .  
Project web site : <http://www.iro.umontreal.ca/labs/infographie/projects/rekon/>  
Advisor: [Pierre Poulin](#) (poulin@iro.umontreal.ca) - GPA : 4.1/4.3
- 1992-1995 B.Sc. Computer Science** - [University of Montreal](#) - Selected on the Dean's list - GPA : 4.1/4.3
- 1992** French "**Baccalauréat**" in Sciences - [Collège Stanislas of Montreal](#) – With distinction.

### SCHOLARSHIPS AND DISTINCTIONS

- 2004** [Selected](#) by the [ACM-Siggraph](#) to participate in the “Women in Computer Graphics tour” of South Africa, designed to promote Computer Graphics amongst women (5 women selected worldwide). Invited talk given in six South-African universities to hundreds of young women.
- 2001** [FRNTQ](#) three-years [Doctoral scholarship](#) (Ranked first) + France-Quebec supplement
- 1996** [CFUW Memorial/Professional fellowship](#) (Masters).
- 1995-1997** [NSERC PGS-A Postgraduate scholarship](#) (Masters).
- 1995** [FCAR](#) Postgraduate scholarship (declined because of NSERC acceptance).
- 1995** [University of Montreal Student Association](#) excellence grant.
- 1992-1995** Canada Excellence Scholarships in Industry, Science and Technology (three years in a row).
- 1994** [Hubert Biermans foundation](#) excellence grant.
- 1994** [NSERC University Undergraduate Student Research Awards](#) (to work at INRS-Télécommunications).
- 1993** [Rose-Daoust Duquette](#) foundation excellence grant.
- 1992** [NSERC University Undergraduate Student Research Awards](#) (to work at University of Montreal).
- June 1994** Selected for the "Target '94" program to be the representative of University of Montreal. "Target '94" is a program whose aim is to bring the best students around Canada to do graduate studies in Computer Science in the Western Universities of the country.

## PROFESSIONAL, SCIENTIFIC AND PEDAGOGICAL EXPERIENCE

- 02/99-11/01** **Software Design Engineer** - [Softimage](#), Montreal - 3D Research and Development, Animation team. Design and development (in C++) for the [XSI](#) software (versions 1.0 to 3.5): Inverse kinematics system management, motion editing techniques, constraints, animation mixer, several components in the software animation module.  
Technical advisor for the Avid/Softimage [acquisition](#) of [The Motion Factory](#).  
Reference: Gordon Cameron, team manager (now at [Pixar Animation Studios](#)): [gocam@pixar.com](mailto:gocam@pixar.com)
- 01/01-06/01** **Lecturer** - [Ecole Polytechnique](#), Montreal - Electrical and Computer Engineering department.  
Teaching course [INF2700](#) - "Man-Machine Interfaces and Computer Graphics".  
Reference: Farida Cheriet, professor at Polytechnique: [farida.cheriet@polymtl.ca](mailto:farida.cheriet@polymtl.ca)
- 10/98-02/99** **Research Assistant** - [iMAGIS team](#) (GRAVIR\_IMAG laboratory), Grenoble, France.  
Development (C++) of a [relighting technique](#) for augmented reality applications. Work in collaboration with Céline Loscos, under the supervision of George Drettakis (INRIA Professor). Cf. [2,3].
- 09/95-09/96** **Analyst Programmer** - [Digits 'n Art](#), Montreal (3D company) - Research and Development team.  
Development of a material editor (in C++) and integration of multi-threading for motion capture processes.  
Reference: [Pierre Lachapelle](#), CEO: [pierre@dnasoft.com](mailto:pierre@dnasoft.com)
- 1993-1998** **Teaching Assistant** - [DESI department](#), University of Montreal.  
C++, C, Pascal and Wordperfect courses for university students, all year long.
- 03/95-08/95** **Research assistant** - [Héron laboratory](#), University of Montreal.  
Design and implementation of a « course generator » for an Intelligent Tutoring System (in SmallTalk) - Cf. [1].
- Summer 1994** **Research Assistant** - Software Telecommunication group, [INRS-Télécommunications](#), Montreal.  
Integration of new methods for network protocol validation. Design and implementation of a lexer, parser and semantic analyzer for compiling a protocol validation language (in Caml-Light).
- Summer 1992** **Research assistant** - Multimedia laboratory, University of Montreal.  
Design and implementation of an interactive multimedia intelligent tutoring system for children to learn cooking, using Macromind Director.
- 1990-1995** **Tutor** in Maths, Physics and French for secondary and post-secondary students.

## PUBLICATIONS

- [1] **Pierre Poulin, Marc Stamminger, François Duranleau, Marie-Claude Frasson, George Drettakis.** [Interactive Point-based Modeling of Complex Objects from Images](#), Proc. Graphics Interface 2003, Vancouver, Canada, June 2003.
- [2] **Céline Loscos, Marie-Claude Frasson, George Drettakis, Bruce Walter, Xavier Granier, Pierre Poulin.** [Interactive Virtual Relighting and Remodeling of Real Scenes](#), 10th Eurographics Workshop on Rendering, Granada, Spain, June 1999.
- [3] **Céline Loscos, Marie-Claude Frasson, George Drettakis, Bruce Walter, Xavier Granier, Pierre Poulin.** *Interactive Virtual Relighting and Remodeling of Real Scenes*, Poster Session, Second IEEE and ACM International Workshop on Augmented Reality (IWAR)'99 - October 1999.
- [4] **Frasson Marie -Claude,** [Reconstruction interactive de scènes tridimensionnelles à partir d'images](#), M.Sc. Thesis, University of Montreal, March 1999.
- [5] **Poulin Pierre, Ouimet Mathieu, Frasson Marie-Claude,** [Interactively Modeling with Photogrammetry](#), 9th Eurographics Workshop on Rendering, Vienna, Austria, June 1998.
- [6] **Nkambou Roger, Frasson Marie-Claude, Frasson Claude :** *Generating Courses in an Intelligent Tutoring System*, 9th International Conference on Industrial & Engineering Applications of Artificial Intelligence and Expert Systems (IEA-AIE '96), presented in Fukuoka, Japan in May 1996.

## COMPUTER SKILLS

- **Languages** : Good expertise in C++, Object Oriented Programming and C. Knowledge of Pascal, Visual Basic and Smalltalk. Design patterns. Programmed extensively on Unix-based machines and under Windows (MS Visual Dev 6.0). Good knowledge of OpenGL, Qt and X. Use of versioning systems (CVS, ClearCase).
- **Hardware** : PC, Silicon Graphics, Sun and Macintosh.



## INVOLVMENT

- 2001-now** Member of the [founding committee](#) and on the board of the [ACM-Siggraph Montreal Chapter](#).
- 1993-1997** Student representative at the Departmental Assembly of the Department of Computer Science bringing together all the faculty members to discuss general department matters and problems.
- 1996-1997** Visiting Student at [UBC](#) (University of British Columbia) in Vancouver for two semesters.
- 1993-1995** Vice-President Department of [Computer Science Student Committee](#), University of Montreal.
- 1993-1995** Volunteer for the national [Innovateurs à l'école](#) program whose aim is to promote science among primary, secondary and post-secondary students by doing presentations in their schools.
- 1992-1996** Volunteer in conferences (ICO 93, INET 96), at the Montreal Scuba Diving Show, at the ["Tour de l'île de Montréal"](#).

## OTHER INTERESTS

- Sport (running, swimming, skiing, aerobics, dancing) and outdoors (sailing, hiking, camping, canoeing, kayaking).
- Scuba Diving! Certified Advanced Diver since 1993.
- Improvisational theater.
- Photography (Black and White and Color).
- Discover the world (traveled extensively in many countries in Europe, throughout North America, Cuba, Peru, Bolivia, Columbia, Mexico, Egypt, Morocco, Japan, ...).

## ASSETS AND ABILITIES

- Languages: Excellent mastering of French and English. Good level in Spanish.
- **Canadian**  and **French**  citizenships.
- Followed the Innovative Company Creation 2004 Training Session of the [Incubateur PACA-Est](#) (7 months)
- Excellent teamwork abilities and communication skills, both written and oral.
- Tenacity, patience, perfectionism.
- Fast learning capacity.

More references available upon request....