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Department of Computer Science  
Stanford University, Stanford, California 94305

## Education

Ph.D. (Automatique et Système), Sup'Aero, Toulouse, France, 1980.  
Diplôme de Spécialisation (Automatique Avancée), Sup'Aero, Toulouse, France, 1976.  
M.S. (Électronique, Électrotechnique et Automatique), Université de Montpellier, 1974.  
B.S. (Science) Université de Montpellier, France, 1972.

## Experience

Professor (2000–present) of Computer Science and (*by courtesy*) Mechanical Engineering, Stanford University.  
Associate Professor (1990–1999) of Computer Science and (*by courtesy*) Mechanical Engineering, Stanford University.  
Director, The Stanford Computer Forum (1997–1999), Stanford University.  
Visiting Professor: The National University of Singapore (1997,2002,2005,2009); EPFL, Lausanne, Switzerland (1996); Paris VI, France (1994,2009); Scuola Superiore S. Anna, Pisa, Italy (1992,2007).  
Senior/Research Associate (1981–1989), Computer Science Department, Stanford University.

## Professional Activities

President IFRR, International Foundation of Robotics Research (2001, present).  
Co-Chair, Scientific Board, IEEE-RAS/IFRR School of Robotics Science (2004, present).  
Co-Editor, Handbook of Robotics, Springer  
Springer Tracts in Advanced Robotics, STAR (2002–present)  
The Robotics Review 1 and 2, Cambridge: MIT Press (1988-1990).  
Editorial Board, IJRR, International Journal of Robotics Research (2003–present)  
Journal of Advanced Robotics (2003–present)  
International Advisory Board, IJSR International Journal of Social Robotics (2009–present)  
Advisory Board, IJHR International Journal of Humanoid Robotics (2003–present)  
International Journal of Autonomous Robotics (2003–present)  
JSME, Japan Society of Mechanical Engineers Journal (1990–1993)  
AdCom Elected Member, IEEE Robotics and Automation Society (1998-2000),(2001-03), and (2011-2014)

IEEE RAS Representative, IEEE-TAB New Technology Directions Committee (2001-03)  
 Steering Committee, IAB Board, IEEE Robotics and Automation (2005-2007)  
 Academic Advisory Board, Asian Institute of Technology, AIT (2001-2005)  
 Scientific Advisory Board, B-IT, Bonn Int. Center for Information Technology (2004-present)  
 Scientific Advisory Board, Italian Institute of Technology, IIT (2007-present)  
 Scientific Board, Biorobotics Science and Engineering, IMT, Lucca, Italy  
 Chair of Steering Committee, ISER, Int. Symposium of Experimental Robotics, (1989–present).  
 Conference Advisory Boards, ICRAM, IAT, WEC, IROS, ITM, ISIM, HNICEM.  
 Conference Steering Committee, ICAR, Advanced Robotics (1989–present). ICMT, Int. Conf.  
 Mechatronics Technology (2002–present).  
 Program Chair, ICRA 2000, IEEE International Conference on Robotics and Automation;  
 ISER, Int. Symp. Experimental Robotics, 1st Montreal 1989; 4th Stanford 1995; 9th Singa-  
 pore 2004, 10th Rio de Janeiro 2006, 11th Athens 2008, 12th New Delhi/Agra 2010, 13th  
 Quebec City 2012;  
 General Chair IROS 2011, IEEE/RSJ Int. Conf. Intelligent Robots and Systems, San Francisco;  
 The Sixth IARP-IEEE/RAS-EURON Joint Workshop on Technical Challenges for Depend-  
 able Robots in Human Environments, Pasadena, California 2008  
 General Co-Chair IROS 2007, IEEE/RSJ Int. Conf. Intelligent Robots and Systems, San Diego  
 BioRob 2008, IEEE/RAS-EMBS International Conference on Biomedical Robotics and  
 Biomechanics, Scottsdale, Arizona, ISRR, International Symp. Robotics Research, Flagstaff,  
 Arizona 2011, RoManSy 2012, Paris.  
 Program Chair, ICRA 2000, IEEE International Conference on Robotics and Automation;  
 ISER, Int. Symp. Experimental Robotics, 1st Montreal 1989; 4th Stanford 1995; 9th Singa-  
 pore 2004, 10th Rio de Janeiro 2006, 11th Athens 2008, Twelfth New Delhi/Agra 2010  
 Program Co-Chair, IROS'95, Int. Conf. Intelligent Robots and Systems, Pittsburgh 1995, Ninth  
 ISER, ISIM2000, International Symposium on Mechatronics, Kyungnam, Korea 2000; Int.  
 Symp. Experimental Robotics, Singapore 2004; Tenth ISER, Int. Symp. Experimental  
 Robotics, Rio de Janeiro 2006; Eleventh ISER, Int. Symp. Experimental Robotics, Athens  
 2008; ACIAR, Asian Conf. Industrial Robotics and Automation, Bangkok (1999-present);  
 IROS 2007, Int. Conf. Intelligent Robots and Systems, San Diego.  
 IEEE-RAS Pioneer Awards Chair, 2007  
 Award Chair: BioRob 2006, Pisa, Italy  
 Award Chair: IEEE-RAS Robotics and Automation, ICRA 2007, Rome, Italy  
 Technical Committee, IEEE Robot Dynamics and Control, Chair (1990-94); IFToMM Robots  
 and Manipulators; IFToMM Robots and Mechatronics; IFAC RobTeC, IEEE-RAS Mobile  
 Manipulation, IEEE-RAS Haptics.  
 Program Committees: IROS, IEEE/RSJ Int. Conf. Intelligent (1991–present); ISER, Int. Symp.  
 Experimental Robotics (1989–present); ARK, Advances in Robot Kinematics (1988–present); ICAR  
 Conference, Advanced Robotics (1989–present); Ro.Man.Sy Symp. Robots and Manipulators (1992–  
 present); ISRAM, Symp. Robotics and Manufacturing (1994–present); FSR, Int. Conf. Field  
 and Service Robotics (1997-present) SY.RO.CO. IFAC Symposium (1994–present); ICRAM Conf.  
 Advances in Mechatronics (1995-present); ISIR Symp. Intelligent Robotics (1991/'92); IEEE Int.

Conf. Robotics and Automation (1991/'92/'95/'96/2001); Japan-USA Symp. Flexible Automation (1992/'96/'97); IASTED Int. Conf. Robotics and Manufacturing (1995/'97/'98); Int. Workshop on Advanced Motion Control (1986); I-SAIRAS Symp. Space Robotics (1992); IASTED Int. Conf. Robotics and Applications (1999); BASYS'96 Architectures and Design Methods; Mechatronics'98, 6th UK Int. Conference; IAT'99, 1st Asia-Pacific Conference on Intelligent Agent Technology; ICORR'99, International Conference on Rehabilitation Robotics. MAS'99 Multi-Agent Systems in Production; INES'99 3rd IEEE Int. Conf. Intelligent Engineering Systems; ISRA 2000, International Symposium on Robotics and Automation; ISR 2000, International Symposium on Robotics; IAM 2001, Intelligent Automated Manufacturing; M2VIP 2001 Mechatronics and Machine Vision; AMC'02, 7th International Workshop on Advanced Motion Control; SICE 2003, Society of Instrument and Control Engineers Annual Conference.

Video Proceeding Committees IEEE Int. Conf. Robotics & Automation,(1991–1999); ISER, Int. Symp. Experimental Robotics, (1989–present).

## Honors and Awards

IEEE Robotics and Automation Pioneering Award, for fundamental pioneering contributions in robotics research, visionary leadership, and life-long commitment to the field in 2010.

Jury, BBVA Foundation Frontiers of Knowledge Award in the Information and Communication Technologies, 2009-present

PROSE Awards for Excellence in Physical Sciences & Mathematics, and for Engineering & Technology, Springer Handbook of Robotics, American Association of Publishers, 2009.

IEEE-RAS Pioneer Awards Chair, 2007

Awards Chair, IEEE-RAS ICRA2007, Rome, Italy, 2007

Awards Chair, BioRob2006, Pisa, Italy, 2006

Honorary Chair, ICMT, Mexico 2006

Consulting Professor, Harbin Institute of Technology, 2006.

Honorary Professor, De La Salle University, Manila, Philippines, 2005.

Honorary Citizen of Budapest Tech, 2004.

IEEE Fellow, 2003.

Honorary Professor, HIT, Harbin, China, 2002.

Distinguished Lecturer, IEEE (1997-2005).

The JARA Award, the 1996 Japan Robot Association Award in Research and Development.

## Keynote and Plenary Presentations

SYROCO 2012, Symposium on Robot Control, Dubrovnik, September 2012

MIS 2012, Multi-scale Intelligent Systems, July 2012

BioRob 2012, Bio-Robotics, Rome, June 2012

MASFOR 2012, 100 Years Anniversary, Bogazici University, Istanbul, June 2012

DEXMART - Advanced Bi-Manual Manipulation, Bled, Slovenia, October 2011

CLAWAR 2011, Climbing and Walking Robots, Paris September 2011

Berlin Summit on Robotics, Berlin Germany, July 2011

Summer School of Impedance, Frauenchiemsee, Germany, July 2011  
 ICAR 2011, International Conference on Advanced Robotics, Tallinn, Estonia, June 2011  
 HNICEM, Manila, Philippines, March 2011  
 Moroccan Engineering Summit, Efran, Morocco, July 2010  
 APSIPA Annual Summit and Conference, Singapore Dec 2010 SIMPAR 2010 International Conference on Simulation, Modeling and Programming for Autonomous Robots. November 15-8, 2010 - Darmstadt, Germany.  
 IEEE Ro-Man, Robot-Human Synergies, Toyama, Japan, Sep 2010  
 Brain, Body, and Machines Lecture Series, the Twenty-Fifth Anniversary of McGill's Center for Intelligent Machines, Montreal, April 2010  
 International Conference on Orthopaedic Surgery, London, UK, June 2010  
 Symposium on Computer Animation, Madrid, Spain, July 2010  
 RAAD, International Workshop on Robotics in Alpe-Adria-Danube Region, Budapest, Hungary June 2010  
 IEEE-RAS/IFRR School of Robotics Science on Social and Cognitive Robotics, Iasi, Romania, July 2010  
 SYROCO 2009, Int. IFAC Symp. Robot Control, Gifu, Japan, Sep 2009  
 Digiteo Forum, Science and Technology of Information, Paris, October 2009  
 Göttingen Science Festival, Göttingen, Germany October 2009  
 Distinguished Lecturer, the 2009-10 Dertouzos Lecture Series, MIT, Boston, Nov 2009  
 Futuro Remoto Science Festival, Napoli, Italy, November 2009  
 HNICEM, Manila, Philippines 2009  
 Budapest Tech Jubilee Conference, Budapest, Hungary September 2009  
 IEEE Int. Conference of Robotics and Automation Science Forum, Kobe, Japan, May 2009  
 IEEE International Symposium on Industrial Electronics, Seoul, Korea, August 2009  
 Dagstuhl Workshop on "Cognition, Control and Learning for Robot Manipulation in Human Environments", Dagstul, Germany, August 2009  
 Robotics At Lincei, Italian Accademia Nazionale dei Lincei, Rome, Italy 2008  
 IARP/IEEE-RAS/Euron Workshop on Robot Dependability, Pasadena, California 2008  
 IEEE/ASME International Conference on Advanced Intelligent Mechatronics, Xian, China 2008  
 18th International Conference on Robotics and Mechatronics'09, Varna, Bulgaria 2008  
 Rensselaer Polytechnic Institute Computer Science Day, Troy, NY, Oct 2007  
 CIM'07 Int. Conf. Control, Johor Baharu, Malaysia, May 2007  
 Journees Nationales de la Robotique Humanoide, Montpellier, France, April 2007  
 IARP/IEEE-RAS/Euron Workshop on Robot Dependability, Rome, Italy, April 2007  
 HNICEM, Manila, Philippines, Feb 2007.  
 ARSO 2006, IEEE Workshop on Advanced Robotics and Social Impact Service Robots, Beijing.  
 ICMT 2006, Int. Conf. Mechatronics Technology, Mexico City, Dec 2006  
 RoManSy'06, CISM-IFTOMM Symp Robot Design, Dynamics & Control, Warsaw, Jun 2006  
 RAAD'06, Int Workshop on Robotics in Alpe-Adria-Danube, Budapest, Hungary June 2006  
 IEEE-RAS International Conference on Robotics and Automation, 2005 Barcelona, Spain  
 ICMT 2005, Int. Conf. Mechatronics Technology, Kuala Lumpur, Dec 2005

ACIAR 2005, Asian Conference on Industrial Automation Robotics, 2005, Bangkok, Thailand  
 Digital Human Workshop 2005, Tokyo, Japan  
 HNICEM, Manila, Philippines, March 2005.  
 KIRW 2004, Korea International Robot Week, Seoul, Korea  
 ICRA 2004, IEEE International Conference on Robotics and Automation, 2005 Barcelona, Spain  
 Budapest Polytechnic Jubilee Convention, 2004, Budapest, Hungary  
 HNICEM, Manila, Philippines, March 2003.  
 RISSP 2003, Robotics, Intelligent Systems and Signal Processing, Changsha, China, 2003.  
 ISCSB 2003 Int. Symposium on Computer Simulation in Biomechanics, 2003.  
 ACIAR 2003 Automation and Robotics, Bangkok, Thailand, 2003.  
 HIS 2002 2nd Int. Conf. Hybrid Intelligent Systems, Santiago, Chile, 2002.  
 RoMoCo 2002 3rd Int. Workshop Robot Motion and Control, Bukowy Dworek, Poland, 2002.  
 ROMAN 2002 11th IEEE Int. W. Robot and Human Interactive Communication, Berlin, 2002.  
 CLAWAR 2002 5th Int. Conf. Climbing and Walking Robots, Paris, 2002.  
 Second IARP/IEEE Workshop on Dependable Robots in Human Environments, Toulouse 2002.  
 WEC 2002 2nd World Engineering Conference, Kuching, Sarawak, Malaysia, 2002.  
 AMT 2001 6th Int. Conf. Active Media Technology, Hong Kong, 2001.  
 SICE 2001 The 40th SICE Annual Conference, Nagoya, Japan, 2001  
 ACRA 2001 Robotics and Mechatronics Congress, Singapore, 2001.  
 ASIAR 2001 Automation and Robotics, Bangkok, Thailand, 2001.  
 ICOM 2001 International Conference on Mechatronics, Kuala Lumpur, Malaysia, 2001  
 ISIM 2000 International Symposium on Mechatronics, Kyungnam, Korea, 2000  
 RoMoCo'99 1st Int. Workshop Robot Motion and Control, Poznan, Poland, 1999  
 INES'99. IEEE International Conference Intelligent Engineering Systems, Slovakia, 1999  
 WEC'99, World Engineering Congress, Kuala Lumpur, Malaysia, 1999  
 ASIAR'99, Automation and Robotics, Bangkok, Thailand, 1999.  
 FSR'97, Field and Service Robotics, Canberra, Australia, 1997  
 ICI&C'97, Informatics and Control, St. Petersburg, Russia, 1997  
 The Annual Christie Lecture, The Johns Hopkins University, 1996  
 Ro.Man.Sy'96, Robots and Manipulators, Udine, Italy, 1996  
 ROVPIA'96, Robotics and Vision, Ipoh, Malaysia, 1996  
 ARK'96, Advances in Kinematics, Portoroz-Bernardin, Slovenia, 1996  
 ICAR'95, Advanced Robotics, Sant Feliu, Spain, 1995  
 IFAC/SY.RO.CO'94, Robot Control, Capri, Italy, 1994  
 The Second Congress on Mechatronics, Takamatsu, Japan 1994  
 ROVPIA'94, Robotics and Vision, Ipoh, Malaysia, 1994  
 The GMA Conference, Langen, Germany, 1993.

## Colloquia and Seminars

Europe and the Mediterranean:

*In France* (Centre d'Etudes et de Recherches de Toulouse; Commissariat à l'Energie Atomique, Paris; Aérospatiale, Paris; Laboratoire de Robotics de Paris, Paris; Imagine, Paris; Cy-

bernetix, Marseilles; PSA Peugeot Citron, Paris; Renault, Paris; INRIA Rocquencourt, Paris; INRIA Rhone-Alpes, Grenoble; INRIA Sophia-Antipolis, Nice, Laboratoire d'Automatique de Montpellier; Laboratoire d'Automatique et d'Analyse des Systèmes, Toulouse; LRP/ISIR Université Paris VI; Matra, Paris; Université Aix-Marseille III, Marseille). *In Germany* (Technical University of Berlin, Technical University of Munich, University of Karlsruhe, University of Duisburg, Daimler Benz, Berlin, University of Hannover, Carl-Cranz-Gesellschaft, Oberpfaffenhofen, Bonn-Rhein-Sieg University of Applied Science, Bonn; DLR, Munich) *In Turkey* (Bogazici University, Istanbul, Istanbul Technical University, Middle East Technical University, Ankara). *In Italy* ( Scuola Superiore S. Anna, Pisa, Tecnomare, Venice, University of Verona, Italian Institute of Technology, Genoa, University of Napoli); In Morocco (Universit Hassan II Casablanca, cole Nationale Suprieure dlectricit et de Mcanique), In Switzerland (EPFL, Lausanne, ETH, Zurich); American University, Cairo, Egypt; University of Leoben, Austria; Institute for Industrial Cybernetic and Robotics, Sofia, Bulgaria.

#### Asia and Australia:

*In China* (Changsha Institute of Technology, Changsha, Harbin Institute of Technology, Harbin) *In Japan* (AIST, Tsukuba;, Fanuc, Oshino-Mura; Fujitsu, Kawasaki; Hiroshima University, Hiroshima; Hitachi Construction Machinery, Tsuchiura; Hitachi Production Engineering Research Laboratory, Yokohama; Honda Wako Research and Development Center, Tokyo; Hong Kong Baptist University, Hong Kong; Industrial Products Research Institute, Tsukuba; Kobe Steel, Kobe; Mechanical Engineering Laboratory, Tsukuba; Mitsui Engineering & Shipbuilding, Tokyo; National University of Singapore; NEC, Nara; Nissan Motor Co., Zama City; Riken, Tokyo; Sony, Tokyo; Tohoku University, Sendai; Toshiba, Kawasaki; Toyota Central R & D Laboratories, Nagoya; Tsukuba University, Tsukuba; Yaskawa, Fukuoka); *In Korea* (Samsung, Seoul; KIST, Seoul; KAIST, Daejeon; Korean Institute for Industrial Technology (KITECH), Seoul); *In Australia* (University of Canberra, Australia; University of Melbourne, Australia; University of Sydney, Australia; University of Western Australia); *In Thailand* (Asian Institute of Technology, Bangkok; Chulalongkorn University, Bangkok; Thammasat University, Bangkok; Prince of Songkla University, Hat Yai) *In Vietnam* (Vietnam National University, Ho Chi Minh City; Hanoi University of Technology; Institute of Mechanics, Vietnam Academy of Sciences, Hanoi); *In Malaysia* (Universiti Teknologi Malaysia, Johor; Universiti Malaya, Kuala Lumpur); Royal University of Phnom Penh, Cambodia, Kathmandu University, Nepal; Regional Science Bureau for Asia & Pacific, UNISCO, Jakarta, Indonesia.

#### In the Americas:

*In the US* (NASA/AMES, Mountain View; Boeing, Seattle; Carnegie Mellon University, General Electric, Schenectady, NY; General Motors, Detroit; Grumman Space Systems, Bethpage; Honda, Mountain View; IBM, Yorktown Heights; JPL, Pasadena; SRI, Menlo Park; Purdue University; Media Lab, MIT; Massachusetts Institute of Technology, Cambridge; NASA, Houston, Pacific Northwest Laboratory, Hanford; Xerox Parc, Palo Alto; Purdue University, West Lafayette; Sandia Laboratories, Albuquerque, New Mexico; The Johns Hopkins University; University of California, Berkeley; University of California, Santa Barbara; University of California, Davis; University of Columbia, New York; University of New York; University of Florida, Gainesville; University of Minnesota, Minneapolis;

University of North Carolina, University of Pennsylvania, Philadelphia; University of Reno; University of Southern California); *In Canada* (University of Toronto; McGill University); Federal University of Rio de Janeiro, Brazil; The Tec de Monterrey, Guadalajara, Jalisco, Mexico.

## Workshop Presentations

HFR'09 Human-Friendly Robotics Workshop, Sestri Levante, Italy December 2008  
Third KAIST-Stanford Joint Workshop on Robotics, Stanford, California, February 2007.  
Workshop on Sciences, Technologies and Applications of Haptics, Paris, September 2006  
Second KAIST-Stanford Joint Workshop on Robotics, Stanford, California, March 2006.  
Workshop on Robot Design, University of Tokyo, Japan, September 2005  
First KAIST-Stanford Joint Workshop on Robotics, Daejeon, Korea, March 2005.  
NASA/NSF Workshop on Autonomous Mobile Manipulation, March 2005  
WTEC NSF Workshop on the U.S Baseline of Robotics, July 2004  
IEEE RAS Educational Robotics, April 2004  
VRAI: Virtual Reality and Active Interfaces, Lausanne, Switzerland, 2003  
CIRA: Control de Systems Robotic for Manipulation and Cooperation, Bertinoro, Italy, 2003  
ICRA'03: Planning and Control of Mobile Manipulators, Taiwan, 2003  
IARP: Biologically Motivated Service Robotics, Jena, Germany 1999  
ICRA'99: Personal Robotics, Detroit 1999.  
Personal Robotics, NSF Workshop, Toulouse, France, 1999.  
Robotics: Emerging Technologies, InterMach'98, Bangkok, Thailand 1998  
Service Robotics, IFR, Milan, Italy, 1997  
Research on Advanced Robotics, RSJ, Tokyo, 1997  
Service Robotics, ICAR'97, Monterey, USA, 1997  
Multi-Robot Cooperation: Current Trends, IROS'97, Grenoble, France, 1997  
Dynamic Simulations, IROS'97, Grenoble, France, 1997  
Autonomous Robotic Systems, ISR, Coimbra, Portugal, 1997  
Research on Advanced Robotics, RSJ, Tokyo, 1997  
The Stanford Mobile Manipulator Platforms, RSJ, Niigata, Japan, 1996  
Information Processing for Intelligent Service Robots, IEEE/ICRA, Minnesota, 1996  
Force and Contact Control in Robotic Operations, IEEE/ICRA, Minnesota, 1996  
Task-Driven Intelligent Robotics, IEEE/ICRA, Nagoya, 1995  
The Role of Physical Models in Robot Planning, WAFR, San Francisco, 1994  
Sensor-Based Robotic Manipulation, IROS, Yokohama, 1993  
A Framework for Multi-Grasp Manipulation, IEEE/WWW, Nagoya, 1993  
Force Control: Historical Perspective and Current Technologies, IEEE/ICRA, Atlanta, 1993  
The Role of Dynamic Control in Contemporary and Tomorrow's Robotics, Udine, 1992  
Critical Issues and Challenges in Robotics and Automation, Toulouse, 1991  
Industrial Robotics Applications (UNIDO), Istanbul, Turkey, August, 1990  
Technical Forum on Flexible Automation, Kyoto, Japan, 1990.

Satellite Services System Working Group, Huntington Beach, California, 1988  
Shared Autonomous and Teleoperated Manipulator Control, Philadelphia, Penn., 1988  
Mars Rover Technology Workshop, JPL, Pasadena, California, 1987  
Object Manipulation in Robot Systems, RESNA, San Jose, California, 1987  
Automatic Robot Programming Workshop, MIT, Cambridge, 1987  
Coordinated Multiple Robot Manipulators Workshop, San Diego, California, 1987.



# PUBLICATIONS

## Books

1. Khatib, V. Kumar, G. J. Pappas: Experimental Robotics, The Eleventh International Symposium, [ISER'08, Athens, Greece], Springer 2009
2. B. Siciliano and O. Khatib: The Handbook of Robotics, Springer, 2008.
3. O. Khatib, V. Kumar, D. Rus: Experimental Robotics, The 10th International Symposium on Experimental Robotics [ISER'06, Rio de Janeiro, Brazil] Springer 2008
4. M. H. Ang Jr., O. Khatib: Experimental Robotics IX, The 9th International Symposium on Experimental Robotics [ISER 2004, Singapore] Springer 2006
5. A. T. de Almeida and O. Khatib: Autonomous Robotic Systems, Springer-Verlag, 1998.
6. O. Khatib, J. K. Salisbury Jr.: Experimental Robotics IV, The 4th International Symposium [ISER'95 Stanford, California, USA], Springer 1997
7. O. Khatib, J. Craig, and T. Lozano-Perez: The Robotics Review 2, MIT Press, 1992.
8. V. Hayward and O. Khatib: Experimental Robotics I, The First International Symposium [ISER'89 Montreal, Canada], Springer-Verlag, 1990.
9. O. Khatib, J. Craig, and T. Lozano-Perez: The Robotics Review 1, MIT Press, 1989.

## Book Contributions

10. E. Demircan, T. Besier, S. Menon, and O. Khatib. Human Motion Reconstruction and Synthesis of Human Skills. In *Advances in Robot Kinematics: Motion in Man and Machine*, Lenarcic, Jadran; Stanisic, Michael M. (Eds.), Springer 2010, pp. 283-292
11. O. Khatib, L. Sentis, and J. Park. A Unified Framework for Whole-Body Humanoid Robot Control with Multiple Constraints and Contacts. In H. Bruyninckx, L. Preucil, and M. Kulich, Eds., *European Robotics Symposium 2008*. Springer Tracts in Advanced Robotics, Vol. 44, Springer 2009, Berlin, Heidelberg, Germany, pp. 303-312
12. D. Shin, I. Sardellitti, Y.-L. Park, O. Khatib, and M. R. Cutkosky. Design and Control of a Bio-inspired Human-Friendly Robot. In O. Khatib, V. Kumar, and G. J. Pappas., Eds., *Experimental Robotics*. Springer Tracts in Advanced Robotics, Vol. 54, Springer 2009, Berlin, Heidelberg, Germany, pp. 43-52.
13. F. Conti, O. Khatib. A new Actuation Approach for Haptic Interface Design, *Experimental Robotics X*, O. Khatib, V. Kumar, D. Rus (Eds.), *STAR, Springer Tracts in Advanced Robotics* 2008.
14. De Sapio V., Warren, J., Khatib, O. Predicting Reaching Postures Using a Kinematically Constrained Shoulder Model. In J. Lenarcic and B. Roth, editors, *Advances in Robot Kinematics*, pp. 209-218. Springer, 2006.
15. V. De Sapio, J. Warren, O. Khatib. Predicting Reaching Postures Using a Kinematically Constrained Shoulder Model. J. Lenarcic and B. Roth, (Eds.), *Advances in Robot Kinematics*, pp. 209-218. Springer, 2006.
16. J. Park and O. Khatib. Robust Haptic Teleoperation of a Mobile Manipulation Platform. *Experimental Robotics IX*, Ang M. and Khatib, O.(Eds.), *STAR Springer Tracts in Advanced Robotics*, (2006) 543-554.

17. Khatib, O., Warren, J., De Sapio, V., and Sentis, L. "Human-Like Motion From Physiologically-Based Potential Energies," On Advances in Robot Kinematics, J. Lenarcic and C. Galletti (Eds.), pp. 149-163, Kluwer Academic Publishers, 2004.
18. Zinn, M., Khatib, O., Roth, B., and Salisbury, K. "Actuations Method for Human-Centered Robotics and Associated Control Challenges," Control Problems in Robotics, A. Bicchi, H. Christensen, and D. Prattichizzo (Eds.), STAR, Springer 2003, pp.105-120.
19. Liu, J. and Khatib, O. "Potential Fields and Neural Networks," The Handbook of Brain, Theory and Neural Networks, Michael A. Arbib (Ed.), 2nd Edition, MIT Press 2002.
20. O. Khatib, O. Brock, K.-S. Chang, F. Conti, D. Ruspini, and L. Sentis. Efficient algorithms for robots with human-like structures and interactive haptic simulation," Advances in Robot Kinematics: Theory and Applications, Eds, Lenarcic, J. and Thomas, F., Kluwer Academic Publishers 2002, pp. 89-98.
21. D. Ruspini and O. Khatib. "Simulation with Contact for Haptic Interaction," *Touch in Virtual Environments*, McLaughlin, M., Hespanha, J.P. and Sukhatme, G.S., Eds., Prentice-Hall, 2001 pp. 32-46.
22. D. Ruspini and O. Khatib. "Haptics for Virtual Prototyping," *Recent Advances in Mechatronics*, O. Kaynak, S. Tosunoglu, M. Ang, Jr, Eds., Springer 1999, pp. 294-303.
23. O. Khatib. "Mobile Manipulator System," *Autonomous Robotic Systems*, A. T. de Almeida and O. Khatib, eds., Springer-Verlag, 1998, pp. 141-148.
24. O. Khatib. "A Unified Approach to Motion and Force Control of Robot Manipulators: The Operational Space Formulation," *Robot Control: Dynamics, Motion Planning and Analysis*, M. W. Spong, F. L. Lewis and C. T. Abdallah, eds. IEEE Press, 1993, pp. 277-287.
25. O. Khatib. "Real-Time Obstacle Avoidance for Manipulators and Mobile Robots," *Autonomous Mobile Robots: Perception, Mapping, and Navigation*, S. S. Iyengar and A. Elfes, eds., IEEE Computer Society Press, 1991, vol. 1, pp. 428-436.
26. O. Khatib. "Real-Time Obstacle Avoidance for Manipulators and Mobile Robots," *Autonomous Robot Vehicles*, I. Cox and G. Wilfong, eds., Springer-Verlag Berlin Heidelberg, 1990, pp.389-404.
27. O. Khatib. "The Potential Field Approach and Operational Space Formulation in Robot Control," *Adaptive and Learning Systems: Theory and Applications*, K.S. Narendra, ed., Plenum Press, 1986, pp. 367-377.

## Special Issues - Journals

28. O. Khatib, V. Kumar, G. J. Pappas: Editorial: Special Issue on The Eleventh International Symposium on Experimental Robotics. I. J. Robotic Res. 29(5): 483-484 (2010)
29. O. Khatib, V. Kumar, D. Rus: Editorial: Special Issue on the Tenth International Symposium on Experimental Robotics. I. J. Robotic Res. 28(6): 2009
30. P. Dario, D. R. Meldrum, O. Khatib: Special Issue on BioRobotics. I. J. Robotic Res. 26(11-12): 2007
31. R. Chatila, P. Dario, O. Khatib: Special Issue on the 11th International Symposium on Robotics Research. I. J. Robotic Res. 24(9): 2005

32. M. Ang, O. Khatib: Special Issue on the 9th International Symposium on Robotics Research. I. J. Robotic Res. 25(9): 2006

## Journal Papers

33. A. Petrovskaya, O. Khatib. Global Localization of Objects via Touch. IEEE Transactions on Robotics Vol. 27, No. 3, pp. 569-585, June 2011
34. L. Sentis, J. Park, and O. Khatib. Compliant Control of Multi-Contact and Center of Mass Behaviors in Humanoid Robots. IEEE Trans. on Robotics. Vol. 26, No. 3, pp. 483-501, June 2010
35. D. Shin, I. Sardellitti, Y.-L. Park, O. Khatib, and M. Cutkosky. Design and Control of a Bio-Inspired Human-Friendly Robot. The International Journal of Robotics Research. Vol. 29, No. 5, pp. 571-584, April 2010
36. O. Khatib, E. Demircan, V. DeSapio, L. Sentis, T. Besier, S. Delp, Robotics-based Synthesis of Human Motion J Physiol Paris. 103(3-5):211-9. August 2009
37. F. Conti, O. Khatib, A New Actuation Approach for Haptic Interface Design The International Journal of Robotics Research vol. 28, no. 6, pp. 834-848, June 2009
38. N. Mansard, O. Khatib, A. Kheddar: A Unified Approach to Integrate Unilateral Constraints in the Stack of Tasks. IEEE Transactions on Robotics 25(3): 670-685 (2009)
39. J. Park and O. Khatib, Robot Multiple Contact Control Robotica 2008, Vol. 26, Issue 05, Sept 2008, 667-677
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