

# Francesco Cepolina CV

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## Country

Italy

## Research IDs

Orcid: <https://orcid.org/0000-0003-1481-4120>

Scopus: <https://www.scopus.com/authid/detail.uri?authorId=56111338500>

Webofscience: <https://www.webofscience.com/wos/author/record/AAA-5147-2022>

## Email

## Phone

## Employment (5)

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### University of Genoa: Genoa, Liguria, IT

2021 to present | Temporary research fellow ( Department of Mechanical, Energy, Management and Transport Engineering - DIME)  
Employment

### Hagergroup: Arenzano, Liguria, IT

2015 to 2020 | Senior system integrator in the Arenzano plant  
Employment

### Bocchiotti: Arenzano, Liguria, IT

2007 to 2015 | New products developer and plant optimization  
Employment

### D'Appolonia: Genoa, Liguria, IT

2006 to 2007 | Technology transfer department  
Employment

### Intuitive Surgical: Sunnyvale, California, USA

2005 to 2006 | R&D surgical robotics  
Employment

## Education and qualifications (4)

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### Université de Paris: Paris, Île-de-France, FR

2006 | PhD in Mechanical, Acoustic and Electronic Science

(Mechanical engineering)

Education

### University of Genoa: Genoa, Liguria, IT

2005 | PhD in Mechanics and Design of Machines

(Department of Mechanical, Energy, Management and Transport Engineering - DIME)

Education

### University of Genoa: Genoa, Liguria, IT

1999 | 5 years degree in Mechanical engineering

(Department of Mechanical, Energy, Management and Transport Engineering - DIME)

Education

### University of Leeds: Leeds, Leeds, GB

1997 | Ordinary degree of Bachelor of Engineering in Mechanical Engineering

Education

## Research activity (8)

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### Agriculture projects

Development of applied projects supported by the Region and related to agriculture:

- Creation of an elevated platform for pruning on accidental terrains.
- Creation of an exoskeleton for the collection of olives.
- Creation of a glass house, heated with microwaves, to optimise the production of basil.

### Surgical robotics

innovative design of mechanisms and kinematic chains to be used as tools for minimally invasive surgical robotics operations.

The research activities began with the doctorate and continued within the research and development section of Intuitive Surgical and in subsequent collaborations with the University of Genoa.

The doctoral thesis starts from the discussion of the current robotic devices for minimally invasive surgery also involving expert surgeons in the field as users and proposes an innovative solution of an articulated minirobot to be used as a support for the operating instrument inside the patient's body. The advantages of this solution convinced the researchers of the Laboratoire de Robotique de Paris of the Université Pierre et Marie Curie - Paris 6 who agreed to conduct the research in collaboration, hence the doctorate in co-tutorship.

The development of the thesis required an in-depth study of functional and structural modeling techniques, kinematic analysis, design and integration of electromechanical micro components resorting, where necessary and/or convenient, to the use of biocompatible functional materials.

During the internship at Intuitive Surgical, Sunnyvale, California, leader in the surgical robotics sector, the research activities focused on studies of distributed mechatronic systems cooperating inside the operating room; these research activities, for confidentiality reasons, have not been published. The candidate participated in the testing of the new equipment studied in the operating room. In order to know in detail, the mechanisms on which the candidate has worked, it is necessary to wait for the publication of Intuitive Surgical patents.

The candidate has also collaborated in research activities on the development of miniaturized devices for handling surgical instruments for internal sutures: the synthesis procedures must meet the requirements of accuracy and transmission of 10N law enforcement with the constraints of extremely small dimensions and the biocompatibility of the materials.

In all the publications relating to this sector, the candidate's contribution in terms of innovation and originality has been essential and predominant.

### **Robotics for cleaning services**

The activities in this sector were directed by Electrolux Zanussi and anticipated the industrial developments of domestic cleaning robotics which today boasts a wide diffusion on the market (Electrolux Trilobite).

The degree thesis systematically deals with the problem of developing systems with a high level of autonomy for the management, automation, and verification of the cleaning processes of large kitchens (kitchens for communities, hotels, etc.) for which there are always health and hygiene standards more stringent. The thesis proposes an innovative multi-agent system which involves the use of two interacting robots for which the conceptual and detailed mechatronic design has been carried out. A special device developed to ensure that the robot adheres to flat vertical surfaces has been patented. For the definition and demonstration of the management and programming options of the cleaning cycles, an object-based simulator in Modsim has been developed which reconstructs the evolution of the process in visual and audio virtual reality. The thesis was awarded the UCIMU SISTEMI PER PRODURRE prize in 1999.

Some of the mechanisms developed both for locomotion and to support the cleaning process are original.

### **Underwater robotics**

The activities in this sector were carried out in collaboration with the PMARlab of the University of Genoa and during the periods carried out at the Instituto de Automatica Industrial (IAI) of the CSIC (Consejo Superior de Investigaciones Científicas, Ciencia e Investigación, Spanish National Research Council) in Madrid and at the research and development department of the Tecnospace company of the CUT group (Cutting Underwater Technologies).

The candidate proposed and studied the functional and structural characteristics of robust and reconfigurable gripping mechanisms. These mechanisms must allow an underwater robot to anchor itself on submerged structures. The grip must be firm as it must be able to resist the strong reactions due to the cutting operations. Furthermore, the clamping must be able to adapt to different shapes and dimensions of immersed artefacts.

The studies carried out at the PMARlab concerned the functional design and static analysis of gripping devices with parallel mechanisms for the maintenance of offshore systems and components for telemanipulated robotic systems which were created for the SBC research prototype of the homonymous European project PPC00-2461 Bottom cutter for diamond wire cutting system.

At the Spanish research center, activities focused on the kinematic and dynamic study of a mobile robot for cleaning and maintaining ship hulls, even partially submerged. The results of the research activities

converged in the prototype of Aurora (G3RD-CT-2000-00246), (2002-2004), auxiliary climbing RObot for underwater cleaning of the hull of sea vessels. Grip and detection.

### **Mechatronics for the stone industry**

The research work conducted at the PMARlab and at the Research and Development Department of D'Appolonia SpA focused on the conceptual and structural design of simple mechanisms with actuation based on shape memory materials in the framework of European research projects: OSNET (Ornamental Stone Network); Pro-Stone (COLL-CT-2005-516417 2005-2008 Eco-efficient and high productivity stone processing with multifunctional materials); Istone (integrated project NMP2-CT-2005-515762 Re-Engineering of Natural Stone Production Chain through Knowledge Based Processes, Eco-Innovation and new Organizational Paradigms), as well as for the INNOMECA project (funded under Mis. 1.7.1 Docup 2000-2006 Innovation Network in the mechanical sector, as a source of enabling technologies for the entire value chain of the stone sector).

### **Extreme robotics**

The ability to invent innovative mechanical architectures and to study their behavioural characteristics using CAD aids, digital mock-ups, and virtual testing benches for the comparative evaluation of alternative solutions, has favoured the studies conducted at the PMARlab on robotics topics for special risky. The candidate proposed modular architectures for Roboclimber (G1ST-CT-2002-50160, 2002-2004 Development of a remote-controlled robot for slope consolidation and landslide monitoring) and Saferdrill Cooperative Research (An autonomous remote-controlled robot for walking and climbing for faster and safer landslide monitoring, slope stability analysis and consolidation).

In addition, the candidate collaborated in the development of the 3D dynamic simulation environment (ODE solver) for AirEOD, an aircraft safety robot.

At the University of Leeds, as part of the English thesis, the candidate studied and developed in rapid prototyping a new leg architecture with a three-degree-of-freedom wheel-foot for a small vehicle for lunar exploration.

The candidate tackled the various studies with methodological rigor and with hints of originality.

### **Micro mechanisms**

Previous research for the development of minimally invasive surgical mechanisms and instruments has allowed the candidate to acquire qualified skills for the development of mini and micro devices. While working in the Research and Innovation department of the Bocchiotti company, the candidate is engaged in the design of mechanisms that include mini-micro components for new generation plastic products. These searches for which confidentiality constraints exist have led to the drafting of patents guaranteeing the priority of the invention that are not yet public.

### **Review of scientific articles**

The results of the research activities carried out were recognized and appreciated by the scientific communities of reference for which the candidate was called to review scientific articles for journals such as: Industrial Robot, The International Journal of Medical Robotics & Computer Assisted Surgery, Journal of Mechanical Engineering Science, Journal "Sensors and Actuators A: Physics. Furthermore, the candidate has reviewed scientific articles for scientific conferences such as IMG04 and ISR. In particular, the candidate has been invited to chair sessions on surgical robotics in international conferences (e.g. ISR'04 Paris, IMG04 Genoa).

## Scientific participation in international and national research projects (10)

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Project	Duration (months)	Role Covered
European Project - Diamond wire cutting system - sub bottom cutter (SBC PPC00-2461)	30	designer researcher
European Project - Auxiliary climbing robot for underwear ship hull cleaning of the sea adherence and surveying (AURORA G3RD-CT-2000-00246)	43	designer researcher
Thematic NETwork on Ornamental Stones (OSNET)	41	designer researcher
European Project - Eco-efficient and high productive stone processing by multifunctional materials (PRO-STONE COLL-CT-2005-516417)	35	designer researcher
European Project - Re-Engineering of Natural Stone Production Chain through Knowledge Based Processes, Eco-Innovation and new Organizational Paradigms (ISTONE NMP2-CT-2005-515762)	45	designer researcher
Innovation network in the mechanical sector, as a source of enabling technologies for the entire value chain of the stone sector (INNOMECA Mis. 1.7.1 Docup)	72	designer researcher
European Project - Development of a tele-operated climbing robot for slope consolidation and landslide monitoring (Roboclimber G1ST-CT-2002-50160)	27	designer researcher
European Project - A remotely controlled autonomous walking and climbing robot for faster and safer landslide monitoring, slope stability analysis and consolidation (SAFERDRILL COOP-CT-2005-016842)	28	designer researcher
European Project - Development of a cost-effective solution for the safe and definitive remediation of the european landfills which present the danger for the leachate to pollute the waterbed (MICRODRAINAGE EVK4-CT-2002-30012)	27	designer researcher
National Project - Innovative modular micro-robotic instruments for endoscopic transluminal surgery (PRIN08 )	24	designer researcher

## Attribution of official teaching or research (7)

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Contract Professor Research Methodology (cod. 86732) - DIBRIS Unige	2023 – 2024
Contract Professor Research Methodology (cod. 86732) - DIBRIS Unige	2022 – 2023
Teaching support Mechanical Design Methods (cod. 80183) - DIBRIS Unige	2022 – 2023
Teaching support Mechanical Design Methods (cod. 80183) - DIBRIS Unige	2021 – 2022
Teaching Industrial and Service Robotics (ISICT) - University of Genoa	01/2012 02/2012
Teaching International Master in Robotics (IMRob) - University of Genoa	03/2007 04/2007
Teaching Pro-Engineer - Centro Italiano Femminile - Genoa	2000 and 2002

### Participation in highly qualified foreign and international research bodies (3)

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Researcher at "Istituto de Automatica Industrial" CSIC IAI, Madrid, Spain	05/2001 08/2001
PhD researcher at Université - Paris 6 + (CEA), Commissariat	01/2003 07/2003
PhD researcher at R&D Intuitive Surgical, Silicon Valley, California	03/2005 11/2005

### Achievement of prizes and awards for scientific activity (12)

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11.2007	<i>SIRI "Arturo Baroncelli" Award for the Doctoral Thesis</i>
9,2005	<i>Industrial Robot "Highly Commended Award", AirEOD Robot</i>
3,2005	<i>Grant donated by Intuitive Surgical to research Surgical Robotics</i>
6,2004	<i>Carige Research Fellowship 10 months in California at Intuitive Surgical</i>
6,2004	<i>PTC 2004 Award, Certificate of Excellent Design, GigiAndretti</i>
3,2004	<i>Invited as chairman for the session "Surgical Robotic Applications" at ISR'04, Paris</i>
8,2003	<i>Scholarship for "Summer School of Surgical Robotics" Montpellier</i>
7.2002	<i>Scholarship donated by the Italo-Fancese University for a Doctorate in co-supervision</i>
2, 2002	<i>Scholarship donated by the MIUR for a three-year PhD study</i>
4.2001	<i>"Leonardo da Vinci" scholarship donated by the EU to work 4 months in Madrid</i>
4.2000	<i>The Italian degree thesis wins the 1st national prize UCIMU production systems</i>
9,1996	<i>"Erasmus" scholarship to study in Leeds, England</i>

### Results obtained in technology transfer/patents (13)

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<i>ITGE99000059, 01/06/1999, "Robot locomotion with depression cups"</i>	<i>University of Genoa</i>
<i>ITGE20000109, 01/09/2000, "Gripper for flexible elements"</i>	<i>University of Genoa</i>
<i>WO2005002797, 13/01/2005, "Gripping element for underwater cuts"</i>	<i>Tecnospamec company</i>
<i>ITMI20080557, 01/04/2008, "Isolation system for mobile socket"</i>	<i>Bocchiotti company</i>
<i>EP2104186, 21/03/2008, "Body for electric socket or plug"</i>	<i>Bocchiotti company</i>
<i>EP2117086, 08/05/2008, "Interlocked electrical outlet "</i>	<i>Bocchiotti company</i>
<i>EP2117085, 08/05/2008, "Interlocked electric socket (locking device)"</i>	<i>Bocchiotti company</i>
<i>FR2923094, 01/05/2009, "Coupling system for civil series inserts"</i>	<i>Bocchiotti company</i>
<i>MI2010A001759, 28/09/2010, "Labeling of electrical components"</i>	<i>Bocchiotti company</i>
<i>ITMI2014A001755, 07/10/2014, "Disappearing electric tower"</i>	<i>Bocchiotti company</i>
<i>IT102021000024677, 27/09/2021, "Exoskeleton for outdoor work"</i>	<i>University of Genoa</i>
<i>IT102022000007367, 13/04/2022, "Elevated platform for steep terrains"</i>	<i>University of Genoa</i>
<i>IT102023000002961, 21/02/2023, "Exoskeleton elevation of work tools"</i>	<i>University of Genoa</i>

## Software knowledge (7)

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Languages: Pascal, Visual Basic, HTML, XHTML, ASP, JAVA, SQL

Systems: MS-DOS, MAC-OS, UNIX, Windows XP, Windows Vista, IIS 6.0 Server

2D 3D modelers: Euclid, ProEngineer, SolidWorks, Sweet Home 3D, Google SketchUp, Blender, Autocad

Multibody analyzers: DADS, ProMechanica, Ansys

Computational analyzers: FEM and Thermal

Simulation languages: Modsim III, Matlab, Simulink, ODE 3D dynamic libraries

Office applications: Microsoft Office, Microsoft Access, Adobe After Effects, Adobe Photoshop, GIMP

## Works (55 of 55)

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### Development of exoskeletons and motion measurement to reduce olive harvesting labor

Engineering in Agriculture, Environment and Food

2024 | Journal article

DOI: 10.37221/eaef.17.2\_66

### The forest lift. A rugged tool to simplify pruning and fruit collection.

Engineering in Agriculture, Environment and Food

2024 | Journal article

DOI: 10.37221/eaef.17.1\_37

### Use of Dielectric Heating in Greenhouses

AgriEngineering

2024-07 | journal-article

DOI: 10.3390/agriengineering6030137

### Review of robotic surgery platforms and end effectors

Journal of Robotic Surgery

2024-02-13 | journal-article

DOI: 10.1007/s11701-023-01781-x

### Energizing Sustainable Agriculture: Advances in Greenhouse Heating through Microwave-Based Technologies

Energies

2023-11-29 | journal-article

DOI: 10.3390/en16237843

### Robots trends and megatrends: artificial intelligence and the society

Industrial Robot: the international journal of robotics research and application

2023-11-06 | journal-article

DOI: 10.1108/ir-05-2023-0095Part of ISSN: 0143-991XPart of ISSN: 0143-991X

**Failure analysis of fiberglass cover used for photovoltaic plants**

*Journal of Applied Polymer Science*

2023-06-20 | journal-article

DOI: 10.1002/app.53961

**Infrared Waves and Microwaves Applied to Greenhouse Agriculture**

2023-06-01 | preprint

DOI: 10.20944/preprints202306.0019.v1

**Simulation and Digital Twin of a Robotic Sanitizing Process of Environments at Risk During the Pandemic**

*Intelligent and Fuzzy Techniques for Emerging Conditions and Digital Transformation*

2023 | journal-article

DOI: 10.1007/978-3-031-15226-9\_46

WOSUID: WOS:000881628600043

**Brainstorm on artificial intelligence applications and evaluation of their commercial impact**

*IAES International Journal of Artificial Intelligence (IJ-AI)*

2022-09-01 | journal-article

DOI: 10.11591/ijai.v11.i3.pp799-808

**An introductory review of robotically assisted surgical systems**

*The International Journal of Medical Robotics and Computer Assisted Surgery*

2022-08 | journal-article

DOI: 10.1002/rcs.2409

**Automation of a garment sewing department assessment by smart simulation**

*International Journal of Simulation and Process Modelling*

2022 | journal-article

DOI: 10.1504/IJSPM.2022.128290

**Exact and heuristic static routing algorithms for improving online grocery shopping logistics**

*Proceedings of the 23rd Int. Conf. on Harbor, Maritime and Multimodal Logistic Modeling & Simulation*

2021 | conference-paper

DOI: 10.46354/i3m.2021.hms.003

ID: BASE:9768dde25a133d0eb52d04c0a3f208a5ee3ac6d2122a56208b90850cab40046d

**On line shopping and logistics: a fast dynamic vehicle routing algorithm for dealing with information evolution**

*Proceedings of the 23rd Int. Conf. on Harbor, Maritime and Multimodal Logistic Modeling & Simulation*

2021 | conference-paper DOI: 10.46354/i3m.2021.hms.004

ID: BASE:4de7a91df0a982e2796ca8aa3884053de7ce5cad9a48b5cd133728310adf1081

**Twin tools for intelligent manufacturing: a case study**

*Proceedings of the 33rd European Modeling & Simulation Symposium*

2021 | conference-paper

DOI: 10.46354/i3m.2021.emss.059

**A robotic cutting tool for contaminated structure maintenance and decommissioning**

*Automation in Construction*

2015 | journal-article

DOI: 10.1016/j.autcon.2015.07.006

Part of ISSN: 0926-5805

ID: BASE:bd33f2d4c3e5da26f743911795383fb365bb28df52c5fb4614c46405fa6f87cb

**Personal full electric vehicle PICA V: Non linear dynamic model and simulation**

2015 | journal-article

ID: BASE:25f10ef446d450d4f81d4086fd61e908eed8178c5b6e04117cbb1b1635020f72

EID: 2-s2.0-84938300263

Part of ISSN: 19980140

**A Novel Robotic Handling Device integrated on a Freight Urban Robotic Vehicle**

2014 | conference-paper

ID: BASE:400bafea12df800f575d833550fa4792f6cdb5eb85b7a3945d09de9e2bf4c66c

**Advances in Robot Surgery**

*Nanotechnology: Concepts, Methodologies, Tools, and Applications*

2014 | book-chapter

DOI: 10.4018/978-1-4666-3990-4.ch011 SOURCE-WORK-ID:

BASE:6ef1071554638c03378aafa4530a42b6dd244ebbb967b6b80b264a8925e17244

EID: 2-s2.0-84898262621

**Design of a Hyper-flexible cell for handling 3D Carbon fiber fabric**

*Recent advances in mechanical engineering and mechanics*

2014 | journal-article

**Design of a robot for hygienization of walls in hospital environments**

*ISR/Robotik 2014; 41st International Symposium on Robotics*

2014 | conference-paper

ID: BASE:e4301bc8f515e80e0ef0ddbda19c183ef4995a8fe631f9bf13e19dba1348529

**Handling carbon fiber fabric in agile manufacturing cells**

*WSEAS Transactions on Circuits and Systems*

2014 | journal-article

EID: 2-s2.0-84904041888 Part of ISSN: 2224266X 11092734

ID: BASE:acb8ae065a455e8eea0b93a52a06c3ee822906e4841e060e6dbefd9fe64377f3

### **Innovazione nella macchina utensile**

2014 | book-chapter

ID: BASE:dd6a58a9ae6f38c50f521b62528526c619c10a253a0c52b993af9237230dcd48

### **Manoeuvring simulations of the personal vehicle PICA**

*16th Int. Conf. on Harbor, Maritime and Multimodal Logistics Modelling and Simulation, HMS 2014*

2014 | conference-paper

ID: BASE:887a10a4353ec4174f7a911f8729a067254642c1c4ee398014cbeb8486d0f1c6

EID: 2-s2.0-84912090227

Part of ISSN: 23052104

### **Space optimization in warehouses logistics**

*16th Int. Conf. on Harbor, Maritime and Multimodal Logistics Modelling and Simulation, HMS 2014*

2014 | conference-paper

ID: BASE:48d1aca95606c35326729e8b311868dba48642dfe439dd556a466af33f93dd67

### **Design of multi-degrees-of-freedom dexterous modular arm instruments for minimally invasive surgery**

*Proceedings of the Institution of Mechanical Engineers, Part H: Journal of Engineering in Medicine*

2012 | journal-article

ID: BASE:b09b252aa0fe2a671d0c695c51973981866a95eab4178457bb0c1889abeb1f8f

DOI: 10.1177/0954411912453239

Part of ISSN: 0954-4119

### **Modeling and control of a parallel robot for needle surgery**

*2011 IEEE International Conference on Robotics and Automation*

2011 | conference-paper

ID: BASE:f58773b3fc0752271f0fc6848959e21b3aab008fdfd2901106ad9fb547005bc5

DOI: 10.1109/icra.2011.5979971 SOURCE-WORK-ID:

BASE:b3425d0d34f09bc6bb86d1ea1f602fe3b4b7e74c3ba99f614326a77c3ed79741

### **AirEOD**

*Industrial Robot: An International Journal*

2006 | journal-article

DOI: 10.1108/01439910610659132

Part of ISSN: 0143-991X

ID: BASE:128ff2385b2e246594089297cf4c01bb3dc6e28f8998bfe5f5f16313b9316a03

### **AirEOD: a robot for on-board airplanes security**

*Climbing and Walking Robots*

2006 | book-chapter

ID: BASE:a5da13044e7e2ec75bed0e1998c5a61bcc68ee992decec5ec5b38d2e9ff25b9a

DOI: 10.1007/3-540-26415-9\_119 SOURCE-WORK-ID:

**Roboclimber versus landslides: design and realization of a heavy-duty robot for teleoperated consolidation of rocky walls**

*IEEE robotics & automation magazine*

2006 | journal-article

ID: BASE:c0d610d51c2b95829ac29a73e09fc414fcbc1bd000554584e45dead7598b5aab

DOI: 10.1109/mra.2006.1598050

Part of ISSN: 1070-9932

**Development of micro-tools for surgical applications**

*University of Genoa, Italy & Université P. & M. Curie, Paris*

2005 | *PhD Thesis*

**Roboclimber the 3 ton spider**

*Industrial Robot: An International Journal*

2005 | journal-article

ID: BASE:36b455234a28213e032a4e4ef21063cd9cf7b1ab8723b956fcd11fb1eeef4817

DOI: 10.1108/01439910510582291

Part of ISSN: 0143-991X

**Snail surgeon: a new robotic system for minimally invasive surgery**

*Proceedings of the Fifth International Workshop on Robot Motion and Control, 2005. RoMoCo'05.*

2005 | conference-paper

ID: BASE:8d8f5ab0da7c847cec975562348d070e9ae97fdb56bd2909df211cfed8d613ad

DOI: 10.1109/romoco.2005.201399

**Trends in robotic surgery**

*Journal of Endourology*

2005 | journal-article

ID: BASE:f287d9369b2e61444a540cbd49b72e8e4305f94d7f827b31f445291d75841a89

DOI: 10.1089/end.2005.19.940

Part of ISSN: 0892-7790

**A four-legged climbing robot for rocky slope consolidation and monitoring**

*Int. World Automation Congress WAC2004*

2004 | conference-paper SOURCE-WORK-ID:

BASE:2170c964cd9bc83bd4ff2d7c445b6a52c940bc2c48dddc4e15d888457241ad31

**A robotic cleaning agency**

*Proc. of IAS'2004--8th Conf. on Intelligent Autonomous Systems*

2004 | conference-paper

ID: BASE:590each9d9ab19f13e779d5f6a9b2e929d643f1a0555d08f120604bef8c57898

### **Miniature gripping device**

*Proc. Int. Conf. Intell. Manipulation Grasping*

2004 | conference-paper **Source:**francesco cepolina

### **Review of robotic fixtures for minimally invasive surgery**

*The International Journal of Medical Robotics and Computer Assisted Surgery*

2004 | journal-article

DOI: 10.1002/rcs.5 Part of ISSN: 1478-5951

ID: BASE:27a99b5a21ed4e6a08db18f59ad46ce1fbcd28466ef7fdb9870164e63218145d

### **Robots in medicine: A survey of in-body nursing aids**

*International Symposium on Robotics, France (March 2004)*

2004 | conference-paper

### **Self Adaptable Clamping Tools for Multiple-Seizure**

*IEEE International Conference on Intelligent Manipulation and Grasping IMG 04*

2004 | conference-paper

### **Self adaptable robotic clamp with flexible elements**

*First EURON—Technology Transfer Award, Amsterdam*

2004 | journal-article

### **Surgery grippers for minimally invasive heart surgery**

*IEEE International Conference on Intelligent Manipulation and Grasping (IMG)*

2004 | conference-paper

ID: BASE:da6d45c282b7bab3c236cdf65228cf2e846d78c15aa827f7df34a9e4079c5b5d

### **Task based optimization method for the design of modular minimally invasive surgery instruments**

*15th CISM-IFTToMM Symposium on Robots and Manipulators (ROMANSY), Montreal, Canada*

2004 | conference-paper

### **Upper limb prosthesis for developing countries**

*Proc. of IEEE International Conference on Intelligent Manipulation and Grasping IMG*

2004 | conference-paper

ID: BASE:0ee1de5ee9473f2624f665687e04bb8e9fd3dc75a2fc8674b1764e5ce8bb0816

### **Videogame for safe flights**

2004 | book

ID: BASE:7166955e8e34e53747cdc2e77f9bc007169f3abbce2aa3bad08cab4430753cd5

### **A family of co-robotic surgical set-ups**

*Industrial Robot: An International Journal*

2003 | journal-article

DOI: 10.1108/01439910310506837

Part of ISSN: 0143-991X

### **Gecko, a climbing robot for walls cleaning**

*International Workshop on Advances in Service Robotics (ASER03), Bardolino, Italy*

2003 | conference-paper

ID: BASE:a2435542e1a16661b74fed38bd5803638024ec059e681563c429cfd7f7179f7

### **Roboclimber**

*International Workshop on Advances in Service Robotics*

2003 | conference-paper

ID: BASE:4b26d42b1deb4bfcc7874878fc7b6bdbaa3bc509cfa36e248b7d859cb75df567

### **Gecko, the walls cleaner**

*Industrial Robot: An International Journal*

2002 | journal-article

DOI: 10.1108/01439910210440246 Part of ISSN: 0143-991X

ID: BASE:9a7328c8670ec2918c119fd7bb661f896228f8737a02db1e31a81b14c1aaaf6e

### **Metodologia di progettazione meccatronica per robotica di servizio**

2002 | conference-paper

ID: BASE:47419f3f9d4f9d8a8025ca19361c659e7ab6603dd8fa9d29b2f31cf5b85da78c

### **Char-Robot: the design of a co-operative equipment for kitchen cleaning and sanitising tasks**

2001 | conference-paper SOURCE-WORK-ID:

BASE:803eccd6166f514adfe0bc37b3ae1a80a567ddf4ec5cdd5b519e6adeaa419a3a

### **Collie-Gecko: a co-operative multi-robot system for cleaning applications Proc. 3rd CLAWAR**

2000 | conference-paper

ID: BASE:b3e306768bfbf7b6d81ee5995056542a8bf39bf2e396fdff5818b7be9988d3ae

### **Gecko-Collie - homecleaning automation of floors, walls, and cupboards**

*Proceedings of the Third International Conference on Climbing and Walking Robots*

2000 | journal-article

WOSUID: WOS:000165883300087

### **Domestic-chores automation: multi-media analysis and assessment study**

*11 th ADM International Conference on Design Tools and Methods in Industrial Engineering" Palermo*

1999 | conference-paper

ID: BASE:217df043eb5b1372268d94d4f1c84e4964dbb908a4741b6b616219377f7dd97c

## **Design and simulation of an all terrain mobile robot** other

ID: BASE:4e586aabf9bd033e1f40648ba80cc02952adcbe7783449746572b302ef26626b

### **Peer review (4)**

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- review activity for IEEE Transactions on biomedical Engineering (1)
- review activity for Institution of ME, Part C, Journal of Mechanical Engineering Science (1)
- review activity for Sensors and Actuators, Elsevier (1)
- review activity for Applied Sciences (1)

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