Marta Russo, Ph.D.

CONTACT INFORMATION

ORCID
Scopus
marta.russo@unicamillus.org
Google Scholar
Linkedin *ResearchGate*

RESEARCH INTERESTS

Behavioural Neuroscience, Computational Neuroscience, Integrative Motor control. Computational models for motor control, Modular architecture of movement, Muscle synergies, Sensorimotor control in neurodegenerative diseases, Study and learning of complex motor skills, Kinematic characterization in virtual reality

RESEARCH EXPERIENCES

July 2026 - present
Associate Professor in Physiology,
Unicamillus, Rome, Italy

January 2024 - June 2026
Researcher,
Institute for Cognitive Sciences and Technologies (ISTC), CNR, Rome, Italy

November 2020 - November 2023
Postdoctoral Fellow,
Dept. of Neurology, Fondazione Policlinico Tor Vergata, Rome, Italy
and Laboratory of Neuromotor Physiology, IRCCS Santa Lucia Foundation, Rome, Italy

October 2018 - October 2020
Postdoctoral Fellow,
Action Lab, Northeastern University, Boston, MA, USA
Advisor: Dagmar Sternad

March 2018 - October 2018
Postdoctoral Fellow,
Centre of Space Bio-medicine, Università degli Studi di Roma Tor Vergata, Rome, Italy
and Laboratory of Neuromotor Physiology, IRCCS Santa Lucia Foundation, Rome, Italy
Advisors: Andrea d'Avella, Francesco Lacquaniti

November 2017 - February 2018
Research Internship,
Oculus Research, Redmond, WA
Advisor: Cesare V. Parise

January 2013 - October 2014
Research assistant,
Laboratory of Neuromotor Physiology, IRCCS Santa Lucia Foundation, Rome, Italy
Advisor: Andrea d'Avella

EDUCATION

November 2014 - March 2018
Ph.D. in Neuroscience,
Centre of Space Bio-medicine, Università degli Studi di Roma Tor Vergata, Rome, Italy

and Laboratory of Neuromotor Physiology, IRCCS Santa Lucia Foundation, Rome, Italy
Dissertation Topic: "Internal models underlying spatial prediction in interception of approaching balls"
Advisors: Andrea d'Avella, Francesco Lacquaniti

November 2008 - September 2012
Master of Science, Physics
Sapienza, Università degli Studi di Roma, Rome, Italy
Degree grade 110/110, GPA 3.74/4.00
Dissertation Topic: "Concrete and abstract words: a model of neural dynamics"
Advisor: Lucia Zanello

November 2004 - May 2008
Undergraduate Degree in Physics
Sapienza, Università degli Studi di Roma, Rome, Italy
Degree grade 104/110
Dissertation Topic: "The transverse flute: a model with wave filters"
Advisor: Maurizio Bonori

Additional Training

29 July- 12 August 2018
2018 Summer School in Computational Sensory-Motor Neuroscience (CoSMo 2018) University of Minnesota, Minneapolis, MN, USA

2016
Maps in the Brain Summer Course at the Radboud University
Best presentation award

6 - 16 September 2016
14th Summer Course on Computational Neuroscience, Max Planck Institute, Goettingen (Germany)

15 - 21 June 2014
"European Computational Motor Control Summer School, Montpellier (France)

Awards and Scholarships

2022
Performance - based contributions for researchers and research fellows to strengthen their professional status and enhance the research system of Lazio. Programma Fondo Sociale Europeo Plus (FSE+) 2021- 2027. SIGEM 22009D

2020
Scholarship for the 30^{th} Annual Meeting of the Society of the Neural Control of Movement (NCM2020), Dubrovnik, Croatia

2018
Scholarship awarded by the National Institute of Health (NIH) for the 2018 Summer School in Computational Sensory-Motor Neuroscience (CoSMo 2018) (Minneapolis, USA).

8 - 12 August 2016
"Maps in the Brain", Radboud Summer School, Nijmegen (The Netherlands)

Awarded Research Grants

2020-2023

Project Starting Grant SG-2018-12366101 - RF 2018 Ministero della Salute
Title Sensorimotor impairments related to cognitive deficits in Alzheimer's disease: a novel diagnostic tool
Role PI

Participation in Research Grants

2024-2025

Project Italian National Recovery and Resilience Plan - European Union NextGenerationEU
Title FAIR - Future Artificial Intelligence Research
Role Researcher

2022-2026

Project European Unions Horizon Europe programme under grant agreement No. 101070292
Title HARIA - Human-Robot Sensorimotor Augmentation - Wearable Sensorimotor Interfaces and Supernumerary Robotic Limbs for Humans with Upper-limb Disabilities
Role Collaborator

2020-2024

Project Project awarded by Deutsches Zentrum fur Luft-und Raumfahrt e.V. (DLR, Germany) by Helmoltz Association e.V
Title VVITA
Role Collaborator

2018– 2020

Project NSF/CRCNS-1723998 Hogan, Sternad, Flash, Giese (Co-PIs)
Title Collaborative research: Hierarchical coordination of complex actions
Role Postdoctoral fellow

2018– 2020

Project NSF-M3X-1825942 Hogan, Sternad (Co-PIs)
Title Collaborative research: Learning to control dynamically complex objects
Role Postdoc

2018– 2020

Project NIH R21-HD089731 Sternad, Sinha (Co-PI's)
Title Quantification of predictive motor impairments in individuals with ASD
Role Postdoctoral fellow

2015 - 2018

Project: Horizon 2020 Robotics Program CogIMon, ICT-23- 2014 No 644727
Role: PhD Student

2010 - 2014

Project: EU Seventh Framework Programme FP7-ICT AMARSi, No 248311
Role: Research assistant

Peer Reviewed Publications

Herzog M, Berger DJ, **Russo M**, d'Avella A, Stein T (2025) Changes in Muscle Synergy Structure and Activation Patterns Underlie Force Field Adaptation, Retention, and Generalization, 134:6, 2047-2069, Journal of Neurophysiology. doi:10.1152/jn.00621.2024

Scano A, Brambilla C, **Russo M**, d'Avella A (2025) Incorporating gravity into synergistic control of upper limb movements using phasic synergies with positive and negative weights, Journal of Applied Physiology 2025 139:1, 112-126
https://doi.org/10.1152/japplphysiol.00779.2024

De Pasquale P, De Bartolo D, **Russo M**, Berger DJ, Maselli A, Borzelli D, Colamarino E, Mattia D, Nissler C, Nowak M, Falomo E, Soto Morras J, Schiller MR, Castellini C, Morone G and dAvella A (2025) User-centered development of a personalized adaptive mirror therapy for upper-limb post-stroke rehabilitation using virtual reality and myoelectric control. Front. Bioeng. Biotechnol. 13:1655416. doi: 10.3389/fbioe.2025.1655416

de Nobile A, Borghi I, De Pasquale P, Berger DJ, Maselli A, Di Lorenzo F, Savastano E, Assogna M, Casarotto A, Bibbo D, Conforto S, Lacquaniti F, Koch G, d'Avella A, **Russo M** (2025) Anticipatory reaching motor behavior characterizes patients within the Alzheimers disease continuum in a virtual reality environment. Alz Res Therapy 17, 78 (2025). https://doi.org/10.1186/s13195-025-01726-6

Russo M, Maselli, A, Sternad D, Pezzulo G (2025) Predictive strategies for the control of complex motor skills: recent insights into individual and joint actions. Current Opinion in Behavioral Sciences, 63:101519. https://doi.org/10.1016/j.cobeha.2025.101519

Park SW, Cardinaux A, Crozier D, **Russo M**, Bond S, Kjelgaard M, Sinha P, Sternad D (2024) Interceptive abilities in autism spectrum disorder: Comparing naturalistic and virtual visuomotor tasks. Autism Research, 121. https://doi.org/10.1002/aur.3246

Shiozawa K, **Russo M**, Lee J, Hogan N, Sternad D (2024) Human foot force informs balance control strategies when standing on a narrow beam. Journal of Neurophysiology, 132(4), 1302-1314. https://doi.org/10.1152/jn.00089.2024

Russo M, Scano A, Brambilla C, d'Avella A (2024) SynergyAnalyzer: A Matlab toolbox implementing mixed-matrix factorization to identify kinematic-muscular synergies, Computer Methods and Programs in Biomedicine, Volume 251, 108217,
https://doi.org/10.1016/j.cmpb.2024.108217.

Brambilla C, **Russo M**, d'Avella A, Scano A (2023) Phasic and tonic muscle synergies are different in number, structure and sparseness, Human Movement Science, Volume 92, 103148, https://doi.org/10.1016/j.humov.2023.103148.

Scano A, Brambilla C, **Russo M**, d'Avella A (2023) Upper Limb Phasic Muscle Synergies with Negative Weightings: Applications for Rehabilitation, 2023 IEEE International Conference on Metrology for eXtended Reality, Artificial Intelligence and Neural Engineering (MetroXRAINE), Milano, Italy, 2023, pp. 834-839, doi: 10.1109/MetroXRAINE58569.2023.10405697.

Nah MC, Krotov A, **Russo M**, Sternad D, Hogan N (2023) Learning to manipulate a whip with simple primitive actions A simulation study. iScience 26(8):107395.
https://doi.org/10.1016/j.isci.2023.107395

d'Avella A, **Russo M**, Berger DJ, Maselli, A (2023) Neuromuscular invariants in action execution and perception: Comment on Motor invariants in action execution and perception by Torricelli et al., Physics of Life Reviews, 45, 63-65, doi.org/10.1016/j.plrev.2023.04.003.

Park SW, Cardinaux A, Crozier D, **Russo M**, Kjelgaard M, Sinha P, Sternad D (2023) Developmental change in predictive motor abilities. iScience 26(2):106038. https://doi: 10.1016/j.isci.2023.106038

Krotov AD & **Russo M**, Nah MC, Hogan N, Sternad D (2022) Motor Control Beyond Reach How Humans Hit a Target with a Whip. Royal Society Open Science, 9: 220581. http://doi.org/10.1098/rsos.220581

Russo M, Lee J, Hogan N, Sternad D (2022) Mechanical effects of canes on standing posture: beyond perceptual information. Journal of NeuroEngineering and Rehabilitation 19, 97. https://doi.org/10.1186/s12984-022-01067-7

Shiozawa K, Lee J, **Russo M**, Sternad D, Hogan N (2021) Frequency-Dependent Force Direction Elucidates Neural Control of Balance. Journal of NeuroEngineering and Rehabilitation, 2021, 18(1), 145

Russo M, Ozeri-Engelhard N, Hupfeld K, Nettekoven C, Thibault S, Sedaghat-Nejad E, Buchwald D, Xing, D, Zobeiri O, Kilteni K, Albert S, Ariani G (2021) Highlights from the 30th Annual Meeting of the Society for the Neural Control of Movement. Journal of Neurophysiology, 2021, 126(4), pp. 967975. doi: 10.1152/jn.00334.2021

Nah MC, Krotov A, **Russo M**, Sternad D, Hogan N. (2021) Manipulating a Whip in 3D via Dynamic Primitives. IEEE International Conference on Intelligent Robots and Systems, 2021, pp. 28032808

Nah MC, Krotov A, **Russo M**, Sternad D, Hogan N (2020) Dynamic Primitives Facilitate Manipulating a Whip. Proceedings of the IEEE RAS and EMBS International Conference on Biomedical Robotics and Biomechatronics, 2020, 2020-November, pp. 685691, 9224399 ***Best Student Paper**

Leib R, **Russo M**, d'Avella A, Nisky I (2020) A bang-bang control model predicts the triphasic muscles activity during hand reaching. J Neurophysiol 124(1): 295-304. doi: 10.1152/jn.00132.2020

Maselli A, Dhawan A, **Russo M**, Cesqui B, Lacquaniti F and d'Avella A (2019) A whole-body characterization of individual strategies, gender differences and common styles in overarm throwing. J Neurophysiol 122(6): 2486-2503. doi: 10.1152/jn.00011.2019

Ceccarelli F, La Scaleia B, **Russo M**, Cesqui B, Gravano S, Mezzetti M, Moscatelli A, d'Avella A, Lacquaniti F and Zago M (2018) Rolling Motion Along an Incline: Visual Sensitivity to the Relation Between Acceleration and Slope. Front. Neurosci. 12:406. doi: 10.3389/fnins.2018.00406

Maselli A, Dhawan A, Cesqui B, **Russo M**, Lacquaniti F and d'Avella A (2017) Where Are You Throwing the Ball? I Better Watch Your Body, Not Just Your Arm!. Front. Hum. Neurosci. 11:505. doi: 10.3389/fnhum.2017.00505

Russo M, Cesqui B, La Scaleia B, Ceccarelli F, Maselli A, Moscatelli A, Zago M, Lacquaniti F, d'Avella A. (2017) Intercepting virtual balls approaching under different gravity conditions: evidence for spatial prediction. J Neurophysiol 118: 24212434, 2017; doi: 10.1152/jn.00025.2017.

Cesqui B, **Russo M**, Lacquaniti F, d'Avella A. (2016) Grasping in One-Handed Catching in Relation to Performance. PLoS ONE 11(7): e0158606. doi: 10.1371/journal.pone.0158606

Russo M, D'Andola M, Portone A, Lacquaniti F and d'Avella A. (2014) Dimensionality of joint torques and muscle patterns for reaching. Front.Comput. Neurosci. 8:24. doi: 10.3389/fncom.2014.00024.

Bibliometric Indicators

h-index: 11 (Scopus), 12 (Google Scholar)
Numero totale di citazioni: 344 (Scopus), 520 (Google Scholar)
Scopus-ID: 56086194300
ORCID: 0000-0003-1020-7542

Certificates

Abilitazione Scientifica Nazionale
Bando D.D. 1796/2023 Settore Concorsuale 05/D1 Fisiologia - Fascia: II
Valida dal 07/11/2025 al 07/11/2037 (art. 16, comma 1, Legge 240/10)

Scientific Collaborations

Prof. Dagmar Sternad, University Distinguished Professor of Biology, Electrical and Computer Engineering, and Physics, Northeastern University, Boston MA

Prof. Giacomo Koch, Director of the Experimental Neuropsychophysiology Lab, IRCCS Fondazione Santa Lucia, Roma, Italy

Dr. Alessandro Scano, Institute of Intelligent Industrial Systems and Technologies for Advanced Manufacturing, Italian National Council of Research (CNR), Lecco, Italy

Prof. Neville Hogan, Sun Jae Professor of Mechanical Engineering and Professor of Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge MA

Prof. Pawan Sinha, Professor of Vision and Computational Neuroscience, Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge MA

Prof. Antonella Maselli, Professor of Physiology, Department of Biomedical and Dental Sciences and Morphofunctional Imaging, University of Messina, Messina, Italy

Prof. Andrea d'Avella, Professor of Physiology, Department of Biology, University of Rome Tor Vergata, Rome, Italy

Oral Presentations at Conferences

Russo M* (2026) Revealing Sensorimotor Markers of the Alzheimers Disease Continuum Through Motor Tasks in Virtual Reality. The European Group for Research on Aging and Physical Activity - 2026 Conference (EGRAPA2026), June 1-3, Caen, France

Russo M* (2026) Revealing Sensorimotor Markers of the Alzheimers Disease Continuum Through Motor Tasks in Virtual Reality. I Congresso Nazionale ISNeT, 08 09 Maggio 2026 Fondazione Santa Lucia IRCCS - Roma

Russo M*, Amine Chaigneau, Giovanni Pezzulo (2026) Visual Uncertainty Enhances Predictive Mechanisms in Goal-Directed Motor Control. CollegaMenti ISTC 2026, Castiglione della Pescaia, April 21-22 2026

Russo M* (2025) Grounded world models for interceptive actions. FAIR Spoke Workshop 2025, Catania, Italy, April 3-4, 2025.

Russo M* (2024) Which model for interceptive actions? 74th National Congress of The Italian Society of Physiology (SIF2024), Rome, Italy, 11-13 September 2024.

Russo M*, de Nobile A, Borghi I, Berger D, De Pasquale P, Maselli A, Bibbo D, Conforto S, Lacquaniti F, Koch G, d'Avella A (2023) A sensorimotor characterization of the Alzheimers disease continuum with Linear Discriminant Analysis. XXIII Congresso Nazionale SIAMOC, October 4-7 2023, Roma, Italy.

Russo M* (2023) Exploring complex motor skills in virtual reality to characterize sensorimotor impairments in neurological disorders. 20th National Congress of the Italian Society for Neuroscience (SINS23), September 14-17 2023, Torino, Italy.

Russo M, Scano A, d'Avella A (2022) Torque-muscular synergies extracted by the mixed-matrix factorization algorithm capture the functional characteristics of motor modules. Annual Meeting of Young Researchers in Physiology (YRP2022), June 13-15 2022, Bertinoro, FC, Italy.

Russo M (2021) Studying complex motor skills in Virtual Reality: a novel tool for diagnostics and rehabilitation. 2nd Research Retreat of IRCCS Fondazione Santa Lucia, December 2-3 2021, Fondazione Santa Lucia, Roma, Italy.

Russo M, Krotov AD, Nah MC, Hogan N, Sternad D (2021) Manipulating a bullwhip: Low-dimensional control of an infinite-dimensional object. 30th Annual meeting of the Society for the Neural Control of Movement NCM2021, April 20-22 2021, (Virtual meeting).

Russo M, Krotov A, Hoyt H, Edraki M, Razavian R, Nah M, Hogan N, Sternad D. Manipulating a whip: motor control beyond reach? (2020) Neuromatch 3.0, October 26-30 2020.

Russo M, Sternad, D. (2020) Dynamic interactions as support for postural balance. NCM Award Winners Symposium, June 16-17 2020

OTHER CONFERENCES
**presenter*

de Nobile A*, Borghi I, Berger D, De Pasquale P, Maselli A, Bibbo D, Conforto S, Lacquaniti F, Koch G, d'Avella A, **Russo M** (2023) Anticipatory responses characterize the Alzheimers Disease continuum in a reaching task. XXIII Congresso Nazionale SIAMOC, October 4-7 2023, Roma, Italy. (*poster*)

De Pasquale P; De Bartolo D; **Russo M**; Berger DJ; Maselli A; Borzelli D; Tramontano M; Nissler C; Nowak M; Castellini C; Morone G; dAvella A (2023) A novel upper limb rehabilitation protocol for chronic post-stroke bimanual reaching tasks based on virtual reality and myoelectric control. XXIII Congresso Nazionale SIAMOC, October 4-7 2023, Roma, Italy.

de Nobile A, Borghi I, Berger D, De Pasquale P, Maselli A, Bibbo D, Conforto S, Lacquaniti F, Koch G, d'Avella A, **Russo M*** (2023) An innovative VR protocol to test sensorimotor impairments in dementia. Progress in Motor Control XIV, September 27-30 2023, Roma, Italy. (*poster*)

Herzog M*, Berger DJ, **Russo M**, d'Avella A, Stein T (2023) Muscle synergies in force field adaptation and spatial transfer. Progress in Motor Control XIV, September 27-30 2023, Roma, Italy. (*poster*)

Maselli A, de Pasquale P, **Russo M**, Lacquaniti F, d'Avella A (2023) Throwing and catching in real and virtual environments: an innovative approach for studying naturalistic motor behavior. Progress in Motor Control XIV, September 27-30 2023, Roma, Italy.

Russo M*, de Nobile A, Borghi I, Berger D, De Pasquale P, Maselli A, Bibbo D, Conforto S, Lacquaniti F, Koch G, d'Avella A (2023) Sensorimotor indicators correlate with cognitive deficits in dementia. 32th Annual meeting of the Society for the Neural Control of Movement NCM2023, April 17-21 2022, Victoria, BC, Canada. (*poster*)

Sisler S*, **Russo M**, Sternad D (2023) Adaptation, learning, retention: Using canes significantly improves balance but with no aftereffects or longer-term persistence. 32th Annual meeting of the Society for the Neural Control of Movement NCM2023, April 17-21 2022, Victoria, BC, Canada. (*poster*)

Park SW*, Bond S, Cardinaux A, Crozier D, **Russo M***, Sinha P, Sternad D (2023) Use of naturalistic and virtual interception tasks to examine predictive ability in individuals with Autism Spectrum Disorder. 32th Annual meeting of the Society for the Neural Control of Movement NCM2023, April 17-21 2022, Victoria, BC, Canada. (*poster*)

Russo M, Scano A, d'Avella A (2022) Torque-muscular synergies extracted by the mixed-matrix factorization algorithm capture the functional characteristics of motor modules. 31th Annual meeting of the Society for the Neural Control of Movement NCM2022, July 26-29 2022, Dublin, Ireland. (*poster*)

Krotov AD, **Russo M**, Nah MC, Hogan N, Sternad D (2022) Motor control beyond reach? How humans hit a target with a whip. 31th Annual meeting of the Society for the Neural Control of Movement NCM2022, July 26-29 2022, Dublin, Ireland. (*poster*)

Bond S, Park S-W, **Russo M**, Cardinaux A., Sinha P., Sternad D. (2021). Predictive impairments compromise motor skills in children with autism spectrum disorder. Neural Control of Movement (NCM 2021), Virtual Conference, April 20-22.

Bond S., Park S-W., **Russo M**, Cardinaux A., Sinha P., Sternad D. (2021). Predictive impairments in motor skills in children with autism spectrum disorder. Global Connectome Virtual Conference of the Society for Neuroscience, January 11-13.

Russo M, Krotov, A, Sternad, D. Interactive perceptual support can improve postural balance. 49th Annual Conference of the Society for Neuroscience, Chicago, IL, October 19-23 2019. (*poster*)

Krotov, A., Zhang, Z., **Russo M**, Hogan, N., Sternad, D. (2019). Cracking a whip: motor control beyond reach. 49th Annual Conference of the Society for Neuroscience, Chicago, IL, October 19-23 2019. (*poster*)

Russo M, Krotov A, Gossart B, Sternad D. Interactive perceptual support can improve postural balance. Progress in Motor Control XII: Movement Improvement Conference, July

7-10 2019, Amsterdam, The Netherlands. (*poster*)

Russo M, Cesqui B, Maselli A, Lacquaniti F, d'Avella A. A mixture of Kalman filters to predict where to catch a flying ball. 41st European Conference on Visual Perception ECVP2018, August 26-30 2018, Trieste, Italy. Perception 2019, Vol. 48(S1) 1233 DOI: 10.1177/0301006618824879 (*poster*)

Maselli A, Dhawan A, Cesqui B, **Russo M**, Lacquaniti F and d'Avella A. Predicting ball direction from compact representation and classification of whole-body throwing actions. 41st European Conference on Visual Perception ECVP2018, August 26-30 2018, Trieste, Italy. Perception 2019, Vol. 48(S1) 1233 DOI: 10.1177/0301006618824879 (*poster*)

Ceccarelli F, La Scaleia B, **Russo M**, Cesqui B, Moscatelli A, dAvella A, Lacquaniti F. Perceptual judgments of a ball rolling down an incline. 40st European Conference on Visual Perception ECVP2017, August 27th to 31st 2017, Berlin, Germany. (*poster*)

Maselli A, Dhawan A, Cesqui B, **Russo M**, Lacquaniti F and d'Avella A. How early can we predict the outcome of a throwing action? 40st European Conference on Visual Perception ECVP2017, August 27th to 31st 2017, Berlin, Germany. (*poster*)

Russo M, Cesqui B, La Scaleia B, Ceccarelli F, Moscatelli A, Zago M, Lacquaniti F, d'Avella A. Intercepting approaching virtual balls under different gravity conditions. 27th Annual meeting of the Society for the Neural Control of Movement NCM2017, May 2-5 2017, Dublin, Ireland. (*poster*)

Cesqui B, **Russo M**, Lacquaniti F, d'Avella A. Grasping in One-handed Catching in Relation to Performance. 27th Annual meeting of the Society for the Neural Control of Movement NCM2017, May 2-5 2017, Dublin, Ireland. (*poster*)

MEDIA APPEARANCE

"When You Step Inside This Lab, You Must Whip It" on The New York Times
Web edition October 4th 2022, newspaper October 11th 2022

SOFTWARE AND TOOLBOX

SynergyAnalyzer MATLAB toolbox for the extraction of muscle and kinematic synergies. The toolbox is open source.

PEER REVIEW EXPERIENCE

BrainScience - *Editorial Board Member since 2022*
Frontiers in Neuroscience (Neuroprosthetics) - *Review Editor since 2020*
Frontiers in Computational Neuroscience - *Review Editor since 2021*
Plos Computational Biology
Experimental Brain Research
Nature Human Behaviour
ACM CHI Conference on Human Factors in Computing Systems (CHI 2023)
Frontiers in Human Neuroscience
Frontiers in Neurorobotics
Frontiers in Sports and Active Living
Journal of Motor Behavior
Journal of Neurophysiology
IEEE International Conference on Robotics and Automation (ICRA 2020)
IEEE Haptic Symposium 2020

Teaching Experience

Cultrice della materia per il corso di "*Neurobiologia*"
2024/2025 — Department of Biology, University of Rome Tor Vergata

Teaching Assistant for the course *Multidisciplinary Approaches to Motor Control*
Spring 2019 — Department of Biology, Northeastern University

Students Supervision

Alessia De Nobile
January 2023 - present — PhD Bioengineering, Univ. Roma Tre

Paolo De Pasquale
January 2021 - December 2022 — PhD Bioengineering, University of Messina

Alessia De Nobile
Fall 2021 - Summer 2022 — MS Bioengineering, Univ. Roma Tre

Aleksei Krotov
Fall 2018 - Summer 2020 — MS Bioengineering, Northeastern University

Ben Gossart
Spring - Summer 2019 — Undergraduate, Biology, Northeastern University

Sabrina Bond
Fall 2019 — Undergraduate, Behavioral Neuroscience, Northeastern University
Honors Early Research and PEAK Experiences Ascent Awards

Abigail Nugent
Spring 2020 — Undergraduate, Bioengineering, Northeastern University

Computer and technical Skills

Languages	Experience
Matlab	Expert,more than 10 years
R	Experienced, more than 5 years
C++,C#	Experienced, more than 5 years
Unity	Experienced, more than 5 years
Python	Basic

Statistical Packages: lme4, R non-CRAN package MERpsychophysics, SPSS.
Data collection: Experience in Motion capture systems (Optitrack, Vicon, Qualysis)
Applications: LaTeX, common Windows spreadsheet and presentation software, Adobe Illustrator, MaxPlus II and Logic Works
Operating Systems: Linux, iOS, Windows.
Experience in programming DSPs, acquired during the master
Experience in programming FPGAs, acquired during the master

Languages

Mother tongue
Italian

Other language(s)

English	Self-assessment Common European Framework of Reference (CEF) level
Understanding	C2 Proficient User

Speaking	C2 Proficient User
Writing	C2 Proficient User

Roma, July 2, 2026