

Curriculum Vitae

01/2014

Bruno RAFFIN

Born the 31th of December 1970, France
Married, two children

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1 Employment History

- **Since October 2001.** INRIA Research Scientist (CR1) at INRIA Rhône-Alpes Grenoble, France.
- **September 1999 - September 2001.** Assistant Professor at Université d'Orléans, France.
- **January 1998 - August 1999.** Postdoc fellow at Iowa Sate University, USA. Funded by a Cray-SGI grant. Teaching duty of 60 hours per semester.

2 Education

- **March 2009.** "Habilitation à Diriger des Recherches", Grenoble Universités, France. *Title : High Performance Interactive Computing.* This French title attests the ability to lead a research team. Title required to apply to Full Professor positions in France.
- **1993-1997.** Ph.D. in Computer Science, Université d'Orléans, France. *Title : A Structured Model of Communications and Synchronizations for Task Parallelism.* Advisers : Bernard Virot and Robert Azencott.
- **1993.** DEA d'Informatique Fondamentale (Diploma of Advanced Studies in computer sciences with specialization in parallelism). École Normale Supérieure de Lyon, France.
- **1991-1992** Master in Mathematics. Université Lyon I, France.

3 Research Advising

3.1 Ph.D. Students

- **David Beniamine (since 2013).** Parallelisation Patterns and Scheduling for Real-Time Physics Simulations. Co-advised with Guillaume Huard.
- **Gilles Daviet (since 2013).** Parallel Macroscopic Simulations of Fibrous Materials. Co-advised with Florence Bertails-Descoubes and Pierre Saramito.
- **Julio Toss (since 2013).** Parallel Algorithms and Data Structures for Physically Based Simulation of Deformable Objects. Join Ph.D with UFRGS, Brazil. Co-advised by Joao Comba.

- **Marwa Sridi (since 2013)**. Parallel Algorithm Composition for Transient Mechanic Simulations. Join Ph.D with CEA, France. Co-advised with Vincent Faucher and Thierry Gautier.
- **Mathias Ettinger (since 2011)**. Cache Efficient Parallel Adaptive Algorithms for Scientific Visualization.
- **Mathieu Dreher (since 2011)**. In-Situ Visualization for Molecular Dynamics.
- **Joao Lima (since 2010)**. Work Stealing on GPUs. Join Ph.D with UFRGS, Brazil. Co-advised by Vincent Danjean and Nicolas Maillard.
- **Marie Durand (2010-2013)**. Coupling CPUs and GPUs for discrete physics simulations. Co-advised with François Faure.
- **Marc Thiboukdjian (2007-2010)**. Parallel and cache-oblivious algorithms for 3D mesh layouts. Co-advised with Vincent Danjean and Jean-Louis Roch.
- **Benjamin Petit (2007-2011)**. Interaction with multi-camera environments. Co-advised with Edmond Boyer.
- **Everton Hermann (2006-2010)**. Parallel algorithms for the SOFA physics simulation framework. Co-advised with François Faure. Engineer at UbiSoft, Paris.
- **Jean-Denis Lesage (2006-2009)**. Adaptive algorithms for large interactive 3D applications. Engineer at CEA, Paris.
- **Thomas Arcila (2005)**. High performance sort-first rendering. Stopped after one year. Engineer at Mercury Computer, Bordeaux, France.
- **Clément Ménier (2003-2007)**. Computer system for real-time 3D modeling. Co-advised with Edmond Boyer. Co-founder and chief software architect of the 4D Views company, Grenoble, France.
- **Jérémy Allard (2002-2005)**. Middleware for large virtual reality applications running on PC clusters. INRIA research scientist at Lille, France.
- **Jesus Verduzco (2001-2005)**. X Windows environment for display-wall. Associate Professor at the Universidad de Colima, Mexico.

3.2 Postdoc

- **Alexandre Ancel (since 2012)**. Distributed Scientific Visualization.
- **Ingo Assenmacher (2009-2011)**. Distributed virtual reality.
- **Luciano Soares (2006)**. Adaptive parallel octree. Research scientist at Petrobras, Brazil.

3.3 Engineers

- **Jeremy Jaussaud (since 2012)**. 3D data exchange protocols.
- **Xavier Martin (since 2011)**. Trainee Ingenieur spending 50% of his time following classes at ENSIMAG and 50% in my group at INRIA. FlowVR Development
- **Eric Amat (since 2010)**. Grimage platform support.
- **Thomas Dupeux (2008-2010)**. Grimage platform support.
- **Antoine Vanel (since 2008)**. FlowVR development.
- **Loick Lecointre (2003-2004)**. FlowVR development. Engineer at Amadeus, Paris.

3.4 Internships

- 31 internships since 2000 (graduate level).

4 Teaching

- **2014** : Algorithms (ENSIMAG, 32 hours, Master program)
- **2012** : Parallel computing (Université d'Orléans, 8 hours, Ph.D. program)

- **2011** : Introduction to parallel computing and scientific visualization (Universidad de Coruna, Spain, 12 hours, Master program). Parallel computing (Université d'Orléans, 8 hours, Ph.D. program),
- **2001-2010** : Parallel computing (Université d'Orléans, 8 hours per year, Ph.D. program), Introduction to parallel computing (Grenoble Université, 18 hours per year, Master program).
- **1999-2001** : **Université d'Orléans**. 230 hours per year. Computer architecture, operating systems, networking and internet technology, security, parallel computing. Master program.
- **1998-1999** : **Iowa Sate University**. 1 class per semester (about 180 hours). Math class. Undergraduate program.
- **1994-1997** : **Université d'Orléans**. 96 hours per year. Algorithms, Turbo Pascal programming and mathematics for computer science. Undergraduate program.

5 Collective Responsibilities

Associated Team with UFRGS, Porto Alegre

In charge of animating the collaboration with the University of Rio Grande do Sul (UFRGS), Porto Alegre. Responsible of several grants for researcher exchnage (20 to 40 Keuros per year) :

- Equipe associée INRIA Diode-A (2006-2011),
- CNRS/Cnpq (2011-2013).
- INRIA/Cnpq (2008-2010),
- Capes/Cofecub (2006-2009 and 2013-2014),
- PICS CNRS (2005-2007).

Since 2004 [this collaboration led to 16 PhDs and more than 40 common publications](#)¹.

In 2011, this collaboration was the basis for the creation [the LICIA lab](#)², a CNRS International Associated Lab between the LIG Lab at Grenoble and UFRGS.

INRIA Responsibilities

- President of the INRIA technology development committee since 2007.
- Deputy Member of the INRIA evaluation committee (2005-2008).
- Member of the hiring committee of junior scientists at INRIA Bordeaux (2008)

National Animations

- President of the steering committee of the [Day of French Scientific Visualization](#)³, since 2010.
- Member of the organizing committee of the CEA-EDF-INRIA summer school entitled "Building the next generation of visualization software", Cadarache, June 2011.

Member of University Hiring Committees

Hiring committee for Assistante Professors at :

- Université Paul Sabatier, Toulouse, 2011.
- Université Joseph Fourier, Grenoble, 2004-2008.
- Université d'Orléans, Orléans, 2008.

PhD Reviewer

- Marc Labadens, Ecole Polytechnique, April 2014. Visualization of Astrophysics Simulations with Octree Based Adaptive Mesh.

1. <http://diodea.imag.fr/>

2. <http://www.inf.ufrgs.br/licia>

3. <http://visu2013.imag.fr>

- Maxim Makhinya, University of Zurich, March 2012. Performance Challenges in Distributed Rendering Systems.
- Hadrien Courtecuisse, Université de Lille 1, December 2011. New Parallel Architectures for Interactive Medical Simulations.
- Alexandre Ancel, Université de Strasbourg, November 2011. Illumination for High Performance Scientific Visualization.
- Quentin Avril, Université de Rennes I, September 2011. Collision Detection for Large Scale Environments : A unified adaptive model for multi-core and multi-GPU architectures.
- Aurélien Esnard, Université de Bordeaux, December 2005. Analysis, design and development of a computational steering and on-line visualization environment for numerical simulations.

International Journal and Conferences

- Paper co-chair of JVRC 2013 (EGVE - EuroVR Joint Virtual Reality Conference).
- EGPGV (Eurographics Symposium on Parallel Rendering and Visualization)
 - Member of the Steering Board since 2007.
 - Co-chair of EGPGV'06, May 2006, Braga, Portugal.
 - Co-chair and local organizer of EGPGV'04, June 2004, Grenoble, France.
- Co-chair and organizer of the Workshop on Commodity Clusters for Virtual Reality, IEEE VR, 22 March 2003, Los Angeles, USA.
- Tutorial co-chair in 2009 and exhibition co-chair in 2012 of IEEE VR (IEEE Conference on Virtual Reality).
- Demo co-chair in 2009 for JVRC (EGVE - ICAT - EuroVR Joint Virtual Reality Conference).
- Co-chair with Shinji Shimojo of HSNCE 2012 (3rd Workshop on High Speed Network and Computing Environments).
- Co-editor special issue "Parallel Graphics and Visualization", Parallel Computing, Volume 33, Issue 6, 2007.
- Co-editor special issue "Parallel Graphics and Visualization", Parallel Computing, Volume 31, Issue 2, 2005.
- Program committee member of :
 - ICCS 2013, 2014 (International Conference on Computational Science).
 - GPUComp 2013 (third Workshop on GPU Computing).
 - Eurographics 2012, short papers.
 - IEEE VR 2008-2013.
 - JVRC 2009-2012.
 - ISVC 2008-2013 (International Symposium on Visual Computing).
 - ICAT 2011 (21st International Conference on Artificial Reality and Telexistence).
 - SEARIS 2011-2013 (Workshop on Software Engineering and Architectures for Realtime Interactive Systems).
 - ACM VRST 2008, Bordeaux, France (ACM Symposium on Virtual Reality Software and Technology).
 - SVR 2008-2014 (Symposium on Virtual and Augmented Reality), Brazil.
 - PAPP 2009-2011 (International Workshop on Applications of Declarative and Object-oriented Parallel Programming).
 - CLCAR 2009-2011 (Conferencia Latinoamericana de Computación de Alto Rendimiento).

6 Grants

- **Equipex Kinovis (2012-2017)**. 2.6 Meuros. Large scale multi-camera platform (extension of the Grimage platform to 60 cameras). Partners : INRIA Rhône-Alpes and the LJK, LIG, LADAF and GIPSA labs.
- **Contrat with CEA (2012)** : Europlexus Parallelization with KAAP. Partners : INRIA Rhône-Alpes and CEA Saclay.

- **ANR grant EXAVIZ (2011-2015)**. Large Scale Interactive Visual Analysis for Life Science. Partners : INRIA Rhône-Alpes, Université d’Orléans, the LBT lab from IBPC, the LIMSI from Université d’Orsay, and the CEMHTI labs from CNRS.
- **European Project "Infrastructure" VISIONAIR (2011-2014)**. Opening of virtual reality and scientific visualization platforms for external academic experiments. Partners : 25 European labs including INRIA Grenoble.
- **Contract with EDF (2010-2013)**. High performance scientific visualization. Fund 1 postdoc and 1 PhD.
- **ANR grant REPDYNE (2010-2012)**. Coordinator for the INRIA Rhône-Alpes. High performance structure and fluid computing. Partners : INRIA Rhône-Alpes, CEA, ONERA, EDF, LaMSID lab from CNRS and LaMCoS lab from INSA Lyon.
- **ANR/JST grant PETAFLOW (2010-2012)**. France/Japon international program. Coordinator for the INRIA Rhône-Alpes. Peta-scale data intensive computing with transnational high-speed networking : application to upper airway flow. INRIA Rhône-Alpes, Gipsa-lab from UJF, NITC (Japan), Cyber Center of Osaka, DITS (Osaka) and the Visualization Lab of Kyoto.
- **European Project Interact (2007-2008)**. Partners : Eptron, Holographika, Total Immersion, Vecsys SA and INRIA Rhône-Alpes. 3D modeling and speech interfacing technologies.
- **ANR (French national research agency) grant Vulcain (2008-2010)**. Partners : Université Joseph Fourier, INERIS, Université de Bourges, SME, PHIMECA, CEA, BULL SAS, Université de Marne la Vallée, INRIA Rhône-Alpes.
- **Ph.D. Grant co-funded by CNRS and CEA (2007-2010)**.
- **ANR grant DALIA (2007-2009)**. National Coordinator. Partners : Université d’Orléans, Université Paris 7, CEA and INRIA Rhône-Alpes. Interactive grid, collaborative interaction and telepresence.
- **ANR grant FVNANO (2008-2010)**. Coordinator for the INRIA Rhône-Alpes. Partners : Université d’Orléans, Université de Bordeaux and INRIA Rhône-Alpes. Interactive simulations of nano structures on PC cluster.
- **ANR grant OCETRE (2004-2005)**. Partners : Thalès, Total Immersion and INRIA Rhône-Alpes. Real-time multi-camera motion capture.
- **ANR grant GEOBENCH (2003-2004)**. Coordinator for the INRIA Rhône-Alpes. Partners : Université d’Orléans, Mercury Computer, CEA, BRGM, INRIA Rhône-Alpes. Virtual reality for scientific visualization.
- **ANR grant CYBER II (2003-2005)**. Partners : Université Lyon I, INRIA Rhône-Alpes. Real-time 3D modeling.

7 Technology Transfer

- Real-time 3D modeling code licensed to the [4DViews company](#)⁴ co-founded by a former Ph.D. Student (2007).
- Co-founder of the [Icatiss Start-up](#)⁵ (2003). Consultant for the company from 2003 to 2006.

8 Software and Platforms

- Member of the steering board of the [Kinovis platform](#)⁶. Experimental platform to be operational by the end of 2014. A first platform, located at INRIA Rhône-Alpes, will provide a large acquisition space for off-line and interactive applications equipped with more than 60 high-resolution cameras. A second platform mixing classical cameras and X-ray cameras will be setup at the Grenoble University Hospital.
- Member of the steering board of the [Grimage platform](#)⁷ since its creation in 2003. Experimental platform

4. <http://www.4dviews.com/>

5. <http://www.icatiss.com/>

6. <http://kinovis.inrialpes.fr>

7. <http://grimage.inrialpes.fr>

located at INRIA Rhône-Alpes. It gathers a PC cluster, a camera network and a display wall. This platform is shared by 3 different INRIA teams (PERCEPTION, EVASION and MOAIS) and funded by various grants (locals, nationals and Europeans). Grimage has been shown at version events (siggraph 2009, IEEE VR 2006, Vision 2006, Siggraph 2007, VRST 2008, European City of Science 2008), and was the object of several [press articles](#).

- [FlowVR Suite](#)⁸ (102 000 code lines). First public release : 2003. Still highly active project. Middleware for parallel interactive applications used for multi-camera 3D modeling, telepresence, steering molecular dynamics simulations as well as in situ analytics on thousands of compute cores.
- MVREALTIME (36 000 code lines). First version : 2004. Real-time 3D modeling. Code transferred to the 4DView Solutions company.
- Net Juggler (82 000 code lines). 2001-2004. More than 1000 downloads. Cluster support for VR Juggler applications.
- SoftGenLock (6 000 code lines). 2001-2004. More than 700 downloads. Software genlocking of commodity graphics cards for active stereo rendering.

9 Courses, Tutorials and Invited Talks

- [1] Bruno Raffin. GPU Computing : Is it Worth the Effort ? International Conference on Computational and Mathematical Methods in Science and Engineering (CMMSE), Benidorm, 2011. Invited Speaker.
- [2] Bruno Raffin. High Performance Interactive Computing. Latin American Conference on High Performance Computing (CLCAR), Colima, 2011. Invited Speaker.
- [3] Bruno Raffin. Markerless 3D Interactions : The Grimage Experience. In *XI Symposium on Virtual and Augmented Reality (SVR09)*, Porto Alegre, May 2009. Invited Speaker.
- [4] Jérémie Allard, Clément Ménier, Bruno Raffin, and François Faure. Grimage : Markerless 3D Interactions. Game Developers Conference, Lyon, 2007.
- [5] Bruno Raffin. High Performance Virtual Reality. Universidad da Coruna, España, 2007. Invited Seminar.
- [6] Bruno Raffin. Adaptive Algorithms for new Parallel Supports. First International Summer School on Emerging Trends in Concurrency (TiC'06), Bertinoro, Italia, 2006.
- [7] Bruno Raffin. Componentes estandard para muros de imagenes de alta resolución y gran tamaño. Jornadas Internacionales de Ciencias Computacionales, Colima, Mexico, 2006. Invited Speaker.
- [8] Jérémie Allard, Marcio C. Cabral, Camille Goudeseune, Hank Kaczmarski, Bruno Raffin, Benjamin Schaeffer, Luciano P. Soares, and Marcelo K. Zuffo. Commodity Clusters for Immersive Projection Environments. In *Proceedings of ACM SIGGRAPH 03, Course 18*, California, July 2003.
- [9] Pilippe Augerat, Camille Goudeseune, Hank Kaczmarski, Bruno Raffin, Benjamin Schaeffer, Luciano P. Soares, and Marcelo K. Zuffo. Commodity Clusters for Immersive Projection Environments. In *Proceedings of ACM SIGGRAPH 02, Course 47*, Texas, July 2002.
- [10] C. Cruz-Neira, C. Just, K. Meinert, A. Bierbaum, P. Hartling, and B. Raffin. Open Source Virtual Reality. IEEE VR 2002 Tutorial, Florida, March 2002.
- [11] Marcelo Knorich Zuffo, Benjamin Schaeffer, Carolina Cruz-Neira, Bruno Raffin, and Roland Blach. PC Clusters for Multiprojection Immersive Environments : Time to Go ? Immersive Projection Technology (IPT) 2002, Florida, March 2002. Panel Discussion.
- [12] Bruno Raffin. Des grappes de PC pour la réalité virtuelle. Imagin@.02, Monaco, February 2002. Invited Speaker.

10 Publications

Available at <http://www-id.imag.fr/~raffin/publications.php>.

8. <http://flowvr.sourceforge.net>

10.1 International Journals

- [1] Matthieu Dreher, Jessica PrevotEAU-Jonquetc, Mikael Trellet, Marc Piuzzi, Marc Baaden, Bruno Raffin, Nicolas Ferey, Sophie Robert, and Sébastien Limet. ExaViz : a Flexible Framework to Analyse, Steer and Interact with Molecular Dynamics Simulations. *Faraday Discussion*, 169, 2014. To be published.
- [2] Marie Durand, Philippe Marin, François Faure, and Bruno Raffin. DEM-based simulation of concrete structures on GPU. *European Journal of Environmental and Civil Engineering*, 0(0) :1–13, 2012.
- [3] Jean-Denis Lesage and Bruno Raffin. A Hierarchical Component Model for Large Parallel Interactive Applications. *Journal of Supercomputing*, 60 :389–409, June 2012. Extended version of NPC 2007 article.
- [4] Mathieu Chavent, Antoine Vanel, Alex Tek, Bruno Lévy, Sophie Robert, Bruno Raffin, and Marc Baaden. GPU-accelerated atom and dynamic bond visualization using HyperBalls, a unified algorithm for balls, sticks and hyperboloids. *Journal of Computational Chemistry*, 32(13) :2924–2935, October 2011.
- [5] Jérémie Allard, Jean-Denis Lesage, and Bruno Raffin. Modularity for Large Virtual Reality Applications. *Presence : Teleoperators and Virtual Environments*, 19(2) :142–162, April 2010.
- [6] Marc Tchiboukdjian, Vincent Danjean, and Bruno Raffin. Binary Mesh Partitioning for Cache- Efficient Visualization. *IEEE Transactions on Visualization and Computer Graphics*, 16(5) :815–828, 2010.
- [7] Benjamin Petit, Jean-Denis Lesage, Clément Ménier, Jérémie Allard, Jean-Sébastien Franco, Bruno Raffin, Edmond Boyer, and François Faure. Multi-Camera Real-Time 3D Modeling for Telepresence and Remote Collaboration. *International Journal of Digital Multimedia Broadcasting*, 2010 :12 pages, 2010.
- [8] Luciano P. Soares, Bruno Raffin, and Joaquim A. Jorge. PC Clusters for Virtual Reality. *The International Journal of Virtual Reality*, 7(1) :67–80, July 2008. Extended Version of IEEE VR 20006 survey.
- [9] Glenn R. Luecke, Bruno Raffin, and James J. Coyle. Comparing the Communication Performance and Scalability of a Linux and an NT Cluster of PCs, a SGI Origin 2000, an IBM SP and a Cray T3E-600. *The Journal of Performance Evaluation and Modelling for Computer Systems*, March 2000.
- [10] Glenn R. Luecke, Bruno Raffin, and James J. Coyle. The Performance of the MPI Collective Communication Routines for Large Messages on the Cray T3E-600, the Cray Origin 2000, and the IBM SP. *The Journal of Performance Evaluation and Modelling for Computer Systems*, July 1999.
- [11] Glenn R. Luecke, Bruno Raffin, and James J. Coyle. Comparing the Communication Performance and Scalability of a SGI Origin 2000, a cluster of Origin 2000’s and a Cray T3E-1200 using SHMEM and MPI Routines. *The Journal of Performance Evaluation and Modelling for Computer Systems*, October 1999.
- [12] Glenn R. Luecke, Bruno Raffin, and James J. Coyle. Comparing the Scalability of the Cray T3E-600 and the Cray Origin 2000 Using SHMEM Routines. *The Journal of Performance Evaluation and Modelling for Computer Systems*, December 1998.
- [13] Emmanuel Melin, Bruno Raffin, Xavier Rebeuf, and Bernard Virot. A Structured Synchronization and Communication Model Fitting Irregular Data Accesses. *Journal of Parallel and Distributed Computing*, 50 :3–27, 1998.
- [14] Bruno Raffin and Mirta B. Gordon. Minimerror, a temperature dependent learning rule. *Neural Computation*, 7(6) :1206–1224, November 1995.

10.2 International Conferences

- [15] Alexandre Ancel, Bruno Raffin, Ingo Assenmacher, Annemie Van Hirtum, Yo Fujiso, and Kazunori Nozaki. Parallel caching for remote visualisation. In *Proceedings of COMPSAC - Conference on Computers, Software & Applications- HSNCE*, pages 1–4, Kyoto, 2013.

- [16] Marie Durand, François Broquedis, Thierry Gautier, and Bruno Raffin. An Efficient OpenMP Loop Scheduler for Irregular Applications on Large-Scale NUMA Machines. In AlistairP. Rendell, BarbaraM. Chapman, and MatthiasS. Müller, editors, *International Workshop on OpenMP (IWOMP)*, volume 8122 of *Lecture Notes in Computer Science*, pages 141–155, Canberra, 2013. Springer Berlin Heidelberg. FP7-PEOPLE-2011-IRSES Project HPC-GA.
- [17] Joao Lima, François Broquedis, Thierry Gautier, and Bruno Raffin. Preliminary Experiments with XKaapi on Intel Xeon Phi Coprocessor. In *SBAC-PAD*, October 2013.
- [18] Tobias Franke, Volker Settgast, Johannes Behr, and Bruno Raffin. VCoRE : a web resource oriented architecture for efficient data exchange. In *18th International Conference on 3D Web (Web3D'13)*, June 2013. Best Long Paper - Second Prize.
- [19] Mathias Ettinger, François Broquedis, Thierry Gautier, Stéphane Ploix, and Bruno Raffin. VtkSMP : Task-based Parallel Operators for VTK Filters. In *Eurographics 2013 Symposium on Parallel Graphics and Visualization (EGPGV'13)*, May 2013.
- [20] Thierry Gautier, Fabien Le Mentec, Vincent Faucher, and Bruno Raffin. X-KAAPI : a Multi Paradigm Runtime for Multicore Architectures. In *Sixth International Workshop on Parallel Programming Models and Systems Software for High-end Computing (P2S2'13)*, October 2013.
- [21] Matthieu Dreher, Marc Piuze, Ahmed Turki, Matthieu Chavent, Marc Baaden, Nicolas Férey, Sébastien Limet, Bruno Raffin, and Sophie Robert. Interactive Molecular Dynamics : Scaling up to Large Systems. In *International Conference on Computational Science (ICCS)*, June 2013.
- [22] Thierry Gautier, Joao Lima, Nicolas Maillard, and Bruno Raffin. Locality-Aware Work Stealing on Multi-CPU and Multi-GPU. In *Sixth Workshop on Programmability Issues for Heterogeneous Multicores (MULTIPROG'13)*, January 2013.
- [23] Thierry Gautier, Joao Lima, Nicolas Maillard, and Bruno Raffin. XKaapi : A Runtime System for Data-flow Task Programming on Heterogeneous Architectures. In *27th IEEE International Parallel & Distributed Processing Symposium (IPDPS)*, May 2013.
- [24] Marie Durand, Bruno Raffin, and François Faure. A Packed Memory Array to Keep Moving Particles Sorted. In *9th Workshop on Virtual Reality Interaction and Physical Simulation (VRIPHYS)*, December 2012.
- [25] Ken ichi Baba, Julien Cisonni, Yasuo Ebara, Paulo Gonzales, Xavier Grandchamp, Takuma Kawamura, Kohji Koyamada, Kazunori Nozaki, Hiroyuki Ohsaki, Xavier Pelorson, Pascale Primet, Bruno Raffin, Eisaku Sakane, Naohisa Sakamoto, Shinji Shimojo, and Annemie Van Hirtum. Petaflow : a project towards information and communication technologies in society. In *First Workshop on High Speed Network and Computing Environments for Scientific Applications (in conjunction with SAINT 2010)*, July 2010.
- [26] Marc Tchiboukdjian, Vincent Danjean, Thierry Gautier, Fabien Le Mentec, and Bruno Raffin. A Work Stealing Algorithm for Parallel Loops on Shared Cache Multicores. In *4th Workshop on Highly Parallel Processing on a Chip (HPPC)*, August 2010.
- [27] Everton Hermann, Bruno Raffin, François Faure, Thierry Gautier, and Jérémie Allard. Multi-GPU and Multi-CPU Parallelization for Interactive Physics Simulations. In *Europar 2010*, September 2010.
- [28] Benjamin Petit, Thomas Dupeux, Benoit Bossavit, Joefrey Legaux, Bruno Raffin, Emmanuel Melin, Jean-Sébastien Franco, Ingo Assenmacher, and Edmond Boyer. A 3D Data Intensive Tele-immersive Grid. In *ACM Multimedia (ACMM'10)*. ACM, October 2010.
- [29] Vincent Danjean Marc tchiboukdjian and Bruno Raffin. Cache-Efficient Parallel Isosurface Extraction. In *Eurographics 2010 Symposium on Parallel Graphics and Visualization (EGPGV'10)*. Eurographics, May 2010.
- [30] Ingo Assenmacher and Bruno Raffin. Short paper : A Modular Framework for Distributed VR Interaction Processing. In *Joint Virtual Reality Conference of EGVE - ICAT - EuroVR (JVRC'09)*. Eurographics, December 2009.

- [31] Benjamin Petit, Jean-Denis Lesage, Edmond Boyer, and Bruno Raffin. Virtualization Gate. In *Proceedings of ACM SIGGRAPH 09*, page 1, New York, NY, USA, August 2009. ACM. Emmerging Technologies : Juried demonstration associated with 1 page included in the proceedings.
- [32] Everton Hermann, Bruno Raffin, and François Faure. Interactive Physical Simulation on Multicore Architectures. In *Eurographics 2009 Symposium on Parallel Graphics and Visualization (EGPGV'09)*, pages 1–8, Munich, Germany, March 2009.
- [33] Benjamin Petit, Jean-Denis Lesage, Edmond Boyer, Jean-Sébastien Franco, and Bruno Raffin. Remote and Collaborative 3D Interactions. In *Proceedings of the 3DTV Conference (3DTV-CON 2009)*, pages 1–4, May 2009.
- [34] B. Petit, J.-D. Lesage, J.-S. Franco, E. Boyer, and B. raffin. Grimage : 3D Modeling for Remote Collaboration and Telepresence. In *15th ACM Symposium on Virtual Reality Software and Technology (VRST08)*, pages 299–300, Bordeaux, France, October 2008. Juried demonstration associated with 2 pages included in the proceedings.
- [35] Everton Hermann, François Faure, and Bruno Raffin. Ray-traced Collision Detection for Deformable Bodies. In *3rd International Conference on Computer Graphics Theory and Applications (GRAPP)*, pages 293–299, Madeira, Portugal, January 2008.
- [36] Jean-Denis Lesage and Bruno Raffin. High Performance Interactive Computing with FlowVR. In *IEEE VR 2008 SEARIS workshop*, pages 13–16, Reno, USA, March 2008. Shaker Verlag.
- [37] Jean-Denis Lesage and Bruno Raffin. A Hierarchical Programming Model for Large Parallel Interactive Applications. In *IFIP International Conference on Network and Parallel Computing*, volume 4672 of *Lecture Notes in Computer Science*, pages 516–525, Dalian, China, September 2007. Springer. Excellent Student Paper Award.
- [38] Jérémie Allard, Clément Ménier, Bruno Raffin, Edmond Boyer, and François Faure. Grimage : Markerless 3D Interactions. In *Proceedings of ACM SIGGRAPH 07*, pages 9–12, San Diego, USA, August 2007. Emmerging Technologies : Juried demonstration associated with 2 pages included in the proceedings. Selection rate : 23 out of 75 submissions.
- [39] Luciano P. Soares, Clément Ménier, Bruno Raffin, and Jean-Louis Roch. Work Stealing for Time-constrained Octree Exploration : Application to Real-time 3D Modeling. In *Eurographics 2008 Symposium on Parallel Graphics and Visualization (EGPGV'08)*, pages 273–274, Lugano, Switzerland, May 2007.
- [40] Luciano P. Soares, Clément Ménier, Bruno Raffin, and Jean-Louis Roch. Parallel Adaptive Octree Carving for Real-time 3D Modeling. In *IEEE Virtual Reality Conference*, Charlotte, USA, March 2007. Poster.
- [41] Clément Ménier, Edmond Boyer, and Bruno Raffin. 3D Skeleton-Based Body Pose Recovery. In *International Symposium on 3D Data Processing, Visualization and Transmission (3DPVT'06)*, pages 389–396, Chapel Hill, USA, June 2006.
- [42] Van-Dat Cung, Jean-Guillaume Dumas, Thierry Gautier, Guillaume Huard, Bruno Raffin, Christophe Rapine, Jean-Louis Roch, and Denis Trystram. Adaptive algorithms : theory and application. In *SIAM Parallel Processing 2006, Mini-Symposium MS1 : Adaptive algorithms for scientific computing*, pages 49–50, San Francisco, USA, February 2006.
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11 Languages

- **French** : mother tongue
- **English** : fluent
- **Spanish** : fluent