Full Professor of Robotics at the Faculty of Engineering of the University of Padua since 1981, President of the Italian Group of Applied Mechanics (GMA) since November 2009, Aldo Rossi was or is Delegate of the Dean for Information Technology (2004-06) and for the Relationships in Scientific Research with the EU (1995-2005); Director of DIMEG (2000-06); Member (since 1971) of the commission A Standardization and Terminology of IFTOMM. Italian Delegate (1983-2006) of IFTOMM; member of Organizing Committee of the world Congress of IFToMM held in Milan (1995), president of IFToMM Italy (1996 – 2004) Chairman of the Education Commission of IFToMM (1999 2006). Principal Investigator of more than ten National and International Research Projects, among which one FIRB Project ("Flexible haptic system for rehabilitation", 2004-06) and one Regional Project ("Passive and active mechatronic systems interacting with the human operator", 2003-05) on Rehabilitation Robotics, two PRIN Projects on Surgical Robotics ("Robot In Medical Environment", 2001-03, and "Methods and Tools Applied to Family Of Robot in medical Environment", 1999-2001), and two EU Projects on Defect Detection Systems (Craft "AUTOmatic system for the MAPping of existing defects on tanned leathers", 2002-04, and Brite-Euram "Development of innovative systems for waterborne coated plastic surfaces to minimise the environmental impact and to increase product quality", 1999-2001). Professor Aldo Rossi published over 150 scientific papers on Medical Robotics, Haptic Systems and Industrial Automation. His research interests include Robotics, Industrial Automation (mechatronic systems and defect detection systems) and Medical Robotics (upper-limb rehabilitation robots and surgical robots).

Publications

[1] Finetto, C., Rosati, G., Faccio, M., Rossi, A.
Implementation framework for a fully flexible assembly system (F-FAS)

Hybrid flexible assembly systems (H-FAS): bridging the gap between traditional and fully flexible assembly systems

Randomized trial of a robotic assistive device for the upper extremity during early inpatient stroke rehabilitation
Neurorehabilitation and Neural Repair, 28 (4), pp. 377-386, 2014

Mixed-model sequencing optimization for an automated single-station fully flexible assembly system (F-FAS)
International Journal of Advanced Manufacturing Technology, 70 (5-8), pp. 797-812, 2014

Fully Flexible Assembly System (F-FAS): a new concept in flexible automation
Assembly Automation, 33(1):8-21, 2013

A novel robot-assisted upper-limb rehabilitation program in acute management of post-stroke patients: a randomized controlled trial
G. Rosati, M. Faccio, and A. Rossi

**Fully flexible assembly system (F-FAS): un nuovo paradigma nell'assemblaggio automatizzato ad elevata flessibilità**

In Atti del 2° CONGRESSO NAZIONALE DEL COORDINAMENTO DELLA MECCANICA ITALIANA, Ancona, Italy, June 25-26 2012

A. Rossi, A. Persona, G. Rosati, M. Faccio, S. Cenci, A. Carli, and C. Finetto

**Sistemi di assemblaggio industriale ad elevata flessibilità**

In Quinta giornata di studio Ettore Funaioli - 15 luglio 2011. A cura di U. Meneghetti, A. Maggiore e V. Parenti Castelli, Bologna, Italy

V. Zanotto, P. Boscariol, A. Gasparetto, A. Lanzutti, R. Vidoni, N. Di Lorenzo, P. Gallina, A. Dalla Via, A. Rossi

**A master-slave haptic system for neurosurgery**

Applied Bionics and Biomechanics 8 (2011), pp- 209-220

G. Rosati, A. Rossi, M. Armani, and S. Masiero

**Acute and subacute phase rehabilitation in post-stroke patients: a new robot-assisted upper-limb rehabilitation program**


G. Rosati, M. Faccio, A. Carli, and A. Rossi

**Convenience analysis and validation of a fully flexible assembly system**


A. Rossi, G. Rosati, S. Cenci, A. Carli, V. G. Riello, A. Foroni, M. Mantovani, and L. Zanotti

**Flexible assembly system for heat exchanger coils**


A. Rossi, G. Rosati, S. Cenci, A. Carli, L. Zanotti, M. Mantovani, A. Foroni, and V. G. Riello

**La meccatronica per l’assemblaggio flessibile**

In Quarta giornata di studio Ettore Funaioli - 16 luglio 2010. A cura di U. Meneghetti, A. Maggiore e V. Parenti Castelli, Bologna, Italy, 2011

V. G. Riello, A. Foroni, G. Rosati, and A. Rossi

**Method for the insertion of bends in pipes for fluid of a heat exchanger**


V. G. Riello, A. Foroni, S. Cenci, G. Rosati, and A. Rossi

**Apparatus for the insertion of bends in pipes for fluid of a heat exchanger**


S. Masiero, G. Rosati, S. Valarini, P. Poli, G. Ferlini, A. Chiasera, M. Armani, A. Rossi, and C. Ferraro

**Post-stroke robotic training of the upper limb: a randomized trial study (preliminary results)**

European Journal of Physical and Rehabilitation Medicine, 46(Suppl. 1 to no. 2):256, 2010

V. Zanotto, A. Gasparetto, P. Boscariol, A. Lanzutti, R. Vidoni, A. Rossi

**Sistema aptico master-slave per neurochirurgia robotizzata basato su NI CompactRIO e NI LabVIEW**

[18] D. Zanotto, G. Rosati, and A. Rossi

Performance analysis of planar cable-based parallel manipulators
Design and Analysis ESDA2010-25282, Istanbul, Turkey, July 12-14 2010


First test results of a haptic tele-operation system to enhance stability of telescopic handlers
Design and Analysis ESDA2010-25305, Istanbul, Turkey, July 12-14 2010


Cable-based robotic systems for post-stroke neurorehabilitation
Design and Analysis ESDA2010-25305, Istanbul, Turkey, July 12-14 2010


Metodo per l’inserimento di curvette nei tubi per fluido di uno scambiatore di calore
Brevetto di invenzione industriale, CCIAA di Milano, Feb-22nd 2010. MI2010A000275

[22] V. G. Riello, A. Foroni, S. Cenci, G. Rosati, and A. Rossi

Apparato per l’inserimento di curvette nei tubi per fluido di uno scambiatore di calore
Brevetto di invenzione industriale, CCIAA di Milano, Feb-22nd 2010. MI2010A000267

[23] G. Rosati, G. Boschetti, A. Biondi and A. Rossi

Real-time defect detection on highly reflective curved surfaces


On-line dimensional measurement of small components on the eyeglasses assembly line


Upper limb rehabilitation robotics after stroke: a perspective from the University of Padua, Italy
Journal of Rehabilitation Medicine, 41(12):981–985, 2009

[26] S. Masiero, G. Rosati, S. Valarini, and A. Rossi

Post-stroke robotic training of the upper limb in the early rehabilitation phase

[27] G. Rosati, D. Zanotto, R. Secoli, and A. Rossi

Design and control of two planar cable-driven robots for upper-limb neurorehabilitation
In Proceedings of the IEEE 11th International Conference on Rehabilitation Robotics


Planar robotic systems for upper-limb post-stroke rehabilitation
In Proceedings of the ASME International Mechanical Engineering Congress & Exposition
IMECE 2008, Boston, MA, USA, Oct 31 - Nov 6 2008

[29] G. Rosati, D. Zanotto, and A. Rossi

Performance assessment of a 3D cable-driven haptic device
In Proceedings of the ASME International Mechanical Engineering Congress & Exposition
IMECE 2008, Boston, MA, USA, Oct 31 - Nov 6 2008


A haptic system to enhance stability of heavy duty machines
In Proceedings of the ASME International Mechanical Engineering Congress & Exposition
IMECE 2008, Boston, MA, USA, Oct 31 - Nov 6 2008
[31] A. Rossi and G. Rosati

**Sistemi robotici per la riabilitazione**
In Allungare la vita è possibile. Tecnologia e invecchiamento, pages 74–84. Centro Studi Alvise Cornaro, Padova, Italy, 2008


**Terapia assistida por robot: una nueva oportunidad en neurorrehabilitacion**
El Hospital, 63(6):8–10, 2007

[33] G. Rosati, A. Rossi, G. Boschetti, and A. Trevisani

**First experimental results of an integrated robotic system for haptic teleoperation**
In Proceedings of the 2007 IEEE International Symposium on Industrial Electronics, Vigo, Spain, June 4-7 2007

[34] A. Rossi and G. Rosati

**Rehabilitation robotics in padua, Italy**

[35] G. Rosati, A. Biondi, G. Boschetti, and A. Rossi

**Real-time estimation of the telescopic handler center of mass**
In Proceedings of the 12th IFToMM World Congress, Besancon, France, June 18-21 2007


**Trajectory planning of a two-link rehabilitation robot arm**
In Proceedings of the 12th IFToMM World Congress, Besancon, France, June 18-21 2007

[37] S. Masiero, E. Carraro, P. Gallina, G. Rosati, A. Rossi, C. Ferraro, and M. Ortolani

**A novel robotic device in neurorehabilitation**
In Proceedings of Festival of International Conferences on Caregiving, Disability, Aging and Technology FICCDAT2007, Toronto, Canada, June 16-19 2007

[38] A. Rossi, A. Biondi, S. Cenci, and G. Rosati

**Development of a telescopic handler simplified model**
In Proceedings of AIMETA 2007, Brescia, Italy, September 11-14 2007


**Robot-aided upper limb rehabilitation in the acute phase**

[40] G. Rosati, G. Boschetti, A. Biondi and A. Rossi

**Real-time defect detection on highly reflective curved surfaces**


**On-line dimensional measurement of small components on the eyeglasses assembly line**


**Wire-based robots for upper-limb rehabilitation**

[43] A. Rossi, A. Trevisani, and V. Zanotto

**A telerobotic haptic system for minimally invasive stereotactic neurosurgery**

[44] P. Gallina, G. Rosati, and A. Rossi

**Implementation of a water compensator for total body irradiation**

**Design of a new 5 d.o.f. wire-based robot for rehabilitation**

[46] Trevisani, A.; Rossi, A.; Zanotto, V.

**Design and implementation of a mechatronic device for robot-assisted neurosurgery**


**Haptic systems in robotic surgery applications**
In Proc. of the Israel-Italy Workshop on Advanced Computer Aided Surgery & Biomedical Image Processing, pages 36-47, Tel Aviv, Israel, June 1 2005

[48] G. Boschetti, G. Rosati, and A. Rossi

**A haptic system for robotic assisted spine surgery**


**Man-machine interaction by haptic systems**
In Proceedings of the Japan-Italy Workshop on The Man and the Robot: Italian and Japanese Approaches, Tokyo, Japan, September 2005


**A control scheme for 5 d.o.f. haptic feedback guided teleoperation**
IASME Transactions, 1(1):53–58, 2004


**Sviluppo di un robot per la riabilitazione dell’arto superiore nell’emiplegico**
Europa Medicophysica, 40 (Suppl.1 to No.3):645–648, 2004

[52] A. Rossi, P. Gallina, G. Rosati, and V. Zanotto

**Rate-to-force control in admittance mode bilateral teleoperation**
In Proceedings of the 11th World Congress in Mechanism and Machine Science IFToMM2004, pages 1373–1379, Tianjin, China, April 2004

[53] A. Rossi, A. Gasparetto, A. Trevisani, and V. Zanotto

**A robotic approach to stereotactic radio-surgery**

[54] A. Rossi and G. Rosati

**The trend in robotics toward man-machine interaction**
In Proceedings of the 1st IASME International Conference on Advances in Mechanics and Mechatronics, Plenary lecture, Udine, Italy, March 2004


**A control scheme for 5 d.o.f. haptic feedback guided teleoperation**
In Proceedings of the 1st IASME International Conference on Advances in Mechanics and Mechatronics (483-145), Udine, Italy, March 2004

[56] G. Rosati, A. Rossi, and V. Zanotto

**Lans: a haptic system for minimally invasive radio-surgery**

[57] G. Boschetti, P. Gallina, G. Rosati, A. Rossi, and V. Zanotto

**A novel approach to haptic/telerobotic spine surgery**
In Proceedings of the 12th International Workshop on Robotics in Alpe-Adria-Danube Region RAAD03, Cassino (FR), Italy, May 2003

[58] G. Boschetti, P. Gallina, G. Rosati, A. Rossi, and V. Zanotto

**Design of an innovative water filter for Total Body Irradiation**
In Proceedings of IASTED International Conference on Biomedical Engineering
BioMED2003, pages 243-248, Salzburg, Austria, June 2003
NeRebot: a wire-based robot for neurorehabilitation
In Proceedings of the 8th International Conference on Rehabilitation Robotics ICORR03,
Daejeon, Republic of Korea, April 2003
[60] G. Boschetti, P. Gallina, G. Rosati, A. Rossi, and V. Zanotto
ROBOGA: an obstacle avoidance system for blind people
In Proceedings of IASTED International Conference on Biomedical Engineering
[61] P. Gallina, A. Gasparetto, A. Rossi and A. Trevisani
Elimination of chatter phenomenon in wood machining by means of damping elements
IFTOMM 2003, 11th World Congress in Mechanism and Machine Science, Agosto 18-21,
2003, Tianjin (China)
Linearizzazione di modelli dinamici per meccanismi a membri deformabili
XVI Congresso AIMETA di Meccanica Teorica e Applicata, 9-12 Settembre 2003, Ferrara
(Italia).
[63] G. Rosati, A. Rossi, and V. Zanotto
Lans: a haptic system for minimally invasive radio-surgery
In Proceedings of the 12th International Workshop on Robotics in Alpe-Adria-Danube
Region RAAD03, Cassino (FR), Italy, May 2003
[64] P. Gallina, A. Gasparetto, G. Rosati, and A. Rossi
Design of a PID controller for a flexible five-bar closed-chain planar manipulator
A Catadioptric System for 3D Optical Measurements
[66] P. Gallina, G. Rosati, and A. Rossi
3-d.o.f. wire driven planar haptic interface
[67] P. Gallina, G. Rosati, and A. Rossi
Utilizzo di interfacce aptiche nella robotica medica
Some applications of robotic mechanisms and haptic interfaces in rehabilitation
[69] M. Bisiacco, P. Gallina, G. Rosati, and A. Rossi
Development of a state-space water-level control for an array of cells to be employed
as compensator in radiotherapy
Dynamics and Control, 10:399–417, 2000
[70] R. Caracciolo, M. Giovagnoni, A. Rossi and A. Trevisani
Modelling and control of a closed chain flexible linkage
Proceedings of the ASME 2000 IDECT/CIE, 26th Biennial Mechanisms and Robotics
Conference, Settembre 10-13, 2000, Baltimore, Maryland (USA).
[71] R. Caracciolo, A. Gasparetto, A. Rossi and A. Trevisani
Linear quadratic optimal control of a four-link flexible planar linkage
Proceedings of the IASTED International Conference on ROBOTICS AND
[72] R. Caracciolo, P. Gallina, A. Gasparetto, A. Rossi
A New, Transportable and Low Cost Method for Robot Calibration
Proceedings of the Tenth IFToMM World Congress on the Theory of Machines and Mechanisms, Oulu, Finland, 20-24 June 1999

[73] P. Gallina, A. Gasparetto, A. Rossi

A Teleoperated Tracked Vehicle for Inspection Inside a RFX Machine

[74] R. Caracciolo, P. Gallina, A. Gasparetto, A. Rossi

A Flexible Robotized Cell for Automation of a Press for Cast Products
Proceedings of the 5th Workshop on AC Motor Drives Technology, Vicenza, 2-3 giugno 1997

[75] R. Caracciolo, P. Gallina, A. Gasparetto, A. Rossi

A Teleoperated Robot for Servicing inside a RFX Machine
Proceedings of the Sixth International Workshop on Robotics in Alpe-Adria-Danube Region, Cassino, 26-28 June 1997

[76] R. Caracciolo, P. Gallina, A. Gasparetto, A. Rossi

A Mechatronic System for Diagnostics of Plastic Products Using Vision
Proceedings of the 5th Workshop on AC Motor Drives Technology, Vicenza, 2-3 giugno 1997

[77] R. Caracciolo, D. Ciscato, A. Gasparetto, A. Rossi

Design and Implementation of a Mechatronic Device for X-ray Collimation

[78] R. Caracciolo, A. Gasparetto, M. Giovagnoni and A. Rossi

A Mechatronic System for Conformal Radiotherapy

[79] R. Caracciolo, A. Gasparetto, A. Rossi, S. Santi

Applicazioni di Robotica in Neurochirurgia
Atti del IV Seminario GMA di Meccanica Applicata alle Macchine, Assisi, 13-14 June 1996

[80] R. Caracciolo, E. Ceresole, A. Gasparetto, A. Rossi

A Modular Cell Structure for Robotized Assembly
Proceedings of the First ECPD International Conference on Advanced Robotics and Intelligent Automation, Athens, 6-8 Sept. 1995

[81] R. Caracciolo, F. Fanton, A. Gasparetto, A. Rossi

A Laser Based 3D Correlation Procedure for the Execution of a Biomedical Task in a Robotized Cell
Proceedings of the Third Conference on Mechatronics and Robotics, Paderborn, Germany, 4-6 Oct. 1995

[82] A. Gasparetto, A. Rossi, I.A. Robb

Control System Design and Dynamic Simulation of an Autonomous Vehicle for Factory Automation
Proceedings of the 20th IEEE International Conference on Industrial Electronics, Control and Instrumentation, Bologna, 5-9 Sept. 1994

[83] A. Gasparetto, A. Rossi

An Autonomous Vehicle for a Flexible Manufacturing Cell