Daniele Cafolla

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PROFESSIONAL SUMMARY

Innovative, bringing proven success in implementing technology-based curriculum delivery and assessment tools. Passionate about fostering academic development and success for every student.

NATIONAL SCIENTIFIC QUALIFICATION

Italian National Scientific qualification as ASSOCIATE PROFESSOR for the disciplinary field of 09/A2 -Applied mechanics. (Academic Recruitment Field 09/A2 - Mechanical and aerospace engineering and naval architecture, according to the national classification). Conferred by the Italian Ministry of Education, University and Research on the 03/02/2022.

SKILLS

- Automation, Robotics, Mechatronics
- SolidWorks, CATIA
- Matlab, LabVIEW
- Fortran, C++, C#, Java, Basic, HTML, PHP, Python
- Student supervision and mentoring
- Module management
- Team leading
- Artificial Intelligence
- Languages: Italian, English, Spanish

WORK HISTORY

LECTURER , ROBOTICS AND ARTIFICIAL INTELLIGENCE *01/2023 to PRESENT*

Swansea University | Swansea, United Kingdom

Make vital contributions to the research on Robotics and Artificial Intelligence research in the Computer Science Department, collaborate internationally with academia and industry, and develop research-informed teaching. The activities are focused on but not limited to:

- Intelligent autonomous robots, mobile robots;
- Motion planning and learning;
- Assistive robots & AI;
- Vision, recognition and reconstruction for robotics;
- Social robotics & AI, intelligent human-robot interactions & interfaces;
- Industrial and medical applications of AI empowered robotics.

RESEARCH DIRECTOR, BIOMECHATRONICS LAB *06/2018 to 12/2022*

IRCCS Neuromed | Pozzilli, Italy

- Provide high-level technical and engineering services to researchers and medical staff of IRCCS Neuromed, to realize components to support clinical research.
- Principal Investigator at the Bioengineering unit, ensuring high levels of productivity
- Wrote research papers, reports, reviews and summaries regarding Robotics.
- Led research team of 4 Researchers on Biomechatronics, Bioengineering and Robotics projects and successfully met all key milestones.
- Provided on-time, within-budget project management in Bioengineering

- Led research projects, including managing costs, schedule and performance

ADJUNCT LECTURER, APPLIED PHYSICS *01/2019 to 01/2021*

University of Tor Vergata | Rome, Italy

- Define the terms biomechanics, statics, dynamics, kinematics, and kinetics, and explain the ways in which they are related.
- Analyze Human biomechanics using graphic and trigonometric method.
- Introduce to the use of sensors and software for human motion analysis.
- Worked to develop and implement curriculum for improved learning and student performance.
- Evaluated and revised lesson plans and course content to facilitate and moderate classroom discussions and student-centered learning.
- Encouraged and facilitated class discussions by interacting with students, using techniques to track student participation, and actively soliciting input.
- Used a variety of learning methods and support materials to facilitate learning process and accentuate presentations, including visual, aural, and social methods.

Offered career assistance to students by conducting mock interviews, providing relevant job opportunities, and teaching networking skills and strategies.

INSTRUCTOR *06/2017 to 02/2021*

Eurolink SRL | Frosinone, Italy

Basic and transversal skills for professionals with an apprenticeship contract:

- Business communication technician
- EDP operator
- Design elements and installation techniques for photovoltaic solar systems
- Specialization course in 3D modelling and animation using Catia software
- *Youth Guarantee* project: specialization course in 3D modelling and animation using Catia software; Specialization course in 3D modelling and animation using CATIA software

RESEARCH FELLOW *08/2017 to 06/2018*

Technical University of Cluj-Napoca | Cluj-Napoca, Romania

- Innovative development of robotic systems for rehabilitation and assisting in healthy aging. Agewell, Cod: SMIS - p 37 215.
- Provided robotic solutions for the therapy for stroke patients.
- Designed, manufactured, and tested cable driven robots.
- Developed program plans, goals, objectives, and milestones.
- Developed written reports related to programs and operations.
- Worked in a multicultural group.

ADJUNCT LECTURER, ROBOT MECHANICS *01/2017 to 01/2018*

University of Tor Vergata | Rome, Italy

- Explain the main modeling and algorithms for analysis and design of the functioning of robot mechanisms in terms of mechanical performance.

- Teach how to handle the mechanics of robot by acquiring skills in analyzing and design, build and control robots for manipulation tasks.
- Worked to develop and implement curriculum for improved learning and student performance.
- Evaluated and revised lesson plans and course content to facilitate and moderate classroom discussions and student-centered learning.
- Encouraged and facilitated class discussions by interacting with students, using techniques to track student participation, and actively soliciting input.
- Used a variety of learning methods and support materials to facilitate learning process and accentuate presentations, including visual, aural, and social methods.
- Offered career assistance to students by conducting mock interviews, providing relevant job opportunities, and teaching networking skills and strategies.

RESEARCH FELLOW *01/2016 to 05/2017*

University of Cassino | Cassino, Italy

- Designed and validated a mobile robot for cultural heritage.
- Modeled and optimized platform design, analyzing it through dynamic simulations.
- Manufactured and assembled a prototype.
- Demonstrated the platform in laboratory and on-field experiences
- Supported and supervised international Bachelor, Master and PhD students in Robotics research programs
- Published papers in prestigious journals and conferences.

MECHANICAL ENGINEER *09/2012 to 05/2013*

University of Cassino | Cassino, Italy

- C0242S10-CIG 05317226DE project by Sogin SpA for the design of a walking robot for the tubes of nuclear power plants to cut the inside via oxy-fuel cutting.
- Control in LabVIEW, design with SolidWorks, and FEA of process temperature.
- Supported engineering design development through analysis and simulation of prototypes and 3D computer models.
- Contributed to project planning meetings to coordinate mechanical design with structural and architecture teams, mitigate design conflicts, and ensure delivery.
- Developed and coordinated effective maintenance approaches.

MECHANICAL ENGINEER *09/2012 to 03/2013*

University of Cassino | Cassino, Italy

- Collaboration in the European project “MAGDRIVE Magnetic-Superconductor Cryogenic Non-contact Harmonic Drive”
- Supported engineering design development through analysis and simulation of prototypes and 3D computer models.
- LabVIEW development and testing, SolidWorks Design and Simulation, MSC ADAMS Simulation, Assembly of measurement, electronic and mechanic systems
- Contributed to project planning meetings to coordinate mechanical design with structural and architecture teams, mitigate design conflicts, and ensure delivery.
- International collaboration with University Carlos III of Madrid.

EDUCATION

Master | AI Artificial Intelligence *PRESENT*

European Information Technologies Certification Academy

- State-of-the-art Machine Learning
- Deep Learning with Neural Networks and Reinforcement Learning
- Practical programming in using tolls such as Python, TensorFlow, Keras, PyTorch,
- Natural Language Processing or Computational Vision in cloud technologies.
- Google Cloud Platform

Ph.D. | Robotics *03/2016*

University of Cassino, Italy

- Design, construction and experimental validation of the humanoid robotic torso CAUTO, CAssino hUmanoid TOrso
- Biomechanical analysis of human Torso at Intelligent Systems Centre (IntelliSys), Nanyang Technological University, Singapore
- LabVIEW development, SolidWorks design, MSC ADAMS simulation

M.Sc. | Mechanical Engineering, Dual Degree Program *03/2012*

Univesity of Cassino, Italy & Panamerican University, Mexico

- Thesis: “Static and dynamic balancing of a parallel manipulator”.
- Analysis, design and testing of a parallel manipulator.

B.Sc. | Mechanical Engineering *04/2010*

University of Cassino, Italy

- Thesis: “Feasibility study of an exoskeleton for rehabilitation of the human hand”.
- Formal analysis, CAD Model design and simulation of a Finger exoskeleton.

AWARDS

- Young Delegates Program Award, 3rd IFToMM International Symposium on Robotics and Mechatronics (ISRM 2013), Singapore, 2013.
- Young Delegates Program Award, Summer School on Micro- and Macro Mechanisms Design, Mechatronics and Robotics, University Politehnica Timişoara, Romania, 2014.
- Make Your Idea, Bic Lazio in collaboration with CNA, DWS System, ROLAND dg and AFM Tassone, Latium, Italy, 2017.
- Service Award, 6th International workshop on New Trends in Medical and Service Robotics (MESROB 2018).
- Service Award, 2nd International Conference of IFToMM ITALY (IFIT 2018).
- Finalist Best Paper Award, 15th IFToMM World Congress 2019.

FUNDINGS

- Ministry of Health, Current research program for Italian Clinical research centres, “IRCCS Neuromed Research Line 4: Advanced diagnostics in neuroscience, cardiovascular,oncology-precision medicine ”. (€3,421,413.56). July 2018 – July 2020
- European Commission, H2020-SC1-PHE-CORONAVIRUS-2020-2 Proposal “Clean Air: Lab to Fab development of air decontamination system for protecting health practitioners against COVID19”. (€ 3,198,750.00). November 2020 – October 2022.

- European Structural Funds, Ministry of Education, University and Research The National Operational Program (PON), Code SA.55753 “3D printing and prototyping and production of orthotic, static or dynamic”. (€ 284,482.00). September 2021 – September 2023.

PUBBLICATIONS

Conferences and Book chapters

1. Acevedo M., Ceccarelli M., Carbone G., Cafolla D., “Complete dynamic balancing of a 3-DOF spatial parallel mechanisms by the application of counter-rotary counterweights”, EUROMECH Colloquium 524, University of Twente, Netherlands, 2012.
2. Cafolla D., Tedeschi F., Carbone G., “Design and simulation on Cassino Hexapod II”, in Proceedings of the 3rd IFToMM International Symposium on Robotics and Mechatronics (ISRM 2013) Singapore, 2013, pp. 3-12.
3. Tedeschi, F., Cafolla, D., Carbone, G., “Design and operation of Cassino Hexapod II”, in Proceedings of RAAD 2013, 22th International Workshop on Robotics in Alpe-Adria-Danube Region, Portoroz, Slovenia, 2013, pp. 94-101.
4. Cafolla D., Carbone G., “A study of feasibility of a human finger exoskeleton”, Service Orientation in Holonic and Multi-Agent Manufacturing and Robotics, Studies in Computational Intelligence, Springer, Vol.544, pp. 363-372, 2014.
5. Cafolla D., Acevedo M., Ceccarelli M, “Static and Dynamic Balancing of a Parallel Manipulator”, Edizioni Accademiche Italiane, ISBN: 978-3-639-65873-6, 2014.
6. Cafolla D., Ceccarelli M., I-Ming C., “Characterization of human Torso behaviour”, in Proceedings of the 3rd IFToMM Asian Conference on Mechanism and Machine Science (Asian MMS 2014) Tianjin, China, 2014, paper BM& MWD-4.
7. Cafolla D. , Ceccarelli M. , “Design and simulation of Humanoid Spine”, New Trends in Mechanisms and Machine Science, Springer Dordrecht, 2014, pp.585-593. DOI 10.1007/978-3-319-09411-3_62.
8. Cafolla D., Ceccarelli M., “Design and FEM Analysis of a Novel Humanoid Torso”, Multibody Mechatronic Systems, Mechanisms and Machine Science 25, Springer, Dordrecht, pp. 477- 488, DOI 10.1007/978-3-319-09858-6_45, 2014.
9. Cafolla D. and Ceccarelli M., “Experimental Inspiration and Rapid Prototyping of a Novel Humanoid Torso”, in Robotics and Mechatronics, Mechanisms and Machine Science Vol. 37, Springer Dordrecht, 2016, pp.65-74. DOI 10.1007/978-3-319-22368-1_7.
10. Cafolla D. and Ceccarelli M., “Design and validation of a PKM Structure for a Humanoid Torso”, in Proceedings of The 14th IFToMM World Congress, Taipei, Taiwan, (DOI) 10.6567/IFToMM.14TH.WC.OS13.122, 2015.
11. Cafolla D., Carbone G., Ceccarelli M., “Balancing of a 3-DOFs Parallel Manipulator”, Dynamic Balancing of Mechanisms and Synthesizing of Parallel Robots. Springer, Dordrecht, (DOI) 10.1007/978-3-319-17683-3_8, pp. 173-191, 2015. (Chapter 8)
12. Ceccarelli M., Carbone G., Cafolla D. and Wang M.F., “How to use 3D printing for feasibility check of mechanism design”, In Advances in Robot Design and Intelligent Control, pp. 307-315, Springer International Publishing, 2015.
13. Cafolla D., Wang M.F., Carbone G. and Ceccarelli M., “LARMbot: a new humanoid robot with parallel mechanisms”, Robot Design, Dynamics and Control: Proceedings of ROMANSY 2016, 21st CISM-IFToMM Symposium on Robot Design, Dynamics, and Control, pp. 275-284, Springer International Publishing, 2016.

14. Ceccarelli M., Cafolla D., Wang M.F., and Carbone G., “An Overview of the Ongoing Humanoid Robot Project LARMbot”, IN: L. Alboul et al. (Eds.): TAROS 2016, LNAI 9716, Springer International Publishing Switzerland 2016, (DOI) 10.1007/978-3-319-40379-3_6, 2016, pp. 53–64.”
15. Chaparro Rico B.D.M, Castillo Castañeda E., Ceccarelli M., Cafolla D., Design and Test of Therapy Exercise for Human Arms”, in Proceedings of MESROB 2016, Medical and Service Robotics 2016, Paper ID: 3, 2016.
16. Leal-Naranjo J.A., Ceccarelli M., Torres-San Miguel C.R., and Cafolla D., “An experimental characterization of human arm motion”, in Proceedings of MESROB2016, Medical and Service Robotics 2016, Paper ID: 4, 2016.
17. Olinski M., Ceccarelli M., Cafolla, D. and Gronowicz A., “An Experimental Characterization of Human Knee Joint Motion Capabilities”, In New Trends in Mechanism and Machine Science, Springer International Publishing, 2017, pp. 411-419, (DOI)10.1007/978-3-319-44156-6_42.
18. Olinski M., Gronowicz A., Ceccarelli M., and Cafolla D., “Human motion characterization using wireless inertial sensors”, in: New Advances in Mechanisms, Mechanical Transmissions and Robotics, Mechanisms and Machine Science 46, Springer International Publishing AG, 2017, pp. 401-408. (DOI) 10.1007/978-3-319-45450-4_40.
19. Chaparro Rico B.D.M, Cafolla D., Ceccarelli M., and Castillo Castañeda E., “Design and Simulation of an Assisting Mechanism for Arm Exercises”, Advances in Italian Mechanism Science. Springer International Publishing, 2017, pp. 115-123.
20. Ceccarelli M., Cafolla D., Carbone G., Russo M., Cigola M., Senatore J.L., Gallozzi A., Di Maccio R., Ferrante F., Bolici F., Supino S., Colella N., Bianchi M., Intrisano C., Recinto G., Micheli A.P., Vistocco D., Nuccio M.R., and Porcelli M., “HeritageBot Service Robot assisting in Cultural Heritage”, In Robotic Computing (IRC), IEEE First International Workshop on Robotic Computing for Cultural Heritage (IRCCH 2017), Taichung City, Taiwan, 2017, pp. 440-445.
21. Ceccarelli M., Cafolla D., Russo M., Carbone G., “Prototype and Testing of Heritagebot Platform for Service in Cultural Heritage”, New Activities for Cultural Heritage, Springer, Cham, 2017, pp. 103-112.
22. Ceccarelli M., Cafolla D., Russo M., Carbone G., “Design and Construction of a Demonstrative HeritageBot Platform Advances in Service and Industrial Robotics, Mechanisms and Machine Science 49, 2017, 49:355-362.
23. Russo M., Ceccarelli M., Cafolla D., Matsuura D., and Takeda Y, An Experimental Characterization of a Parallel Leg Mechanism for Robotic Legs, Submitted to the 22st CISM IFToMM Symposium on Robot Design, Dynamics and Control (ROMANSY 2018), Rennes, France, 2018.
24. Orozco Magdaleno E.C., Cafolla D., Ceccarelli M., Castillo Castañeda E., and Carbone G., “Experiences for a User-Friendly Operation of Cassino Hexapod III”, Mechanisms and Machine Science, 2018, 67:205-213.
25. Leon Rodriguez J.F.R., Carbone G., Cafolla D., Russo M., Ceccarelli M., and Castillo Castañeda E., Experiences and Design of a Cable-Driven Assisting Device for Arm Motion, Submitted to the 22st CISM IFToMM Symposium on Robot Design, Dynamics and Control (ROMANSY 2018), Rennes, France, 2018.
26. Gerding E., Carbone G., Cafolla D., Russo M., Ceccarelli M., Rink S., and Corves B., Design of a Finger Exoskeleton for Motion Guidance. Submitted to EUCOMES 2018 - European Conference on Mechanism Science, Aachen, Germany, 2018.
27. Carbone G., Cafolla D., Ceccarelli M., Aydinoglu O., and Demirel M., “Internship Experience for Learning the Operation of a Cable-Driven Robot for Rehabilitation Tasks”, 2nd International

Symposium on the Education in Mechanism and Machine Science (ISEMMS 2017), Madrid, Spain, 2017. (in print)

28. Russo, M., Ceccarelli, M., Cafolla, D., Matsuura, D., and Takeda, Y., “An Experimental Characterization of a Parallel Leg Mechanism for Robotic Legs” ROMANSY 22 – Robot Design, Dynamics and Control, CISM, Springer, Cham, 2018, pp. 584:18-25.
29. Lazăr V.A., Cafolla D., Leon Rodriguez J.F.R, Carbone G., Ceccarelli M., Pisla D., and Vaida C., “Experimental Characterization of Assisted Human Arm Exercises”, International Conference on Automation, Quality and Testing, Robotics (AQTR 2018), Cluj Napoca, Romania, 2018, paper 9978-1-5386-2203-2/18/$31.00.
30. Cafolla, D., Russo, M., Carbone, G., “Design of CUBE, a cable-driven device for upper and lower limb exercising”, in New Trends in Medical and Service Robotics: Advances in Theory and Practice, 2018, 65:255-263.
31. Cafolla D., “A 3D visual tracking method for rehabilitation path planning”, in New Trends in Medical and Service Robotics: Advances in Theory and Practice, 2018, 65: 264-272.
32. Lazăr V.A., Cafolla D., Pisla D., and Carbone G., “Design of a mechanical interface for a cable driven rehabilitation Device”, in New Trends in Medical and Service Robotics: Advances in Theory and Practice, 2018, pp. 283-292.
33. Russo M., Cafolla D., Ceccarelli M., “Development of LARMbot 2, a novel humanoid robot with parallel architectures”, Mechanism Design for Robotics, Mechanism and Machine Science, Springer, Cham, 2018, 66:17-24.
34. Gerding E., Carbone G., Cafolla D., Russo M., Ceccarelli M., Rink S., Corves B., “Design and Testing of a Finger Exoskeleton Prototype”, Advances in Italian Mechanism Science, Mechanisms and Machine Science, Springer, Cham, 68:342-349, 2018.
35. Ceccarelli M., Cafolla D., Russo M., Carbone G., “Design issues for a flying-walking robot”, The Asian Conference on Mechanism and Machine Science (Asian MMS2018), Bengaluru, India, 2018. (in print)
36. Ivanov K., Gonzalez-Cruz C.A., Ceccarelli M., Ozhiken A.K., and Cafolla D., “Design and experiences of a planetary gear box for adaptive drives”, (2019) Mechanisms and Machine Science, 2019, 59:284-291.
37. Carbone G., Cafolla D., Ceccarelli M., Aydinoglu O., Demirel M., “Internship experience for learning the operation of a cable-driven robot for rehabilitation tasks”, Mechanisms and Machine Science, 2019, 64:195-207.
38. Arslan O., Karaahmet S.B., Selvi Ö., Cafolla D., and Ceccarelli M., “Redesign and construction of a low-cost CaPaMan prototype”, Mechanisms and Machine Science, 2019, 66:158-165.
39. Espinosa-Garcia F.J., Carbone G., Ceccarelli M., Cafolla D., Arias-Montiel M., Lugo-Gonzalez E., “A study of feasibility for a design of a metamorphic artificial hand”, Mechanisms and Machine Science, 2019, 67:283-290.
40. Russo M., Ceccarelli M., Cafolla D., Matsuura D., and Takeda Y., “An Experimental Characterization of a Parallel Leg Mechanism for Robotic Legs”, ROMANSY 22 – Robot Design, Dynamics and Control, CISM, Springer, Cham, 2019, 584:18-25.
41. Leon, J.F.R., Carbone, G., Cafolla, D., Russo, M., Ceccarelli, M., and Castillo Castañeda, E., “Experiences and Design of a Cable-Driven Assisting Device for Arm Motion”, ROMANSY 22 – Robot Design, Dynamics and Control, CISM, Springer, Cham, ,2019, pp. 584:94-101.

42. Cafolla D., “A personalized flexible exoskeleton for finger rehabilitation: a conceptual design”, Advances in Mechanism and Machine Science, mechanism and Machine Science, Springer, Cham, 73:73-82, 2019.
43. Cafolla D., Russo M., Chaparro-Rico, B.D.M., “A 3D vision tracking method for mechanism validation”, Advances in Mechanism and Machine Science, mechanism and Machine Science, Springer, Cham, 73 2067-2076, 2019.
44. Orozco Magdaleno E.C., Cafolla D., Castillo Castañeda E., Carbone G., “Gait planning for obstacle avoidance using mecanum wheel”, Advances in Mechanism and Machine Science, mechanism and Machine Science, Springer, Cham, 73: 2391-2400, 2019.
45. Ricciuti P., Di Pardo A., Cafolla D., “MeDB: a Portable Clinical Historical Database”, In: Marta Mieli, Carlo Volpe, Connecting the Future., Consortium GARR, ISBN: 978-88-905077-9-3, doi: 10.26314/GARR-Conf19-proceedings-20, Torino, 2019, pp. 98-101.
46. Cafolla D., Pavone L., “A BCI controlled soft finger exoskeleton fitting patient’s needs”, In: 3rd ICEHTMC Proceedings. GLOBAL CLINICAL ENGINEERING JOURNAL, ISSN: 2578-2762, Roma, doi: 10.31354/globalce.v2iSpecial%20Is, 2019, p. 104.
47. Cafolla D., Sebastiano F., “An Implantable Biocompatible Smart Stent for Monitoring Eventual Restenosis”, Mechanisms and Machine Science, 2021, pp. 861–867.
48. Ceccarelli M., Cafolla D., Russo M., “Design Issues for a Walking-Flying Robot”, Lecture Notes in Mechanical Engineering, 2021, pp. 267–277.
49. Rodríguez-León, J.F., Cafola, D., Suarez, B., Castillo-Castañeda, E., Carbone, G., “A study of feasibility for a novel cable-driven upper-limb exoskeleton with magnetic balancing”, Mechanisms and Machine Science, 102, pp. 184-191, 2021.
50. Cafolla D., Chaparro-Rico B.D.M.,”A Universal Aided Piloting System with NLU Support”, Mechanisms and Machine Science, 122 MMS, pp. 621 – 627, 2022.
51. Araque-Isidro J.E., Cafolla D., Ceccarelli M.,”Problems and Requirements for Outer Space Astronaut Service Robot, Mechanisms and Machine Science, 122 MMS, pp. 603 – 611, 2022.

Journals

52. Tedeschi F., Cafolla D., and Carbone G., “Design and operation of Cassino Hexapod II” JOMAC International Journal of Mechanics and Control Vol. 15 N° 01, 2014, pp. 1590-8844.
53. Cafolla D., I-Ming C., and Ceccarelli M., “An experimental characterization of human torso motion”, Frontiers of Mechanical Engineering, Vol. 10, No. 4, (DOI) 10.1007/s11465-015-0352-z, 2015, pp. 311-325.
54. Cafolla D. and Ceccarelli M., “Design and simulation of a cable-driven vertebra-based humanoid torso”, International Journal of Humanoid Robotics, Vol. 13, No. 4, (DOI) 10.1142/S0219843616500158, 2016, pp. 1650015-1−1650015-27.
55. Cafolla D. and Ceccarelli M., M. F. Wang, G. Carbone, “3D printing for feasibility check of mechanism design”, International Journal of Mechanics and Control, ISSN: 1590-8844, Vol. 17, No. 01, 2016, pp. 3-12.
56. Russo M., Ceccarelli M., Corves B., Hüsing M., Lorenz M., Carbone G., “Design, Construction and Testing of a Gripper for Horticulture products”, Advances in Robot Design and Intelligent Control, Advances in Intelligent Systems and Computing, Springer, Cham, 2016, 540:119-127.

57. Russo M., Ceccarelli M., Corves B., Hüsing M., Lorenz M., Cafolla D., and Carbone G., “Design and Test of a Gripper Prototype for Horticulture Products”, Journal of Robotics and Computer-Integrated Manufacturing, Vol.44, 2017, pp. 266-275.
58. Cafolla D. and Ceccarelli M., “An Experimental Validation of a Novel Humanoid Torso”, Robotics and Autonomous Systems, (DOI) 10.1016/j.robot.2017.02.005, http://dx.doi.org/10.1016/j.robot.2017.02.005, 2017.
59. Cafolla D. and Ceccarelli M., “Characteristics and Performance of CAUTO (CAssino hUmanoid TOrso) Prototype”, Inventions 2017, 2(3), 17, Special Issue Advances in Mechanism Design for Robots), (DOI) 10.3390/inventions2030017, 2017.
60. Ceccarelli M, Cafolla D, Russo M, and Carbone G., LARM Bot Humanoid Design Towards a Prototype. MOJ App Bio Biomech 1(2): 00008. DOI: 10.15406/mojabb.2017.01.00008, 2017.
61. Ceccarelli M., Cafolla D., Russo M., and Carbone G., HeritageBot Platform for Service in Cultural Heritage Frames, Submitted to International Journal of Advanced Robotic Systems, 2018
62. Cafolla D., Russo M., and Carbone G., “Design and validation of an inherently safe cable-driven assisting device”, International Journal of Mechanics and Control, 2018, Vol.19, N.01, pp.23-32, ISSN 1590-8844.
63. Chaparro Rico B.D.M, Cafolla D., Ceccarelli M., and Castillo Castañeda E., “Experimental Characterization of NURSE, a Device for Arm Motion Guidance”, Journal of Healthcare Engineering, vol. 2018, Article ID 9303282, 15 pages, 2018, https://doi.org/10.1155/2018/9303282.
64. Russo M., Cafolla D., Ceccarelli M., “Design and experiments of a novel humanoid robot with parallel architectures”, MDPI Robotics, 7(4):79, 2018.
65. Stampanoni Bassi, M., Casciato, S., Gilio, L., Pavone, L., Cafolla, D., Sforza, E., Alfonsi, E., Simonelli, I., Di Gennaro, G., Centonze, D., Iezzi, “Subclinical dysphagia in task-specific mouth tremor triggered by drinking”,Clinical Neurophysiology, 130 (8), 2019, pp. 1289-1291.
66. Orozco Magdaleno E.C., Cafolla D., Castillo Castañeda E., Carbone G., “A Service Hexapod Robot As Hospital Guide”, JOMAC International Journal of Mechanics and Control Vol. 20, No. 01, 2019, pp. 121-126.
67. Pavone L., Gabriele Pasqua G., Ricciuti P. and Cafolla D., “A Kinect-Based Portable Automatic Gait Analysis System: An Experimental Validation”, Biomedical Journal of Scientific & Technical Research, Volume 17:1, 2019, pp. 12552-12555.
68. Cafolla D., Russo M., Carbone, G., “CUBE, a cable-driven device for limb rehabilitation”, Journal of Bionic Engineering 16(3):492-502, 2019.
69. Pavone L., and Cafolla D., “A Tailored BCI Controlled Soft Finger Exoskeleton for Patient’s Needs: A Conceptual Design”, Biomedical Journal of Scientific & Technical Research, Volume 19:3, 2019, pp. 14288-14292.
70. Orozco-Magdaleno E.C., Cafolla D., Castillo-Castañeda E., Carbone G, “A hybrid legged-wheeled obstacle avoidance strategy for service operations”, SN Appl. Sci. 2, 329, https://doi.org/10.1007/s42452-020-2141-5, 2020.
71. Cafolla, D., Russo, M., Ceccarelli, M., “Experimental Validation of HeritageBot III, a Robotic Platform for Cultural Heritage”, Journal of Intelligent & Robotic Systems, https://doi.org/10.1007/s10846-020-01180-6, 2020.
72. Chaparro-Rico B.D.M., Cafolla D., Ceccarelli M., Castillo-Castaneda E., “NURSE-2 DoF device for arm motion guidance: Kinematic, dynamic, and FEM analysis”, Applied Sciences (Switzerland), 10 (6), art. no. 2139, 2020.

73. Carbone G., Gerding E.C., Corves B., Cafolla D., Russo M., Ceccarelli M., “Design of a Two-DOFs driving mechanism for a motion-assisted finger exoskeleton”, Applied Sciences (Switzerland), 10 (7), art. no. 2619, 2020.
74. Orozco-Magdaleno E.C., Cafolla D., Castillo-Castañeda E., Carbone G, “Static Balancing of Wheeled-legged Hexapod Robots”, MDPI Robotics, 9(2):23, 2020.
75. Chaparro-Rico B.D.M., Cafolla D., Castillo-Castaneda E., Ceccarelli M., “Design of arm exercises for rehabilitation assistance”, Journal of Engineering Research (Kuwait), 8 (3), 2020, pp. 203–218.
76. Chaparro-Rico B.D.M., Cafolla D., “Test-retest, inter-rater and intra-rater reliability for spatiotemporal gait parameters using SANE (an eaSy gAit aNalysis systEm) as measuring instrument”, Applied Sciences (Switzerland), 10 (17), art. no. 5781, 2020.
77. Chaparro-Rico B.D.M., Cafolla D., Tortola P., Galardi G., “Assessing stiffness, joint torque and ROM for paretic and non-paretic lower limbs during the subacute phase of stroke using Lokomat tools”, Applied Sciences (Switzerland), 10 (18), art. no. 6168, 2020.
78. Cafolla D., Russo M., Ceccarelli M., “Experimental Validation of HeritageBot III, a Robotic Platform for Cultural Heritage”, Journal of Intelligent and Robotic Systems: Theory and Applications, 1000 (1), 2020, pp. 223–237.
79. Chaparro-Rico B.D.M., Sebastiano F., Cafolla D., “A smart stent for monitoring eventual restenosis: Computational fluid dynamic and finite element analysis in descending thoracic aorta”, Machines, 8 (4), art. no. 81, 2020.
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