

Louaï ADHAMI

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CHIR Medical Robotics Group
INRIA, Unité de Sophia Antipolis
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06902 Sophia Antipolis, Cedex
FRANCE

Born 30/10/1974
Lebanese Nationality
Married

Education **PhD in Real-time systems, Robotics and Control** **1999-2002**
École des Mines de Paris - performed at INRIA. Sophia Antipolis, France.
Thesis: “An Architecture for Computer Integrated Mini-Invasive Robotic Surgery: Focus on Optimal Planning”, *with distinction*.
DEA in Robotics, Control, Vision, Image & Systems **1998-1999**
École Supérieure en Sciences Informatiques. Sophia Antipolis, France.
Master of Engineering in Electronics, Devices & Systems **1996-1998**
American University of Beirut. Beirut, Lebanon.
Thesis: “Robot-bone registration for orthopedic medical interventions”.
Bachelor of Engineering in Computer & Communications **1992-1996**
American University of Beirut. Beirut, Lebanon.

Professional Experience **Industrial Postdoc at the ChIR Medical robotics group** **2002-2003**
INRIA Sophia Antipolis, France.
Research assistant in robotics **1997-1998**
American University of Beirut. Beirut, Lebanon.
Teaching assistant in computer engineering **1996-1997**
American University of Beirut. Beirut, Lebanon.
Technical engineer on X-ray machines **Summer 1995**
Electronic and Medical Equipment Inc. Beirut, Lebanon.

Teaching Experience **Participated in Graduate courses in Robotics and CIS.** **2001-2003**
École Supérieure en Sciences Informatiques. Sophia Antipolis, France.
Lab instructor **1996-1997**
"Communication Systems Lab", "Micro-processor Lab" and "Numerical Analysis Lab": 12 hours/week.
Volunteer courses in Group dynamics and leadership **1995-1998**
Lebanese Red Cross. Lebanon.

Languages **Arabic:** mother tongue
English: fluent (TOEFL 643 in 1996)
French: fluent (French school system)

Computer Skills **Environments:** Unix (Linux, Solaris and IRIX), Microsoft Windows.
Languages: C/C++ (GNU and MS Visual C++), Matlab, scripts (zsh, sh,...), Maple, Fortran, Basic, Assembler ... XML, UML, PHP (basics)
Libraries: OpenGL, LAPACK, FLTK ...
Databases: MySQL (basics), MS Access

Extra Member of the Lebanese Red Cross:
Circular First aid teams (1994-1997): Member, team leader and ambulance driver
activities Youth (1992-1998): Member, President (AUB club 1996) and trainer
(groups dynamics and children activities)

References **Dr. Ève Coste-Manière** (PhD advisor & research supervisor)
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Dr. Karim Abdel-Malek (Master advisor & research supervisor)
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Dr. Kenneth Salisbury (PhD examiner)
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Publications

Journals

- L. Adhami and È. Coste-Manière. *Optimal planning for minimally invasive surgical robots*. IEEE Transactions on Robotics and Automation: Special Issue on Medical Robotics, (in press) 2003.
- È. Coste-Manière, L. Adhami, F. Mourgues, O. Bantiche, D. Le, D. Daunt, N. Swarup, K. Salisbury, and G. Guthart. *Optimal planning of robotically assisted heart surgery: Transfer precision in the operating room*. International Journal of Robotics Research, In revision.
- È. Coste-Manière, L. Adhami, R. Severac-Bastide, J.-D. Boissonnat, and A. Carpentier. *Plannification et simulation de chirurgie mini-invasive robotisée*. Comptes rendus de l'académie des sciences 325(4), 2002.
- L. Adhami and K. Adbel-Malek. *A partial surface/volume match for high accuracy object localization*. Machine GRAPHICS and VISION 10(2), 2001.

Journals (medical)

- È. Coste-Manière, L. Adhami, F. Mourgues, and A. Carpentier. *Planning, simulation, and augmented reality for robotic cardiac procedures: The stars system of the chir team*. Seminars in Thoracic and Cardiovascular Surgery, 15(2), April 2003.
- È. Coste-Manière, L. Adhami, P. Antiphon, and Abbou C.C. *Preparedness in robotically assisted interventions*. Current Urology Reports, 4(2):101-108, April 2003.

Patent

È. Coste-Manière, L. Adhami, J.-D. Boissonnat, A. Carpentier, and G. Guthart. *U.S. provisional patent application 60/296808: Methods and apparatus for planning robotic surgery*, 2002.

Conferences (peer reviewed)

- L. Adhami and È. Coste-Manière. *A versatile system for computer integrated mini-invasive robotic surgery*. In Medical Image Computing and Computer Assisted Intervention (MICCAI'02), Tokyo, Japan, Oct. 2002.
- È. Coste-Manière, L. Adhami, F. Mourgues, O. Bantiche, and etal. *Optimal planning of robotically assisted heart surgery: Transfer precision in the operating room*. In

Lecture Notes in Control and Information Sciences, Experimental Robotics VIII, 2002.

- È. Coste-Manière, L. Adhami, D. Bondyfalat, and G. Doweck. *Formal methods for safe integration in medical robotics*. In Proc of 2nd IARP/IEEE RAS joint workshop on Technical Challenge for Dependable Robots in Human Environments, pages 236-241, Toulouse, France, October 2002.
- L. Adhami, D. Bondyfalat, G. Doweck, and È. Coste-Manière. *Formal verification to enforce the safety of robotically assisted surgical interventions*. In Surgetica CAS, pages 90-96, Grenoble, France, September 2002.
- L. Adhami and È. Coste-Manière. *Positioning tele-operated surgical robots for collision-free optimal operation*. In Proc. of the 2002 IEEE International Conference on Robotics and Automation, May 2002.
- L. Adhami and È. Coste-Manière. *Planification et simulation de chirurgie mini-invasive utilisant des robots télé-opérés*. In Journées nationales de la recherche en robotique (JJCR'15), Strasbourg, France, Feb. 2002.
- È. Coste-Manière, L. Adhami, R. Severac-Bastide, K. Lobontiu, Adrian Salisbury, J.-D. Boissonnat, N. Swarup, G. Guthart, É. Mousseaux, and A. Carpentier. *Optimized port placement for the totally endoscopic coronary artery bypass grafting using the da Vinci robotic system*. In Lecture Notes in Control and Information Sciences, Experimental Robotics VII, volume 271. Springer, 2001.
- L. Adhami, È. Coste-Manière, and J.-D. Boissonnat. *Planning and simulation of robotically assisted minimal invasive surgery*. In Proc. Medical Image Computing and Computer Assisted Intervention (MICCAI'00), volume 1935 of Lect. Notes in Comp. Sc. 1954. Springer, Oct. 2000.
- K. Abdel-Malek, D. McGowan, and L. Adhami. *Partial surface matching for high accuracy registration*. In Proc. of the 4th Computer Assisted Orthopaedic Surgery (CAOS), Davos, Switzerland, March 1999.

Workshop

L. Adhami, È. Coste-Manière, and J.-D. Boissonnat. *Planning and simulation of minimally invasive surgery using tele-operated manipulators*. In Workshop on Medical Robotics, 10th International Conference on Advanced Robotics, Budapest, Hungary, August 2001.