# Marta Russo, Ph.D.


Contatti

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*ORCID*
*Scopus*
*Google Scholar*
Linkedin *ResearchGate*


Temi di Ricerca

Modelli computazionali per il controllo motorio, Architettura modulare del movimento, Sinergie muscolari, Controllo sensorimotorio in patologie neurodegenerative,
Studio e apprendimento di compiti motori complessi, Caratterizzazione cinematica in realtà virtuale.

Posizione e Incarichi

**Luglio 2026 - presente**
Professoressa Associata di Fisiologia,
Unicamillus, Roma, Italia

**Gennaio 2024 - Giugno 2026**
Ricercatrice,
Istituto di Scienze e Tecnologie della Cognizione (ISTC), CNR, Roma, Italia

**Novembre 2020 - Dicembre 2023**
Ricercatrice,
Dip. di Neurologia, Fondazione Policlinico Tor Vergata, Roma, Italia
*e* Laboratorio di Fisiologia Neuromotoria, IRCCS Fondazione Santa Lucia, Roma, Italia

**Ottobre 2018 - Ottobre 2020**
Postdoc,
Action Lab, Northeastern University, Boston, MA, USA
Supervisore: Dagmar Sternad

**Luglio 2018 - Ottobre 2018**
Assegnista di Ricerca,
Centro di Biomedicina Spaziale, Università degli Studi di Roma Tor Vergata
*e* Laboratorio di Fisiologia Neuromotoria, IRCCS Fondazione Santa Lucia, Roma, Italia
Supervisori: Andrea d'Avella, Francesco Lacquaniti

**Novembre 2017 - Febbraio 2018**
Internship,
Reality Labs, Meta, Redmond, WA, USA
Supervisore: Cesare V. Parise

**Gennaio 2013 - Ottobre 2014**
Borsista di Ricerca,
Laboratorio di Fisiologia Neuromotoria, IRCCS Fondazione Santa Lucia, Roma, Italia
Supervisore: Andrea d'Avella

Istruzione

**Novembre 2014 - Marzo 2018**
XXX Ciclo di Dottorato di Ricerca in Neuroscienze,
Centro di Biomedicina Spaziale, Università degli Studi di Roma Tor Vergata

*e* Laboratorio di Fisiologia Neuromotoria, IRCCS Fondazione Santa Lucia, Roma, Italia
Tesi: ''Internal models underlying spatial prediction in interception of approaching balls"
Supervisori: Andrea d'Avella, Francesco Lacquaniti
Titolo conseguito il 05.03.2018

**Novembre 2008 - Settembre 2012**
Laurea Specialistica in Fisica
Sapienza, Università degli Studi di Roma, Roma, Italia
Conseguita il 24.12.2012 con voto 110/110
Tesi: "Concrete and abstract words: a model of neural dynamics"
Supervisore: Lucia Zanello

**Novembre 2004 - Maggio 2008**
Laurea Triennale in Fisica
Sapienza, Università degli Studi di Roma, Roma, Italia
Conseguita il 28.05.2008 con voto 104/110
Tesi: "The transverse flute: a model with wave filters"
Supervisore: Maurizio Bonori

## Attività di Formazione

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

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

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

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

## Premi

**2022**
Contributi premiali per i ricercatori e assegnisti di ricerca per rafforzarne la condizione professionale e potenziare il sistema della ricerca del Lazio. Programma Fondo Sociale Europeo Plus (FSE+) 2021- 2027. Codice SIGEM 22009D

**2020**
Scholarship per il $30^{th}$ Annual Meeting of the Society of the Neural Control of Movement (NCM2020), Dubrovnik, Croazia

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

**2016**
Premio per Migliore Presentazione al "Maps in the Brain" Summer Course at the Radboud University, Nijmegen (The Netherlands)

RESPONSABILITA' DI PROGETTI DI RICERCA

**2020-2023**

*Progetto* Starting Grant SG-2018-12366101 - RF 2018 Ministero della Salute
*Titolo* Sensorimotor impairments related to cognitive deficits in Alzheimer's disease: a novel diagnostic tool
*Ruolo* PI

PARTECIPAZIONE A PROGETTI DI RICERCA

**2024-2025**

*Progetto* Italian National Recovery and Resilience Plan (NRRP) - European Union NextGenerationEU
*Titolo* FAIR - Future Artificial Intelligence Research
*Ruolo* Ricercatrice

**2022-2026**

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

**2020-2024**

*Progetto* Project awarded by Deutsches Zentrum fur Luft-und Raumfahrt e.V. (DLR, Germany) by Helmoltz Association e.V
*Titolo* VVITA
*Ruolo* Collaborator

**2018– 2020**

*Progetto* NSF/CRCNS-1723998 Hogan, Sternad, Flash, Giese (Co-PIs)
*Titolo* Collaborative research: Hierarchical coordination of complex actions
*Ruolo* Postdoc

**2018– 2020**

*Progetto* NSF-M3X-1825942 Hogan, Sternad (Co-PIs)
*Titolo* Collaborative research: Learning to control dynamically complex objects
*Ruolo* Postdoc

**2018**

*Progetto* NIH R21-HD089731 Sternad, Sinha (Co-PI's)
*Titolo* Quantification of predictive motor impairments in individuals with ASD
*Ruolo* Postdoc

**2015 - 2018**

*Progetto*: Horizon 2020 Robotics Program CogIMon, ICT-23- 2014 No 644727
*Ruolo*: Studente di Dottorato

**2013 - 2014**

*Progetto*: EU Seventh Framework Programme FP7-ICT AMARSi, No 248311
*Ruolo*: Assistente di Ricerca

PUBBLICAZIONI SCIENTIFICHE

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

de Nobile A, Bibbo D, **Russo M**, Conforto S (2024) A focus on quantitative methods to assess human factors in collaborative robotics, International Journal of Industrial Ergonomics, 2024, Volume 104, 1036636, doi:10.1016/j.ergon.2024.103663

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 († *equal contribution*)

**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. https://doi.org/10.1186/s12984-021-00907-2

**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 Award*

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.

**Dati Bibliometrici**

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

**Abilitazioni e Certificazioni**

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)

Supervisione e gestione delle piattaforme robotiche dell'Istituto di Scienze e Tecnologie della Cognizione del CNR. Provvedimento 306/2024, Oct. 22, 2024

**Collaborazioni Scientifiche**

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

Prof. Giacomo Koch, Direttore del Laboratorio di Neuropsicofisiologia Sperimentale, IRCCS Fondazione Santa Lucia, Roma

Dr. Alessandro Scano, Sistemi e Tecnologie Industriali Intelligenti per il Manufatturiero Avanzato (STIIMA), Consiglio Nazionale delle Ricerche (CNR), Lecco

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

**Relatrice a Conferenze**

**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. II Research Retreat della Fondazione Santa Lucia. December 02-03 2021, Fondazione Santa Lucia, Roma

**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

ALTRE CONFERENZE
**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. 31st 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. 31st 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.(*poster*)

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.(*poster*)

**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*)

**Apparizione sui Media**

*"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 per lestrazione di sinergie muscolari e cinematiche. Il toolbox open source.

**Attività di Revisione**

BrainScience - *Editorial Board Member dal 2022*
Frontiers in Neuroscience (Neuroprosthetics) - *Review Editor dal 2020*
Frontiers in Computational Neuroscience - *Review Editor dal 2021*
Plos Computational Biology

Experimental Brain Research
Nature Human Behaviour
Frontiers in Human Neuroscience
Frontiers in Neurorobotics
Frontiers in Sports and Active Living
ACM CHI Conference on Human Factors in Computing Systems (CHI 2023)
Journal of Motor Behavior
Journal of Neurophysiology
IEEE International Conference on Robotics and Automation (ICRA 2020)
IEEE Haptic Symposium 2020

## Didattica e Attivita' di Supervisione

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

Tutor per il corso "*Multidisciplinary Approaches to Motor Control*"
Primavera 2019 Department of Biology, Northeastern University

Supervisione dottorato di Alessia De Nobile
Gennaio 2023 - presente PhD Bioengineering, Univ. Roma Tre

Supervisione dottorato di Paolo De Pasquale
Inverno 2021 - Autunno 2022 PhD Bioengineering, University of Messina

Supervisione tirocinio e tesi magistrale di Alessia De Nobile
Autunno 2021 - Estate 2022 MS Bioengineering, Univ. Roma Tre

Supervisione tesi magistrale di Aleksei Krotov
Autunno 2018 - Estate 2020 MS, Bioengineering, Northeastern University

Supervisione tirocinio di Abigail Nugent
Primavera 2020 Undergraduate, Bioengineering, Northeastern University

Supervisione tirocinio di Sabrina Bond
Autunno 2019 Undergraduate, Behavioral Neuroscience, Northeastern University
**Honors Early Research and PEAK Experiences Ascent Awards**

Supervisione tirocinio di Ben Gossart
Primavera - Estate 2019 Undergraduate, Biology, Northeastern University

## Capacità Tecniche e di Programmazione

| **Linguaggi** | Esperienza |
|---|---|
| Matlab | Molto Esperta, più di 10 anni |
| R | Esperta, più di 5 anni |
| C++,C# | Esperta, più di 5 anni |
| Unity | Esperta, più di 5 anni |
| Python | Basic |

**Statistica**: lme4, R non-CRAN package MERpsychophysics, SPSS.
**Raccolta Dati**: Sistemi di tracciamento ottici (Optitrack, Vicon, Qualysis)
**Software**: LaTeX, Windows Office, Adobe Illustrator, MaxPlus II and Logic Works
**Sistemi Operativi**: Linux, iOS, Windows.

LINGUE

**Prima Lingua**

Italiano

**Seconda Lingua**

| | Self-assessment Common European Framework of Reference (CEF) |
|---|---|
| Inglese | |
| Comprensione | C2 Proficient User |
| Parlato | C2 Proficient User |
| Scrittura | C2 Proficient User |

Tutto quanto qui dichiarato corrisponde a verità, ai sensi degli articoli 46 e 47 del D.P.R. 445 del 2000. Autorizzo il trattamento dei dati personali presenti nel CV ai sensi del D.Lgs. 2018/101 e del GDPR (Regolamento UE 2016/679).

Roma, 2 luglio 2026