



## PERSONAL INFORMATION

**Ludovico Pedullà** Via Bandi 26, 16148 Genoa (Italy) ludovico.pedulla@aism.it

Sex Male | Date of birth 18/01/1985 | Nationality Italian

## POSITION

**Researcher in rehabilitation, neurophysiology and bioengineering**

## WORK EXPERIENCE

18/03/2019–Present

**Researcher**Italian Multiple Sclerosis Foundation  
Via Operai, 40, 16149 Genoa (Italy)  
[www.aism.it](http://www.aism.it)

Member of the Scientific Area of the Italian Multiple Sclerosis Foundation.

My research is focused on the study of:

- the basic physio-pathological mechanisms of plasticity in humans;
- the impact of physical exercise and sports activity on behavioural and neural correlates in healthy subjects and in persons with multiple sclerosis;
- the impact of motor and cognitive rehabilitation on behavioural and neural correlates in persons with multiple sclerosis;
- validation of clinical scales for the evaluation of persons with multiple sclerosis;
- development of new protocols and devices for the rehabilitation of people with multiple sclerosis.

**Business or sector** Human health and social work activities

15/01/2015–Present

**University teaching assistant**

University of Genoa, Genoa (Italy)

- 2018-present: Information Processing Systems (Bachelor's degree for Physical Therapy)
- 2017-present: Medical Technologies for Clinical Neuroscience (Master degree for Biomedical Engineering)
- 2015-present: Human Physiology (Bachelor's degree for Biomedical Engineering)

01/03/2017–28/02/2019

**Post Doc**Department of Experimental Medicine, University of Genoa  
Via L. B. Alberti 2, 16132 Genova (Italy)  
[www.dimes.unige.it](http://www.dimes.unige.it)

Fellowship Grant supported by the Italian MS Foundation on "Behavioural and neural correlates of dual tasks negotiation in ecological setting: an fNIRS study to investigate cognitive-motor interference after rehabilitation in people with multiple sclerosis"

01/01/2014–20/04/2017

**PhD student**Department of Experimental Medicine, University of Genoa  
Via L. B. Alberti 2, 16132 Genoa (Italy)  
[www.dimes.unige.it](http://www.dimes.unige.it)

Investigating neural plasticity in sensori-motor neurorehabilitation.

- 11/06/2012–29/11/2013 **Researcher**  
 Italian Multiple Sclerosis Association  
 Via Operai 40, 16149 Genova (Italy)  
 Responsible for the development of a new software for cognitive rehabilitation in people with MS.  
 Collaborator in planning and implementing experimental protocols of motor and cognitive rehabilitation in people with multiple sclerosis.
- 01/04/2008–31/10/2008 **Physical therapist**  
 Fondazione Giovanni e Ottavia Ferrero  
 Via Italia 19, 17047 Vado Ligure (SV) (Italy)  
 Rehabilitative treatments of orthopedic and neurologic patients.

EDUCATION AND TRAINING

- 01/01/2014–20/04/2017 **Ph.D. in Neuroscience** EQF level 8  
 University of Genoa, Genoa (Italy)  
 Neural plasticity and neurorehabilitation of sensorimotor and cognitive systems in multiple sclerosis
- 01/11/2011–25/10/2013 **Master degree in bioengineering (final mark 104/110)**  
 University of Genoa, Genoa (Italy)  
 Scientific, technical and informatic expertise aiming at acquisition and analysis of experimental data in biomedical field.
- 01/11/2008–28/10/2011 **Bachelor degree in biomedical engineering (finale mark 95/110)**  
 University of Genoa, Genoa (Italy)  
 Acquisition of informatic, biomechanic, and telecommunications skills  
 Designing, developping, implementing and testing of biomedical devices.
- 01/10/2004–25/11/2007 **Bachelor degree in Physical therapy (full marks with honors)**  
 University of Genoa, Genoa (Italy)  
 Assessment, functional diagnosis and rehabilitative treatment of orthopedic and neurologic patients.  
 Biomechanics and physiologic and pathologic movement analysis.  
 Biomedical data analysis.
- 01/09/1999–25/07/2004 **High school diploma (classical studies)**  
 Liceo classico statale Andrea D'Oria, Genoa (Italy)
- 27/08/2002–31/05/2003 **USA high school graduation**  
 Wheeling Park High School, Wheeling (Usa)

PERSONAL SKILLS

Mother tongue(s) Italian

Foreign language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	C2	C2	C1	C1	C2

French	B1	B2	A2	A2	B1
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Levels: A1 and A2: Basic user - B1 and B2: Independent user - C1 and C2: Proficient user  
Common European Framework of Reference for Languages - Self-assessment grid

**Communication skills** I establish good relations both at work and in the free time. I am used to teamwork and to opinion sharing.

**Organisational / managerial skills** Good organizational and leadership skills.

**Digital skills** Mastery in programming languages: C, C++, C#, MatLab.  
 Mastery in Eclipse and Xamarin platforms for mobile devices' application development.  
 Mastery in BTS Smart-D movement analysis system.  
 Mastery in Office, Internet and E-mail packages.  
 Skills in statistical analysis softwares Origine and Statistica.

**Driving licence** A1, B

ADDITIONAL INFORMATION

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**Honours and awards** **Awards as First author:**  
 2018: Best Poster Young Researchers, Scientific Congress of Italian Multiple Sclerosis Foundation, Rome, Italy.  
 2013: Travel grant to acknowledge the quality of scientific contribution to theECTRIMS/RIMS congress, Copenhagen, Denmark.

**Awards as Participant:**  
 2014: best platform presentation, The CONSORTIUM of Multiple Sclerosis Centers, Dallas, Texas (USA).

**Patents** 2013: Structured Cognitive Functions Training Kit (Scientific-Clinical App for Android mobile devices) – N° 008950, Ordinativo D008111, 20/08/2013

ATTACHMENTS

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- Scientific\_curriculum.pdf

## Scientific\_curriculum.pdf

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e-mail: ludovico.pedulla@aism.it

### SCIENTIFIC CURRICULUM

#### List of publications on international journals with peer-review

##### 2020

- **Pedullà L**, Gervasoni E, Bisio A, Biggio M, Ruggeri P, Avanzino A, Bove M. The last chance to pass the ball: investigating the role of temporal expectation and motor resonance in processing temporal errors in motor actions [published online ahead of print, 2020 Feb 12]. *Soc Cogn Affect Neurosci*. 2020
- Tacchino A, Ponzio M, **Pedullà L**, et al. Italian validation of the Arm Function in Multiple Sclerosis Questionnaire (AMSQ) [published online ahead of print, 2020 May 12]. *Neurol Sci*.
- Canepa P\*, **Pedullà L\***, Bisio A, Ruggeri P, Bove M. Is the 12 minute-walk/run test a predictive index of cognitive fitness in young healthy individuals? A pilot study on aerobic capacity and working memory in a real-life scenario. *Neurosci Lett*. 2020;728:134983.
- Brichetto G, Monti Bragadin M, Fiorini S, Battaglia MA, Konrad G, Ponzio M, **Pedullà L**, Verri A, Barla A, Tacchino A. The hidden information in patient-reported outcomes and clinician-assessed outcomes: multiple sclerosis as a proof of concept of a machine learning approach. *Neurol Sci*. 2020;41(2):459–462

##### 2019

- Brichetto G, **Pedullà L**, Podda J, Tacchino J. Beyond center-based testing: Understanding and improving functioning with wearable technology in MS. *Mult Scler*. 2019;25(10):1402–1411.
- Bonzano L, **Pedullà L**, Tacchino A, Brichetto G, Battaglia MA, Mancardi GL, Bove M. Upper limb motor training based on task-oriented exercises induces functional brain reorganization in patients with multiple sclerosis. *Neurosci*. 2019;410:150-159.

##### 2018

- Bonzano L\*, **Pedullà L\***, Pardini M, Tacchino A, Zaratini P, Battaglia MA, Brichetto G, Bove M. Brain activity pattern changes after adaptive working memory training in multiple sclerosis. *Brain imaging behav*. 2018;Oct30:1-13.
- Crivelli D\*, **Pedullà L\***, Bisio A, Rueda S, Brichetto G, Bove M, Balconi M. When “Extraneous” Becomes “Mine”. Neurophysiological Evidence of Sensorimotor Integration During Observation of Suboptimal Movement Patterns Performed by People with Multiple Sclerosis. *Neurosci*. 2018;386:326-338.

##### 2017

- Bisio A, **Pedullà L**, Bonzano L, Tacchino A, Brichetto G, Bove M. The kinematics of handwriting movements as expression of cognitive and sensorimotor impairments in people with multiple sclerosis. *Sci Rep*. 2017;7(1):17730.

2016

- Bisio A, **Pedullà L**, Bonzano L, Ruggeri P, Brichetto G, Bove M. Evaluation of Handwriting Movement Kinematics: From an Ecological to a Magnetic Resonance Environment. *Front Hum Neurosci.* 2016;10:488.
- **Pedullà L**, Brichetto G, Tacchino A, Vassallo C, Zaratini P, Battaglia MA, Bonzano L, Bove M. Adaptive vs. non-adaptive cognitive training by means of a personalized App: a randomized trial in people with multiple sclerosis. *J Neuroeng Rehabil.* 2016;13(1):88.

2015

- Tacchino A\*, **Pedullà L\***, Bonzano L, Vassallo C, Battaglia MA, Mancardi G, Bove M, Brichetto G. A New App for At-Home Cognitive Training: Description and Pilot Testing on Patients with Multiple Sclerosis. *JMIR Mhealth Uhealth.* 2015;3(3):e85.
- Brichetto G, Piccardo E, **Pedullà L**, Battaglia MA, Tacchino A. Tailored balance exercises on people with multiple sclerosis: A pilot randomized, controlled study. *Mult Scler.* 2015;21(8):1055-63.

2013

- Tacchino A, Bove M, **Pedullà L**, Battaglia MA, Papaxanthis C, Brichetto G. Imagined actions in multiple sclerosis patients: evidence of decline in motor cognitive prediction. *Exp Brain Res.* 2013;229(4):561-70.

**Posters and oral presentations**2020

- **Pedullà L**, Rinaldi S, Addeo S, Cooper J, Chioffi M, Bellosta A, Battaglia MA, Monti Bragadin M, Podda J, Tacchino A, Brichetto G, Konrad G.. Aerobic training in multiple sclerosis: a pilot study on the effects of group treatment with mini-trampolines. RIMS 2020, Leuven, Belgio.
- **Pedullà L**, Addeo S, Rinaldi S, Chioffi M, Bellosta A, Battaglia MA, Monti Bragadin M, Podda J, Tacchino A, Brichetto G, Konrad G. Aerobic training in multiple sclerosis: a pilot study on the effects of music during group treatment. RIMS 2020, Leuven, Belgio.

2019

- **Pedullà L**, Bove M, Bergamaschi R, Correale L, Brichetto G. Ride the wave: an explorative investigation on the perspective of people with multiple sclerosis about sports activity. RIMS 2019, Lubiana, Slovenia.
- **Pedullà L**, Bonzano L, Bisio A, Job M, Tacchino A, Brichetto G, Bove M. Effects of curvilinear walking and cognitive-motor dual tasks on motor performance and cortical activity in people with multiple sclerosis. RIMS 2019, Lubiana, Slovenia.
- **Pedullà L**, Bisio A, Biggio M, Parodi F, Travali A, Cesaroni G, Tacchino A, Brichetto G, Bove M. Investigating and enhancing the effect of rehabilitation in real life with a new sensorized prosthetic aid: a study in people with multiple sclerosis. Workshop "Innovation In Rehabilitation Technologies" 2019, Genoa, Italy.

2018

- **Pedullà L**, Bisio A, Bonzano L, Dessypris A, Faelli E, et al. Aerobic training as substrate for neural plastic changes in multiple sclerosis. RIMS 2018, Amsterdam, Netherland.
- **Pedullà L**, Ponzio M, Tacchino A, Battaglia MA, Bove M, Bricchetto G. Development and validation of the “Dual-task Impact on Daily-life Activities Questionnaire”: preliminary evaluation in people with multiple sclerosis. RIMS 2018, Amsterdam, Netherland
- **Pedullà L**, Bonzano L, Bisio A, Job M, Bricchetto G, Bove M. Neural correlates of dual task cost in ecological settings: preliminary results in healthy subjects of an fNIRS study. RIMS “Special Interest Group mobility”, Glasgow, UK.
- **Pedullà L**, Bisio A, Bonzano L, Canepa P, Adascalitei S, Bricchetto G, Bove M. Cognitive cost and brain activity during dual tasks: an fNIRS study in young adults. SISMeS 2018, Messina, Italy

#### 2017

- **Pedullà L**, Bisio A, Bonzano L, Tacchino A, Bove M, Bricchetto G. Developing an integrated core set for the evaluation of handwriting movement in people with multiple sclerosis. RIMS 2017, Barcelona, Spain.
- **Pedullà L**, Bricchetto G, Tacchino A, Bonzano L, Bove M. Adaptive working memory training improves cognitive performance and affects brain functional reorganization in people with multiple sclerosis. RehabWeek 2017, London, UK.

#### 2016

- **Pedullà L**, Bisio A, Bonzano L, Tacchino A, Bricchetto G, Bove M. Integrated assessment of handwriting movement in people with multiple sclerosis. ECTRIMS-RIMS 2016, London, UK.

#### 2015

- **Pedullà L**, Tacchino A, Vassallo C, Bonzano L, Battaglia MA, Bove M, Bricchetto G. Adaptive vs non-adaptive cognitive rehabilitation training based on working memory: effects on people with multiple sclerosis. RIMS 2015, Milano, Italy
- **Pedullà L**, Bisio A, Avanzino L, Tacchino A, Bricchetto G, Bove M. Corticospinal excitability during action observation is affected by the fluency of the observed movement. Neuroscience - SfN 2015, Chicago, USA.

#### 2014

- **Pedullà L**, Tacchino A, Vassallo C, Bonzano L, Battaglia MA, Bove M, Bricchetto G. Riabilitazione cognitiva nella sclerosi multipla: un trattamento personalizzato intensivo a domicilio tramite un'Applicazione per tablet non commerciale. Congresso Nazionale della Società Italiana di Riabilitazione Neurologica - SIRN 2014, Genova, Italy.
- **Pedullà L**, Tacchino A, Vassallo C, Bonzano L, Battaglia MA, Bove M, Bricchetto G. Home-based personalized cognitive training with a customized tablet application in people with multiple sclerosis. Rehabilitation in Multiple Sclerosis - RIMS 2014, Brighton, UK.
- **Pedullà L**, Tacchino A, Vassallo C, Bonzano L, Battaglia MA, Bove M, Bricchetto G. A new tool for personalized at-home intensive cognitive rehabilitation. Gruppo Nazionale di Bioingegneria - GNB 2014, Pavia, Italy.

#### 2013

- **L. Pedullà**, E. Piccardo, M.A. Battaglia, A. Tacchino, G. Bricchetto. Tailored balance exercises for people with multiple sclerosis: a pilot randomized controlled study. ECTRIMS/RIMS 2013, Copenhagen, Denmark.

#### **Awards**

##### 2018

- Best Poster Young Researchers, Scientific Congress of Italian Multiple Sclerosis Foundation, Rome, Italy.

##### 2013

- Travel grant to acknowledge the quality of scientific contribution to the ECTRIMS/RIMS congress, Copenhagen, Denmark.

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Autorizzo il trattamento dei dati personali contenuti nel mio curriculum vitae in base all'art. 13 del D. Lgs. 196/2003 e all'art. 13 GDPR 679/16. Il sottoscritto è altresì a conoscenza che, ai sensi dell'art. 26 della legge 15/68, le dichiarazioni mendaci, la falsità negli atti e l'uso di atti falsi sono puniti ai sensi del codice penale e delle leggi speciali.

In fede,

Ludovico Pedullà

18/06/2020

