

Luciana Porcher Nedel

Curriculum Vitae with selected publications (march 2009)

Personal Information

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Current position Assistant professor since July, 2002.

Education

- 1995 - 1998** Doctoral Studies in Computer Science (Graphics).
Ecole Polytechnique Federale de Lausanne, EPFL, Switzerland
Title: Anatomic Modeling of Human Bodies Using Physically-Based Muscle Simulation
Advisor: Daniel Thalmann
- 1996 - 1997** Postgraduate Studies in Computer Science (Virtual Reality)
Ecole Polytechnique Federale de Lausanne, EPFL, Switzerland
Title: A Proposal for a New Human Template with Interactive Muscles Animation
Advisors: Daniel Thalmann and Ronan Boulic
- 1990 - 1993** Master Studies in Computer Science (Graphics).
Universidade Federal do Rio Grande do Sul, UFRGS, Porto Alegre, Brazil
Title: Simulation of Deformable Objects Based on Dynamic Analysis
Advisor: Flvio Rech Wagner
- 1985 - 1989** Undergraduate Studies in Computer Science.
Pontifcia Universidade Catlica do Rio Grande do Sul, PUC RS, Porto Alegre, Brazil

Scientific Activities

Program Committee Member

- ACM VRCAI (ACM SIGGRAPH International Conference on Virtual-Reality Continuum and its Applications in Industry) (2008)
- CGI (Computer Graphics International) (2008)
- CASA (Computer Animation and Social Agents) (2009, 2007, 2006, 2005, 2004, 2003)
- ICINCO (International Conference on Informatics in Control, Automation and Robotics) (2009, 2008, 2007)
- Mixer 2004 (Workshop on Mixed Reality)

- Richmedia 2003
- SIBGRAPI (2009, 2008, 2006, 2005, 2004, 2003)
- SVR (SBC Symposium on Virtual Reality) (2009, 2008, 2007, 2006, 2004, 2003, 2002, 2001, 2000)
- IFIP INTERACT 2009
- Cyberworlds (2009, 2008)
- SBC Workshop on Medical Informatics (WIM) (2009)

Co-organizer of CGI 2007

Co-chair of SIBGRAPI 2003 tutorials and SIBGRAPI 2009 video festival

Co-chair of WRV 2000 Program Committee

Reviewer Service

- Journals: Computer Graphics Forum, Virtual Reality (Springer), The Visual Computer (Springer), IEEE Computer Graphics and Applications, Journal of Computer-Aided Civil and Infrastructure Engineering (CACIAE), Computer Animation and Virtual Worlds (Willey), Revista de Informática Teórica e Aplicada (RITA)
- Conferences: Eurographics, IEEE Visualization, IEEE VR
- Funding Agencies: CNPq, FINEP, FAPERGS

Member of Editorial Board

The Visual Computer (Springer) – since 2009

Languages

Fluent in English, French and Portuguese (native language)

Awarded Prizes

2007	Best paper award in VIII Workshop on Medical Informatics (WIM), sponsored by the Brazilian Computing Society, with the paper <i>MedicalStudio: a medical component-based framework</i>
2006	Best paper award in SVR, VIII Symposium on Virtual Reality (SVR), sponsored by the Brazilian Computing Society, with the paper <i>EyeScope: A 3D Interaction Technique for Accurate Object Selection in Immersive Environments</i>
2006	Best paper (second place) award in SVR, VIII Symposium on Virtual Reality (SVR), sponsored by the Brazilian Computing Society, with the paper <i>Electronic Handlebar: A new home-brewed input device for three-dimensional navigation</i>
1998	Young Researcher Award bestowed in CGI'98 (Computer Graphics International Conference), CGS - Computer Graphics Society
1993	XII CTD – Twelfth Thesis and Dissertation Contest, sponsored by the Brazilian Computing Society, Master Science Thesis called "Simulation of Deformable Objects Based on Dynamic Analysis", September 1993

Publications

Journal Papers

1. Dietrich, Carlos A., Scheidegger, Carlos E., Nedel, Luciana P., COMBA, João L.D., Silva, Cláudio T. *Marching Cubes without Skinny Triangles*. *Computing in Science & Engineering*, March/April 2009, v. 11, n. 2. p. 82 - 87, 2009.

2. DIETRICH, Carlos Augusto, SCHEIDEGGER, Carlos, COMBA, João L.D., NEDEL, Luciana P., SILVA, Cláudio T. 2008. Edge Groups: An Approach to Understanding the Mesh Quality of Marching Methods In: *IEEE Transactions on Visualization and Computer Graphics*, v.15, p.150 - 159, 2009
3. DIETRICH, Carlos Augusto, SCHEIDEGGER, Carlos, SCHREINER, John, COMBA, João L.D., NEDEL, Luciana P., SILVA, Cláudio T. 2008. Edge Transformations for Improving Mesh Quality of Marching Cubes In: *IEEE Transactions on Visualization and Computer Graphics*, v.14, p.1651 - 1666, 2008
4. SILVEIRA, Renato, PRESTES, Edson, NEDEL, Luciana P. Managing coherent groups. In: *Computer Animation and Virtual Worlds*, v.19, p.295 - 305, 2008.
5. OLSZEWSKI, Raphael, VILLAMIL, Marta Becker, TREVISAN, Daniela Gorski, NEDEL, L. P., FREITAS, Carla M.D.S., REYCHLER, Hervé, MACQ, Benoit. 2008. Towards an integrated system for planning and assisting maxillofacial orthognathic surgery In: *Computer Methods and Programs in Biomedicine*, v.91, 13-21
6. DUBOIS, Emmanuel, NEDEL, L. P., FREITAS, Carla M.D.S., JACON, Liliane. 2005. Beyond user experimentation: notational-based systematic evaluation of interaction techniques in virtual reality environments In: *Virtual Reality (Waltham Cross)*, v.8, 118-128
7. ZANCHET, Dinamar José, MONTERO, Edna Frasson de Souza, SILVA, Ana Maria Marques da, DIETRICH, Carlos Augusto, NEDEL, L. P. 2005. Personal Computer Software Evaluation in Interactive Generation of Pig Liver Three-Dimensional Anatomical Images In: *Transplantation Proceedings*, v.37, 198-200
8. TORRES, Jorge Alberto Rangel, NEDEL, L. P. 2002. A Proposal of a multi-level architecture for animation of synthetic actors with cognitive reasoning In: *Scientia (Unisinos)*, v.13, 13-23
9. NEDEL, L. P., THALMANN, D. 2000. Anatomical modeling of deformable human bodies. In: *The Visual Computer*, v.16, 306-321

Book Chapters

1. TREVISAN, Daniela Gorski, Nicolas, V., MACQ, Benoit, NEDEL, L. P. 2008. A medical Component-based Framework for Image Guided Surgery In: *Multimodal User Interfaces From Signals to Interaction*, edited by Dimitrios Tzovaras. e ed 1. Vol. 1, 271-280. Berlin: Springer
2. DIETRICH, Carlos Augusto, NEDEL, L. P., COMBA, João L.D. 2008. A Sketch-based Interface to Real-Time Strategy Games based on a Cellular Automaton In: *Game Programming Gems 7*, edited by Scott Jacobs, 59-67. Boston: Charles River Media
3. PAMPLONA, V. F., OLIVEIRA NETO, Manuel Menezes de, NEDEL, L. P. 2008. Animating Relief Impostors using Radial Basis Functions Textures In: *Game Programming Gems 7*, edited by Scott Jacobs, 401-412. Boston: Charles River Media
4. DIETRICH, Carlos Augusto, NEDEL, L. P., COMBA, João L.D. 2008. Fast Tessellation of Quadrilateral Patches on GPU for Dynamic Level of Details (to appear) In: *ShaderX7 - Advanced Rendering Techniques*, edited by William H. de Boer; Sebastien St-Laurent; Wolfgang Engel; Matthias Wloka; Natasha Tatarchuk; Kenneth Hurley; Christopher Oat; Wessam Bahnassi; Carsten Dachsbacher. e ed 1. Vol. 1, 1-10
5. FARIAS, M. A., TREVISAN, Daniela Gorski, NEDEL, L. P. 2008. Foot Navigation Technique for First Person Shooting Games In: *Game Programming Gems 7*, edited by Scott Jacobs, 69-79. Boston: Charles River Media
6. DIETRICH, Carlos Augusto, COMBA, João L.D., NEDEL, L. P. 2006. Storing and Accessing Topology on the GPU: A Case Study on Mass-Spring Systems In: *ShaderX 5 - Advanced Rendering Techniques*, edited by Wolfgang Engel. e ed 1. Vol. 1, 565-577. Boston: Charles River Media
7. NEDEL, L. P., FREITAS, Carla M.D.S. 2006. 3D User Interfaces: from Pragmatics to Formal Description In: *Research in Interactive Design*, edited by X. Fischer and D. Coutellier. Vol. 1, 1-13. Paris: Springer-Verlag

8. BOULIC, R., FUA, P., HERDA, L., SILAGHI, M., MONZANI, J. S., NEDEL, L. P., THALMANN, D. 1998. *An Anatomic Human Body for Motion Capture In Technologies for the Information Society: Developments and Opportunities*, edited by Jean-Yves Roger; Brian Stanford-Smith; Paul T. Kidd. ed 1, 652-659. Amsterdam: IOS Press

Selected Conference Papers

1. TREVISAN, Daniela Gorski, NEDEL, L. P., MACQ, Benoit. 2008. *Augmented Vision for Medical Applications In: Proceedings of the 2008 ACM Symposium on Applied Computing, Volume II: Information Systems & Applications ACM Symposium on Applied Computing Fortaleza 2008 1 1415-1419* New York: ACM

2. SILVEIRA, Renato, PRESTES, Edson, NEDEL, L. P. 2008. *High-Level Path Specification and Group Control for Virtual Characters in Interactive Virtual Environments In: Proceedings of Computer Graphics International CGI - Computer Graphics International Istanbul 2008 1 100-107* Geneva: Computer Graphics Society

3. PAMPLONA, V. F., Fernandes, Leandro F., PRAUCHNER, João Luis, NEDEL, L. P., OLIVEIRA NETO, Manuel Menezes de *The Image-Based Data Glove In: SVR - Symposium on Virtual and Augmented Reality, 2008, João Pessoa. Proceedings of the X Symposium on Virtual and Augmented Reality. Porto Alegre: SBC, 2008. v.1. p.204 – 211*

4. FREITAS, Carla M.D.S., NEDEL, L. P., Galante, Renata, LAMB, Luís da Cunha, André Spritzer, Fujii, Sérgio, Oliveira, José P.M., Ricardo Araújo, Moro, Mirella M. *Extração de Conhecimento e Análise Visual de Redes Sociais In: SEMISH 2008 - CONGRESSO DA SOCIEDADE BRASILEIRA DE COMPUTAÇÃO, 2008, Belém. Anais do Congresso da Sociedade Brasileira de Computação - 2008. Porto Alegre: SBC, 2008.*

5. Reinaldo, Gelson, Maule, Marilena, Zacarias, Márcio, MACIEL, A., FREITAS, Carla M.D.S., NEDEL, L. P. *A Dynamic Multi-display System Approach In: SVR - Symposium on Virtual and Augmented Reality, 2008, João Pessoa. Proceedings of the X Symposium on Virtual and Augmented Reality. Porto Alegre: SBC, 2008. v.1. p.133 - 136*

6. UGHINI, Cléber, NEDEL, L. P. 2007. *Adaptable Deterministic Roadmaps for Motion Planning of Bodies with many DOFs In: Proceedings of the 20th International Conference on Computer Animation and Social Agents Computer Animation and Social Agents (CASA) Hasselt 2007 1 19-26* Hasselt: Hasselt University

7. VILLAMIL, Marta Becker, NEDEL, L. P., FREITAS, Carla M.D.S., MACQ, Benoit. 2007. *An Anatomy-based Approach to Simulate the Temporomandibular Joint Movement In: Proceedings of the 20th International Conference on Computer Animation and Social Agents Computer Animation and Social Agents (CASA) Hasselt 2007 1 41-47* Hasselt: Hasselt University

8. DAPPER, Fábio, PRESTES, Edson, NEDEL, L. P. 2007. *Generating Steering Behaviors for Virtual Humanoids using BVP Control In: Proceedings of Computer Graphics International 2007 Computer Graphics International Petrópolis 2007 1 105-114* Porto Alegre: Sociedade Brasileira de Computação

9. HUFF, Rafael, DIETRICH, Carlos Augusto, NEDEL, L. P., FREITAS, Carla M.D.S., COMBA, João L.D., OLABARRIAGA, Silvia Delgado. 2006. *Erasing, Digging and Clipping in Volumetric Datasets with One or Two Hands In: VRCIA 2006 - ACM International Conference on Virtual Reality Continuum and its Applications VRCIA - ACM International Conference on Virtual Reality Continuum and its Applications Hong Kong 2006 1 271-278* New York: ACM SIGGRAPH

10. NAVARRE, David, PALANQUE, Philippe, BASTIDE, Rémi, SCHYN, Amélie, WINCKLER, Marco, NEDEL, L. P., FREITAS, Carla M.D.S. 2005. *A Formal Description of Multimodal Interaction Techniques for Immersive Virtual Reality Applications In: Human-Computer Interaction - INTERACT 2005: IFIP TC13 International Conference, Rome, Italy, September 12-16, 2005. Proceedings INTERACT 2005 - Tenth IFIP TC13 International Conference on Human-Computer Interaction Roma 2005 3585 170-183* Springer-Verlag GmbH

11. TORRES, Jorge Alberto Rangel, NEDEL, L. P., BORDINI, Rafael H. 2004. *Autonomous Agents with*

Multiple Foci of Attention in Virtual Environments In: CASA 2004 Conference Proceedings Computer Animation and Social Agents Geneva 2004 1 189-196 Geneva, Switzerland: Computer Graphics Society

12. DIETRICH, Carlos Augusto, NEDEL, L. P., OLABARRIAGA, Silvia Delgado, COMBA, João L.D., ZANCHET, Dinamar José, SILVA, Ana Maria Marques da, MONTERO, Edna Frasson de Souza. 2004. Real-time interactive visualization and manipulation of the volumetric data using GPU-based methods In: *Progress in Biomedical Optics and Imaging SPIE Medical Imaging 2004 - Visualization, Image-Guided Procedures, and Display San Diego 2004 5 181-192 Bellingham, Washington, USA: SPIE - The International Society for Optical Engineering*

13. NEDEL, L. P., FREITAS, Carla M.D.S., JACOB, L. J., PIMENTA, Marcelo. 2003. Testing the Use of Egocentric Interactive Techniques in Immersive Virtual Environments In: *Human-Computer Interaction: INTERACT'03 INTERACT 2003 - Ninth IFIP TC13 International Conference on Human-Computer Interaction Zurich 2003 471-478 Amsterdam: IOS Press*

14. MACIEL, A., NEDEL, L. P., FREITAS, Carla M.D.S. 2002. Anatomy Based Joint Models for Virtual Humans Skeletons In: *Proceedings of Computer Animation International Conference on Computer Animation Geneva 2002 220-224 Los Alamitos, CA: IEEE Computer Society*