

Erika Rovini

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OCCUPATIONAL FIELD

Biomedical Engineer, Bioengineering, Data Scientist

CURRENT POSITION

12/2018 - currently

Post-Doc Researcher

The BioRobotics Institute, Scuola Superiore Sant'Anna, viale R. Piaggio,34, 56025, Pontedera (PI), Italy

▪ **Main Activities:**

- IMUs and physiological sensors;
- physiological and motion data analysis particularly for neurodegenerative diseases applications;
- data processing algorithms, feature extraction, statistical analysis, machine learning;
- collaboration with clinicians for developing experimental protocols and conducting experimental sessions;
- writing of scientific contributions on international peer-reviewed journals and participation in national and international conferences.

▪ **Project Manager PHArA-ON** *Pilots for Healthy and Active Ageing* (GA 857188) funded from the European Union's Horizon 2020 research and innovation programme (Dec. 2019-Nov. 2023) www.pharaon.eu

▪ **Project Manager OLIMPIA** *A novel accessible and widespread healthcare service model based on technology innovation for objective (early) diagnosis and therapeutic monitoring of Parkinson's disease promoting continuity of care* (CUP J44I20000760009) (Jul. 2020 – May 2023)

▪ **Reviewer** for international peer-reviewed journals (e.g., Frontiers in Neurology, The Journal of the Neurological Science, Computers in Biology and Medicine, IEEE Access, PlosOne, Sensors) and conferences (e.g., Italian Forum of Ambient Assisted Living - FortAAL, Int. Symp. on Consumer Technology - ISCT, Int. Conf. on Intelligent Robots and Systems - IROS).

▪ Experience in **writing** Regional, National (FAR/FAS Tuscany) and EU project (FP7, H2020) **proposals**.

▪ **Co-investigator** in Regional, National and EU projects.

▪ **Tutor** for Master Thesis students and Visiting Research students.

Field: Bioengineering, Biorobotics, AAL, Wearable sensors, Signal Processing, Data Analysis, Neuroscience

WORK EXPERIENCE

20/12/2017 – 19/12/2018

Collaborator (co.co.co.)

Istituto Ortopedico Rizzoli, via di Barbiano,1/10, 40136, Bologna (BO), Italy

- Reports and scientific publications about: i) kinematic intraoperative data acquired during TKAs with navigation systems; ii) analysis of proprioception before and after TKA, within the project "New methodologies for the treatment of limb amputations through osseointegration"

Field : Bioengineering, Orthopaedics, Biomechanics, Data analysis

15/09/2011 - 31/10/2014

Assistant Researcher

The BioRobotics Institute, Scuola Superiore Sant'Anna, viale R. Piaggio,34, 56025, Pontedera (PI), Italy
Working on regional and European projects:

- **RITA** (Studio, implementazione e sperimentazione di Reti ICT in Toscana e Assistenza socio-sanitaria per anziani e non autosufficienti), **CariLiv** (Le tecnologie per l'assistenza ad anziani, disabili e non autosufficienti: nuovi scenari per il volontariato?), **ASTROMOBILE** (Assistive SmarT RObotic platform for indoor environments MOBILity and intEraction) e **ROBOT-ERA** (Implementation and integration of advanced Robotic Systems and intelligent Environments in real scenarios for the ageing population): studies on usability and acceptability of assistive technologies.
- **PARKINSON:** development of wearable devices based on inertial sensors to acquire and process data for upper and lower limbs motion analysis in people with Parkinson's disease and in healthy subjects of control (in partnership with ASL1 Massa and Carrara, Onlus NeuroCare Association and Telecom Italia WHITE Joint Lab).

Field: Bioengineering, Biorobotics, AAL, Wearable sensors

EDUCATION AND TRAINING

11/2019

Innovation Manager

Ministero Italiano dello Sviluppo Economico (MISE), Italy

11/2014 - 11/2018

PhD in BioRobotics (Vote 100/100 cum laude)

Livello EQF 8

The BioRobotics Institute, Scuola Superiore Sant'Anna, viale R. Piaggio,34, 56025, Pontedera (PI), Italy
Thesis on: "*Study and development of novel diagnostic and therapeutic approaches in Parkinson's disease based on ICT and machine learning*". Supervisor and Tutor: Dr. F. Cavallo; co-tutor: Dr. C. Maremmani

- Decision support system for PD diagnosis and management based on data analysis from IMU and physiological sensors;

- data processing algorithms, statistical analysis, machine learning;
 - experimental protocols and experimentation in real environments involving real endusers;
 - know how on clinical scales, socio-clinical hypotheses, users' needs.
 - Co-Investigator of **Trans.Safe** Ambient Response to Avoid Negative Stress and enhance SAFETY (Jul. 2014 – Jun 2017)
 - Writing of National (FAR/FAS Tuscany) and EU project (FP7, H2020) proposals.
 - Developer and Project manager in **DAPHNE** - Servizi innovativi e sostenibili di diagnosi precoce, trattamento terapeutico e gestione della malattia di Parkinson attraverso tecnologie mHealth e ICT, favorendo l'automonitoraggio domiciliare e la partecipazione attiva del paziente e del caregiver – bando FAS Salute 2014, funded by Tuscany Region
- The PhD was funded by Ministerial scholarship. From 19/04/2016 to 28/09/2016 I took benefit from a maternity leave according to Art. 22, comma 6, L. 240/2010.

Session 2-2011

Enabled to practice the profession of Industrial Engineer

University of Pisa, via Diotisalvi, 2, 56122, Pisa, Italy

09/2008 - 07/2011

Master Degree in Biomedical Engineering (Vote 110/110)

Livello EQF 7

Università di Pisa, via Diotisalvi, 2, 56122, Pisa, Italy

Thesis on: “*Study and development of a magnetic system for the placement of devices during the minimally invasive surgery for atrial fibrillation*” Supervisor: Prof. A. Mencias, Tutor: Dr. E. Troia.

09/2004 - 07/2008

Bachelor Degree in Biomedical Engineering (Vote 110/110)

Livello EQF 6

University of Pisa, via Diotisalvi, 2, 56122, Pisa, Italy

Thesis on: “*Study and preparation of functional properties of novel biomimetic materials for applications in regenerative medicine*”. Supervisor: Prof. C. Cristallini; Tutor: Ing. D. Silvestri

June 2017

Connected Health Summer School - Smart Technology for Smarter Living (CHSS 2017). Artimino, Italy – Winner of Best Group Award. (<http://www.connectedhealth-summerschool.org/>). Organizers: Ulster University (Prof. C. Nugent) and I+ s.r.l. (Dr. C. Paggetti).

Events and Presentations

- *IEEE 42nd Int. Engineering in Medicine and Biology Conf. (EMBC)*, Online, July 2020 – oral presentation
- *Giomata Nazionale del Parkinson (GNP 2019)*, 30th Nov. 2019, Florence, Italy – invited speaker
- *IEEE 41st Int. Engineering in Medicine and Biology Conf. (EMBC)*, Berlin, July 2019 – oral presentation
- *IEEE Int. Symp. on Measurements & Networking (M&N)*, Catania, July 2019 – oral presentation
- *Sensori indossabili per la diagnosi ed il monitoraggio della malattia di Parkinson: studio CASANOVA e DAPHNE*, Massa, Feb 2018 – Invited Speaker, Technical demonstration as expert in wearable sensors.
- *8° Forum Italiano per l'Ambient Assisted Living (FortAAL)*. Genova, Jun 2017 – oral presentation
- *Convegno Vivere il Parkinson: il futuro è adesso*, Verona, Nov, 2015 – Technical demonstration as expert in wearable sensors.
- *6° Forum Italiano per l'Ambient Assisted Living (FortAAL)*. Lecco, May, 2015 – oral presentation
- *20th IMEKO TC4 Int Symp*, Benevento, Sept, 2014 – oral presentation

PERSONAL SKILLS AND COMPETENCES

Mother Tongue

Italian

Other languages

UNDERSTANDING

SPEAKING

WRITING

Listening

Reading

Spoken Interaction

Spoken Production

English

B1

B2

B1

B1

B2

Spanish

A2

B1

A2

A2

A2

Levels: Basic Level A1/2 - Intermediate Level B1/2 - Advanced Level C1/2. European Level

Technical Skills and Competences

- Data processing, statistical analysis, machine learning, artificial intelligence.
- Motion data analysis and physiological signals analysis.
- Use of microcontrollers, IMU sensors and physiological sensors.
- Writing of documents, projects (including participation in European projects), reports, deliverables, patents and scientific papers for the dissemination of the activity results.
- Use of chemical lab instrumentation (e.g., spectrophotometer, HPLC, lyophilizer, centrifuge)

Computer Skills and Competences

- Microsoft Office / Latex.
- Good knowledge of data processing software (Matlab) and video-editing softwares.
- Basic knowledge of CAD design software (ProEngineer), finite element analysis software (COMSOL Multiphysics), programming language C++ / C#, and creation of graphical user interfaces (Visual Studio,

Communicative,
Organizational and
Management Skills and
Competences

LabView).

- My personal course of study, as well as my multiannual experience in sports, significantly contributed to my training, allowing me to develop a good team spirit and excellent capabilities of interaction and integration also in new areas. During my experience in Scuola Superiore Sant'Anna, I always provide my skills and competencies to achieve common objectives, organising and coordinating also meeting group and events when required. This let me develop a great sense of responsibility and organization as well as an excellent ability to manage deadlines and meetings. My childhood passion for reading also enables me to hone skills of analysis and synthesis with a good attitude for writing.

Driving Licence

B

ADDITIONAL INFORMATION

Patents

- Cavallo F., Maremmani C., Esposito D., **Rovini E.**, Aquilano M., Dario P., Carrozza M.C., "Not-glove inertial sensor system for movement analysis of hand: SensHand V1", Italian patent PI2013A000002, 14/01/2013.
- Cavallo F., Maremmani C., Esposito D., **Rovini E.**, Aquilano M., Dario P., Carrozza M.C., "Inertial rings-based sensor system for movement analysis of hand: SensHand V2", Italian patent PI2013A000003, 14/01/2013.
- Cavallo F., Maremmani C., Esposito D., **Rovini E.**, Aquilano M., Dario P., Carrozza M.C., "Method and related apparatus for monitoring biomechanical performances of human limbs". PCT/IB2014/ 058265, 14 Jan 2014.

Awards

- **Open Accelerator Zambon 2020**, Special Support Program Award to WEARnCARE, role: presenter.
- **Open Accelerator Zambon 2020**, Bird & Bird legal consultancy award to WEARnCARE, role: presenter.
- **StartCup Toscana 2020**, 1st prize, WEARnCARE business idea, role: presenter.
- Best paper award for at **FortAAL2020**, role: co-author
- Best paper award for Under35 researcher at **FortAAL2019**, 3rd prize, role: co-author
- **iNEMO Design Challenge Award 2015**: The idea proposed in the project was the design and development of a system, composed of wireless inertial rings based on the iNEMO-M1 (STMicroelectronics), to finely and objectively measure the movement and posture of the fingers for objective assessment of the motor performance in patients with Parkinson's Disease (Nov 2015).

Membership

IEEE Member and EMBS Member 2019/2020

Key Indexes

	# Contributions	# Citations	H-index
Scopus	32	333	9
Scholar	47	496	12

Publications

International Scientific Journals:

1. G. Mancioppi, L. Fiorini, **E. Rovini**, & F. Cavallo (2021). "The Use of Motor Cognitive Dual-Task Quantitative Assessment on Subjects with Mild Cognitive Impairment: A systematic Review". *Mechanisms of Ageing and Development*, 193: 111393. <https://doi.org/10.1016/j.mad.2020.111393>.
2. A. Butt, **E. Rovini**, H. Fujita, C. Maremmani, & F. Cavallo (2020). "Data Driven models for Objective Grading improvement of Parkinson's Disease". *Annals of Biomedical Engineering* <https://doi.org/10.1007/s10439-020-02628-4>
3. **E. Rovini**, C. Maremmani, & F. Cavallo (2020). "A wearable system to objectify assessment of motor tasks for supporting Parkinson's Disease diagnosis". *Sensors*, Special Issue: *Sensors and Sensing Technology Applied in Parkinson Disease*, 20(9), 2630; <https://doi.org/10.3390/s20092630>
4. L. Bragonzoni, **E. Rovini**, G. Barone, F. Cavallo, S. Zaffagnini, & M.G. Benedetti (2019). "How proprioception change before and after total knee arthroplasty: a systematic review". In *Gait & Posture*, 72:1-11. <https://doi.org/10.1016/j.gaitpost.2019.05.005>.
5. C. Maremmani, R. Monastero, G. Orlandi, S. Salvadori, A. Pieroni, R. Baschi, A. Pecori, C. Dolciotti, G. Berchina, **E. Rovini**, F. Cuddemi, & F. Cavallo (2019). "Objective assessment of blinking and facial expressions in Parkinson's disease using vertical electrooculogram and facial surface electromyography". *Physiological Measurement*, 2019 Apr 24. <https://doi.org/10.1088/1361-6579/ab1c05>.
6. F. Cavallo, A. Moschetti, D. Esposito, C. Maremmani, & **E. Rovini** (2019). "Upper limb motor pre-clinical assessment in Parkinson's disease using machine learning". In *Parkinsonism & Related Disorders*, <https://doi.org/10.1016/j.parkreldis.2019.02.028>
7. A.H. Butt, **E. Rovini**, C. Dolciotti, G. De Petris, P. Bongioanni, M. C. Carboncini, & F. Cavallo (2018). "Objective and Automatic Classification of Parkinson Disease with Leap Motion Controller". *BioMedical Engineering OnLine*, 17:168. <https://doi.org/10.1186/s12938-018-0600-7>
8. **E. Rovini**, C. Maremmani, A. Moschetti, D. Esposito & F. Cavallo. (2018). "Comparative motor pre-clinical assessment in Parkinson's disease using supervised machine learning approaches". *Annals of Biomedical Engineering* <https://doi.org/10.1007/s10439-018-2104-9>.
9. **E. Rovini**, C. Maremmani, & F. Cavallo. (2018). "Automated systems based on wearable sensors for the management of Parkinson's disease at home: a systematic review". *Telemedicine Journal and e-Health*.

- <https://doi.org/10.1089/tmj.2018.0035>.
10. C. Maremmani, F. Cavallo, C. Purcaro, G. Rossi, S. Salvadori, **E. Rovini**, D. Esposito, A. Pieroni, S. Ramat, P. Vanni, B. Fattori, & G. Meco. (2018). "Combining olfactory test and motion analysis sensors in Parkinson's disease preclinical diagnosis: A pilot study". *Acta Neurologica Scandinavica*, 137:204–211. doi: 10.1111/ane.12862
 11. S. Betti, R. Molino Lova, **E. Rovini**, G. Acerbi, L. Santarelli, M. Cabiati, S. Del Ry, & F. Cavallo (2017). "Evaluation of an integrated system of wearable physiological sensors for stress monitoring in working environments by using biological markers". *IEEE Transactions in Biomedical Engineering*, 65(8):1748-1758. doi: 10.1109/TBME.2017.2764507
 12. **E. Rovini**, C. Maremmani, & F. Cavallo (2017). "How wearable sensors can support Parkinson's Disease diagnosis and treatment: a systematic review". *Frontiers in Neuroscience*, 11:555. doi: 10.3389/fnins.2017.00555
 13. A.H. Butt, **E. Rovini**, D. Esposito, G. Rossi, C. Maremmani, & F. Cavallo (2017). "Biomechanical parameter assessment for classification of Parkinson disease on clinical scale". *International Journal of Distributed Sensor Networks*, vol. 13(5). doi: 10.1177/1550147717707417

Book Chapter:

1. **E. Rovini**, D. Esposito, C. Maremmani, P. Bongioanni, & F. Cavallo (2016). "Empowering Patients in Self-Management of Parkinson's Disease through Cooperative ICT Systems". In Y. Morsi, A. Shukla, & C. Rathore (Eds.) *Optimizing Assistive Technologies for Aging Populations* (pp. 251-277). Hershey, PA: Medical Information Science Reference. doi:10.4018/978-1-4666-9530-6.ch010. Re-edited in: (2018) *Wearable Technologies: Concepts, Methodologies, Tools, and Applications* (pp. 637-663). IGI Global.

Proceedings Conferences:

1. G. Mancioffi, L. Fiorini, **E. Rovini**, R. Zeghari, A. Gros, V. Manera, P. Robert, & F. Cavallo (2020), "How Dominant Hand and Foot Dexterity May Reveal Dementia Onset: A Motor and Cognitive Dual-Task Study", In Proceedings *IEEE Eng Med Biol Soc. (EMBC) 2020*, July 20-24, 2020, Montreal, Canada.
2. F. Cavallo, **E. Rovini**, C. Dolciotti, R. Della Ragione, P. Bongioanni, & L. Fiorini, (2020), "Physiological response to Vibro-Acoustic stimulation in healthy subjects: a preliminary study", In Proceedings *IEEE Eng Med Biol Soc. (EMBC) 2020*, July 20-24, 2020, Montreal, Canada.
3. **E. Rovini**, G. Galperti, L. Fiorini, G. Mancioffi, V. Manera, & F. Cavallo, (2020), "SensRing, a novel wearable ring-shaped device for objective analysis of reach-to-grasp movements", In Proceedings *IEEE Eng Med Biol Soc. (EMBC) 2020*, July 20-24, 2020, Montreal, Canada.
4. A. H. Butt, F. Cavallo, C. Maremmani, & **E. Rovini**, (2020), "Biomechanical parameters assessment for classification of Parkinson Disease using Deep Recurrent Neural Networks", In Proceedings *IEEE Eng Med Biol Soc. (EMBC) 2020*, July 20-24, 2020, Montreal, Canada.
5. **E. Rovini**, G. Galperti, L. Fiorini, G. Mancioffi, V. Manera, & F. Cavallo, (2020), "SensRing, a wearable ring-shaped device for measuring kinematics in reach-to-grasp tasks", In Proceedings *VII Congress of the National Group of Bioengineering (GNB) 2020* June 10-12, 2020, Trieste, Italy
6. L. Fiorini, G. D'Onofrio, **E. Rovini**, A. Sorrentino, L. Coviello, R. Limosani, D. Sancarlo, F. Cavallo (2019) "Towards cloud social robots for clinical assessment of sarcopenia in frail elderly". In Proceedings *28th IEEE Int. Conf. on Robot and Human Interactive Communication (Ro-Man 2019)*, Oct 14-18, 2019, New Delhi, India.
7. **E. Rovini**, A. Moschetti, L. Fiorini, D. Esposito, C. Maremmani, & F. Cavallo (2019) "Wearable sensors for prodromal motor assessment of Parkinson's Disease using supervised learning". In Proceedings *IEEE Eng Med Biol Soc. (EMBC) 2019*, July 23-27, 2019, Berlin, Germany.
8. L. Coviello, F. Cavallo, R. Limosani, **E. Rovini**, & L. Fiorini (2019) "Machine Learning based physical Human-Robot Interaction for walking support of frail people". In Proceedings *IEEE Eng Med Biol Soc. (EMBC) 2019*, July 23-27, 2019, Berlin, Germany.
9. A. H. Butt, C. Zambrana, S. Idelsohn-Zielonka, M. Claramunt-Molet, A. Ugartmendia-Etxarri, **E. Rovini**, A. Moschetti, C. Molleja, C. Martin, E. Opisso Salleras, & F. Cavallo (2019). "Assessment of Purposeful Movements for Post-Stroke Patients in Activities of Daily Living with Wearable Sensor Device". In Proceedings *IEEE Conference on Computational Intelligence in Bioinformatics and Computational Biology*, July 9-11, 2019, Certosa di Pontignano, Siena, Italy. 10.1109/CIBCB.2019.8791470
10. **E. Rovini**, D. Esposito, L. Fabbri, S. Pancani, F. Vannetti, & F. Cavallo (2019). "Vision optical-based evaluation of SensHand accuracy for Parkinson's disease motor assessment". In *Proceedings of the 2019 IEEE International Symposium on Measurements & Networking (M&N)*, July 8-10, 2019, Catania, Italy.
11. **E. Rovini**, L. Fiorini, D. Esposito, C. Maremmani, & F. Cavallo (2019). "Fine motor assessment with unsupervised learning for personalized rehabilitation in Parkinson Disease". In *Proceedings of the International Conference on Rehabilitation Robotics (ICORR)*, June 24-29, 2019, Toronto, Canada.
12. G. Mancioffi, L. Fiorini, M. L. Critelli, **E. Rovini**, M. Timpano Sportiello, & F. Cavallo (2019). "Evaluation of MCI Motor Performances During a Cognitive Dual Task Exercise". In *Proceedings of the IEEE 23rd International Symposium on Consumer Technologies (ISCT)*, June 19-21, 2019, Ancona, Italy.
13. L. Fiorini, F. Cavallo, M. Martinelli, & **E. Rovini** (2019). "Characterization of a PPG wearable sensor to be embedded into an innovative ring-shaped device for healthcare monitoring". In *Proceedings of the 10th*

- Forum Italiano Ambient Assisted Living (ForttAAL)*, June 19-21, 2019, Ancona, Italy. – **Under35 Researcher Award**, 3rd prize.
14. **E. Rovini**, L. Santarelli, D. Esposito, C. Maremmani, & F. Cavallo. (2019). "DAPHNE: a novel e-Health system for the diagnosis and the treatment of Parkinson's Disease": Italian Forum 2017. In Cavallo F., Marletta V., Monteriù A., Siciliano P. (Eds.) *Ambient Assisted Living*. ForttAAL 2017. Lecture Notes in Electrical Engineering, pp.271-288. https://doi.org/10.1007/978-3-030-04672-9_19
 15. A.H. Butt, **E. Rovini**, C. Dolciotti, P. Bongioanni, G. De Petris, F. Cavallo (2017) "Leap Motion Evaluation for Assessment of Upper Limbs Motor Skills in Parkinson's Disease". In *Proc. 2017 IEEE-RAS-EMBS Int Conf on Rehabilitation Robotics (ICORR)*, July 17-20, 2017, London, UK. doi: 10.1109/ICORR.2017.8009232
 16. G. Acerbi*, **E. Rovini***, S. Betti*, A. Tirri, J.F. Ronai, A. Sirianni, J. Agrimi, L. Eusebi, & F. Cavallo (2017). *A wearable system for stress detection through physiological data analysis*. In: Cavallo F., Marletta V., Monteriù A., Siciliano P. (Eds.) *Ambient Assisted Living*. ForttAAL 2016. Lecture Notes in Electrical Engineering, 426:31-50. Springer, Cham
 17. **E. Rovini**, D. Esposito, C. Maremmani, P. Bongioanni, & F. Cavallo (2014). "Using wearable sensor systems for objective assessment of Parkinson's disease", In *Proc. 20th IMEKO TC4 Int Symp*, Benevento, Italy
 18. R. Esposito, M. Bonaccorsi, D. Esposito, M. Filippi, **E. Rovini**, M. Aquilano, F. Cavallo, P. Dario and M.C. Carrozza (2013). "RITA Project: An Ambient Assisted Living Solution for Independent and Safely Living of Aging Population", In *Proc. 4° Forum Italiano per l'Ambient Assisted Living (ForttAAL)*, Ancona, Italy
 19. F. Cavallo, C. Maremmani, D. Esposito, **E. Rovini**, P. Bongioanni, M. Aquilano, M.C. Carrozza, P. Dario (2013), "Preliminary evaluation of SensHand V1 in assessing motor skills performance in Parkinson Disease", *Proc. Int Conf on Rehabilitation Robotics (ICORR)*, Seattle, WA, USA
 20. M. Aquilano, F. Cavallo, M. Bonaccorsi, R. Esposito, **E. Rovini**, M. Filippi, D. Esposito, P. Dario, and M.C. Carrozza (2012). "Ambient Assisted Living and Ageing: Preliminary Results of RITA Project", *Conf Proc IEEE Eng Med Biol Soc. (EMBC) 2012*:5823-6

Abstracts:

1. G. Mancioffi, L. Fiorini, **E. Rovini**, R. Zeghari, A. Gros, V. Manera, P. Robert, & F. Cavallo (2020), "How Dominant Hand Dexterity Could Help in Characterizing Different Grades of Cognitive Decline: A Motor and Cognitive Dual-Task Study". In *Proceedings in 2020 Alzheimer's Association International Conference (AAIC)*, 24-30 April, 2020, Amsterdam, The Netherlands.
2. V. Manera, G. Galperti, **E. Rovini**, R. Zeghari, G. Mancioffi, L. Fiorini, A. Gros, A. Mouton, R. Zory, X. Corveleyn, F. Cavallo & P. Robert (2020). "Developing non-invasive, objective assessment tools for social apathy in Neurocognitive Disorders: the role of action kinematics". In *Proceedings 2020 Alzheimer's Association International Conference (AAIC)*, 24-30 April 2020, Amsterdam, The Netherlands.
3. **E. Rovini**, A. Moschetti, L. Fiorini, D. Esposito, C. Maremmani, & F. Cavallo (2019). "Motor-based assessment of prodromal Parkinson's disease combining wearable sensors and machine learning". In *Movement Disorders*, 34 (Suppl. S2): S488(1177) © 2019 International Parkinson and Movement Disorder Society.
4. G. Mancioffi, L. Fiorini, **E. Rovini** & F. Cavallo (2019). "A Neuroscientific approach for MCI Characterization using a Motor and Cognitive Dual-Task". In *Movement Disorders*, 34 (Suppl. S2): S487(1174) © 2019 International Parkinson and Movement Disorder Society.
5. M. Rinieri, L. Santarelli, L. Fabbri, G. Pastucci, **E. Rovini**, D. Esposito, S. Pancani, C. Maremmani, F. Vannetti, & F. Cavallo (2017). "Preliminary studies for the evaluation of a novel wearable sensor for biomechanical analysis of upper limbs in Parkinson Disease". In *Gait & Posture*, 57(3):38. <http://dx.doi.org/10.1016/j.gaitpost.2017.07.102>
6. C. Maremmani, P. Bongioanni, G. Rossi, N. Tambasco, G. Meco, F. Cavallo, D. Esposito, **E. Rovini**, M. Aquilano, & M.C. Carrozza, P. Dario (2013). "Unbiased and mobile motor function analysis - SensHandV1 SensorFootV1 system - in PD patients and healthy subjects. A way for preclinical diagnosis of disease?", *Abstracts of the XX World Congress Parkinson's Disease and Related Disorders*, Geneva, Switzerland
7. C. Maremmani, P. Bongioanni, F. Cavallo, D. Esposito, **E. Rovini**, M. Aquilano, M. C. Carrozza, P. Dario (2013), "Preliminary evaluation of SensorFoot V1 and SensHand V1 in assessing motor skills performance of Parkinson's Disease patients", *Journal of the Neurological Sciences* 333(1):e67, 15 Oct 2013
8. F. Cavallo, M. Aquilano, R. Esposito, **E. Rovini**, M. Filippi, D. Esposito, P. Dario, M.C. Carrozza (2012). "RITA: An ambient assisted living approach to study, design and implement socio-medical services for ageing well". *Gerontechnology* 11(2):289.

Personal Data

I authorize the treatment of my personal data pursuant to D. Lgs. 196 of 30 June 2003 "Code relating to the protection of personal data" and art. 13 GDPR 679/16.

Place and Date

