

CURRICULUM VITAE of LUIGI CATTANEO – Associate professor in Physiology, MD, PhD – UPDATED JANUARY 2024

1. GENERAL INFORMATION:

Born in MONTEVIDEO (URUGUAY) il 24/04/1974. **Citizenship:** italian. **email:** luigi.cattaneo@univr.it. **telephone:** +39 348-7337670 **skype_ID:** luigicattaneoonskype **Spoken languages:** Italian (mother tongue); English, French, Spanish and Dutch.

2. ORCID: 0000-0001-8905-7529; Scopus ID:

3. EDUCATION:

Period or Award date	Title/Certificate	Institution	Vote	Description
15/10/1997	Degree in Medicine and Surgery	University of Pavia	110/110 cum laude	6-years track Thesis: "Excessive daytime sleepiness in epilepsy" – Supervisor Prof. A. Tartara
1° sessione 1998	Abilitation to the profession of Medical Doctor.	University of Pavia	pass	-
20/11/2002	Specialization in Neurology	University of Parma	50/50 cum laude	5-yeatrs track - Thesis: "Trigemino-facial inhibitory reflex in hemifacial spasm" – Supervisor Prof. G. Pavesi.
10/03/2007	PhD in Neuroscience	University of Parma	pass	4-years track - Thesis: "Motor control of lower facial muscles" – Tutors: Prof. G. Rizzolatti and Prof. G. Pavesi.

4. WORK EXPERIENCE:

Period	Role	Institution	Details
03/2007 – 03/2008	Research fellow	University of Parma	Project: "Mirror system and motor control in autism"
10/2008 – 09/2012	Research fellow	University of Trento	Project: "brain stimulation methods for the study off neural representations of actions and objects"
01/10/2012 – 20/12/2015	Assistant professor	University of Trento	Ricercatore universitario a t.d. tipo A (art. 24 c.3-a L. 240/10) Sector: psychobiology (SSD M-PSI/02)
21/12/2015 – 20/12/2018	Tenure-track assistant professor	University of Verona	Ricercatore universitario a t.d. tipo B (art. 24 c.3-b L. 240/10) - Sector: physiology (SSD BIO/09)
21/12/2018 – 30/09/2019	Associate professor	University of Verona	Sector: physiology (SSD BIO/09)

01/10/2019 – present	Associate professor	University of Trento	Sector: psychobiology (SSD M-PSI/02)
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5. INTERNATIONAL FELLOWSHIPS:

- (01/01/2004 – 1/07/2004): Marie-Curie training fellowship at the Institute of Neurology, Sobell Department of Motor Neurosciences, London (UK), supervised by Professor Roger N. Lemon.
- (01/10/2007 – 31/12/2007): research fellowship at the Neuroimaging center of UCSB - California supervised by Prof. Scott T. Grafton.

6. BioSketch:

I have been conducting research in the field of systems physiology and cognitive neuroscience for many years. The main theme of my research is to understand the biological and physiological correlates of behavior in humans, especially regarding the control of movement. The topics of my research are: sensorimotor transformations for movements of the upper limb and face. Particular attention is given to how complex categories such as the geometry of objects, the vision of biological movement, language and numerical quantities are represented in the motor system. Recently, I directed my attention to the ability of the human brain to establish flexible sensorimotor associations, based on abstract rules. In my research activity I have never lost sight of my clinical neurologist training and I test my psychophysiological hypotheses also on groups of patients. My research activity is carried out in complete autonomy in all its phases, including the conception and execution of experiments and the interpretation of scientific data. Given my clinical background I am extremely motivated to test the theoretical models developed with my basic research in a clinical setting. I am convinced of the importance of reconciling the basic physiology with the clinical disciplines of neurosurgery, neurology, neuroradiology and clinical neurophysiology. I use as main research tool Transcranial Magnetic Stimulation (TMS), of which I have deep knowledge. I am familiar with and have used also other methods of non-invasive brain stimulation (tDCS), the study of motion kinematics, the spectral analysis of EEG and event-related evoked potentials and structural neuroimaging (tractography) and functional (fMRI) techniques.

7. PAST RESEARCH COLLABORATION:

- Università degli Studi di Parma - Prof. Giacomo Rizzolatti.
- Università degli Studi di Parma - Prof. Giovanni Pavesi.
- Università degli Studi di Bologna – Prof. Elisabetta Làdavas.
- Univeristà di Grenoble – Prof. Marc Sato
- Arizona State University – Prof. Arthur Glenberg
- University of Birmingham – Prof. Uta Noppeney

8. ACTIVE RESEARCH COLLABORATION:

- University of Verona: Prof Francesco Sala - intraoperative electrophysiology of the motor system

- University College London: Dr Davide Giampiccolo - intraoperative electrophysiology of the motor system
- Aix-Marseille University: Dr. Thomas Brochier - the role of the parietal opercular cortex in haptically-guided movement.
- University of Milan Statale: Prof. Corrado Sinigaglia and Dr. Guido Barchiesi - action observation in the parietal and premotor cortices
- University of Surrey (London): Prof. Juha Silvanto - state-dependency in brain stimulation.
- University of Sassari: Prof. Franca Deriu - control of orofacial voluntary and affective movements
- University di Milano-Bicocca: Prof. Marco Marelli - embodied representation of concrete and abstract language
- University of Pavia: Prof. Carlotta Lega - the role of the motor system in musical perception

9. ITALIAN NATIONAL SCIENTIFIC ABILITATION:

- Abilitazione al ruolo di II fascia in **Fisiologia (05/D1, ex settore BIO/09)** conseguita nella tornata 2012, valida a partire dal 31/01/2014.
- Abilitazione al ruolo di II fascia in **Neurologia (06/D6, ex settore MED/26)** conseguita nella tornata 2012, valida a partire dal 03/02/2014.
- Abilitazione al ruolo di II fascia in **Psicologia Generale, Psicobiologia e Psicométria (11/E1, ex settori M-PSI/01, M-PSI/02 e M-PSI/03)** nella tornata 2012, valida a partire dal 25/02/2014.
- Abilitazione al ruolo di I fascia in **Fisiologia (05/D1, ex settore BIO/09)** conseguita nella tornata 2016-2018 (primo quadrimestre) valida a partire dal 04/04/2017
- Abilitazione al ruolo di I fascia in **Psicologia Generale, Psicobiologia e Psicométria (11/E1, ex settori M-PSI/01, M-PSI/02 e M-PSI/03)** nella tornata 2022 (primo semestre), valida a partire dal 27/01/2022.

10. AWARDED GRANTS (more recent first)

period	title	Granting agency	role	Funded grant
12/2023 – 12/2025	Motivated Behaviour in the Superior Frontal Gyrus in Health and Disease (MoBS)	PRIN program from the Ministry of Unic	coordinator	104.000 €.
09/2022 – 08/2025	Twinning for excellence in non-invasive brain stimulation in Western Balkans (TWINNIBS)	European Union – project HORIZON-WIDERA-2021-ACCESS-02	local coordinator	70.000 €.
09/2021 – 09/2024	A swing between the inner and the outer worlds: exploring the function of the frontal aslant tract in with transcranial magnetic stimulation	the BIAL foundation	coordinator	44.000 €.
09/2020 – 08/2023	NEURO-CONNECT - Systems neuroscience meets clinical neurosurgery: development of novel multimodal monitoring indices of brain connectivity in patients with glioma	Cassa di Risparmio di Verona foundation	local coordinator	340.000 €.

10/2018-11/2019	Progettazione di un'ortesi robotica per l'arto superiore con controllo mioelettrico e indirizzata a soggetti con debolezza muscolare	European Social Fund	local coordinator	92.700 €
09/2016 – 08/2018	Brain Action. A New View on Real Actions: Neural Mechanisms of Visuo-Motor Transformations	Supervisor of Simona Monaco, to whom the grant has been issued	Marie Skłodowska-Curie Individual Fellowships	168.000 €
10/2006-09/2007	Brain mapping of the cortical representation of facial movements in patients with congenital facial palsy undergoing surgical procedures of facial animation	Telethon foundation	coordinator	40.000 €.

11. EDITORIAL ACTIVITY:

- Academic Editor for PLOS One (since 2013). Ad-hoc reviewing editor for eLife (2016) Member of the Editorial Advisory Board del Journal of Cognitive Enhancement (since 2016).
- Ad-hoc reviewer for: Acta Psychologica; Annals of Clinical and Translational Neurology; Annals of Internal Medicine; Behavioral Brain Research; Brain; Brain Stimulation; Brain Topography; Cerebral Cortex; Clinical Neurophysiology; Cognition; Consciousness and Cognition; Cortex; European Journal of Neurology; European Journal of Neuroscience; e-Life; Frontiers in Human Neuroscience; Journal of Neurology, Neurosurgery and Psychiatry; Journal of Neurophysiology; Journal of Neuroscience; Journal of Psychiatry; JoVE - Journal of Video Experiments; Muscle and Nerve; Nature Communications; Neuroimage; Neurology Research International; Neuropsychologia; Philosophical Transactions of the Royal Society B; PLOS One; Scientific Reports; Social Cognitive and Affective Neuroscience.

12. REVIEWER FOR RESEARCH GRANT AGENCIES: Research Foundation Flanders (FWO) (2012-2018); Marie Skłodowska-Curie actions - Research Fellowship Programme (2013); Manchester University; mental health and neurodegeneration research group. (2014); The Danish Council for Independent Research (2015); Member of the REPRISE board for grant review of the Italian ministry of University and Education (since 2017); the Vienna Science and Technology Fund (www.wwtf.at - 2021). 2022: Gertrude von Meissner Foundation, Geneva.

13. SOCIETY MEMBERSHIPS:

The Brainstem Society; Società Italiana di Neurologia (SIN); Società Italiana di Psicofisiologia (SIPF); Società Italiana di Fisiologia (SIF).

14. AWARDS:

- Selection for “e-poster presentation” with the work “State-Dependent TMS Reveals Tuning for Different Observed Grip Types in the Ventral Premotor Cortex” at the meeting of the Organization for Human Brain Mapping (Barcelona 2010).

- Selected as best poster with the work “One’s motor behavior predictably modulates the understanding of others’ actions through adaptation of premotor visuo-motor neurons” at the Magstim TMS Summer School (Oxford 2010), Oxford UK
- Selected symposium at the XX Congresso Nazionale della Società Italiana di Psicofisiologia (novembre 2012, Venezia) with the proposal “interfaccia tra controllo esecutivo e comportamento automatico”.
- **Vincitore del “Premio della Società Italiana di Psicofisiologia 2015 per la brillante attività di ricerca nell’ambito della psicofisiologia” (Lucca, Novembre 2015)**
- Selected symposium “Visual and auditory praxic environment in the primate brain: space, objects and agents” XXVI Congresso Nazionale SIPF, Turin, 15-17 Novembre 2018

15. Ad-hoc INVITED TALKS:

- a) “New approaches to the study of action observation using transcranial magnetic stimulation (TMS)” presented at the ***Trieste Symposium on Perception and Cognition*** - October 28, 2010 in Trieste (Italy).
- b) “Transcranial Magnetic Stimulation approaches to action understanding” presented at the ***Italy-Israel Dialogue on Cognitive and Affective Neuroscience***. November 7-8, 2011 at the Inter-disciplinary college of Herzliya, (Israel).
- c) “Motor mirroring meets motor performance” presented at the ***16th world congress of psychophysiology***. September 13-17, 2012 in Pisa (Italy).
- d) “Early and Late Motor responses to Action Observation” presented at the meeting ***Mirror neurons: new frontiers 20 years after their discovery***. September 2, 2012 at Erice (Italy).
- e) “Motor resonance meets motor performance” as an ***Institute of Movement Neuroscience Symposium***. May 7, 2013 at the Sobell Department of Movement Neuroscience – UCL – London (UK).
- f) “Bottom-up and Top-down responses to action observation” Seminar at the ***Facoltà di Psicologia, Università di Bologna***. May 30, 2013.
- g) “Motor mirroring meets motor performance” – ***Formal Donders DCC lecture***. October 8, 2013 at the Radboud Universiteit - Nijmegen (NL).
- h) “Le basi neurali delle scelte di azione” – seminar held the ***Scuola di Dottorato di Scienze della Vita e della Salute***, University of Verona. December 17, 2014
- i) “Motor representations in the brain” seminar at the ***Interdisciplinary workshop on Practical Reasoning and Motor Representation*** at the University of Warwick (UK). June 2, 2015.
- j) Lectio magistralis at the ***National congress of the Italian Psychophysiological society***, November 20, 2015 in Lucca (Italy).
- k) “Mapping sensorimotor functions in the human premotor cortex” presented at the international neuropsychological symposium (INS), Cassis (France) 30 june 2018.
- l) “inhibitory set-related activity in the dorsal premotor cortex” seminar held at the ***Centro di Neurofisiologia Traslazionale del linguaggio e della comunicazione IIT@UNIFE***. University of Ferrara, on June 13, 2018
- m) Organizer of the symposium “Behaviorally-committed representation of the world in the primate brain: objects agents and space” ***19th World Congress of Psychophysiology (IOP2018)***, Lucca, 6 settembre 2018.
- n) Organizer of the symposium “Visual and auditory praxic environment in the primate brain: space, objects and agents” XXVI ***Congresso Nazionale SIPF***, Turin, 15-17 Novembre 2018

- o) "Spatial sampling with TMS: theoretical issues and application to the motor system" seminar held in the ***NeuroPhylosophy series*** of the University of Milan- Statale – organizer Prof. Corrado Sinigaglia – May 2019
- p) "Corticomotor connectivity evaluated by non-invasive and invasive brain stimulation" seminar held at the ***Department of Biomedical and Clinical Sciences "Luigi Sacco"*** in Milan – June 2019 - @ the thalamocortical Laboratory led by Marcello Massimini.
- q) "Frontal and parietal connectivity to the motor cortex" talk held at the EANS meeting New Frontiers in Intraoperative Neurophysiology Bridging Neurosciences and Neurosurgery: 2-4 February 2023 Verona, Italy
- r) "Variability induced by state dependency in cognition" talk held at the ***Expert Workshop - Controversies in Brain Stimulation: Targeting Variability in Transcranial Stimulation Research*** Munich, October 8, 2023

16. ORGANIZATION OF MEETINGS/EVENTS:

- Scientific committee of the EANS meeting - New Frontiers in Intraoperative Neurophysiology Bridging Neurosciences and Neurosurgery: 2-4 February 2023 Verona, Italy

17. TEACHING ACTIVITY:

I held courses on the biological bases of behavior and cognition, human physiology, clinical neurophysiology, brain stimulation, neuropsychology and introduction to neuroscience at the BA and master courses in psychology, at the school of medicine, at the specialization schools in neurology and in neurosurgery. I have supervised 5 PhD students, and more than 40 students for internship and thesis in the tracks of Psychology, Cognitive Neuroscience, Bioinformatics, Neuroscience and Medicine.

17.1. Previous courses:

Institution	School	Course	language	Hours/year	Time period
University of Parma	Scuola di Specializzazione in Neurologia	attività didattica integrativa “Approfondimento di tecniche neurofisiologiche applicate allo studio del movimento”	italian	8 hours	2003-2004
University of Parma	Corso di Laurea in Medicina e Chirurgia	attività didattica elettiva “Tecniche neurofisiologiche”	italian	10 hours	2006-2008
University of Trento	Corso di laurea triennale Scienze e Tecniche di Psicologia Cognitiva	Neuroscienze del comportamento	italian	28 hours	2014-2015 2015-2016
University of Trento	Corso di laurea magistrale in Cognitive Sciences	Foundations of Brain Imaging – modulo di neuroanatomia	english	18 hours	2013-2014 2014-2015 2015-2016

University of Trento	Scuola di dottorato in Cognitive and Brain Sciences	Brain Stimulation Techniques	english	9 hours	2011-2012 2012-2013 2013-2014 2014-2015 2015-2016
University of Trento	corso PAS - classe di concorso A040 – igiene, anatomia, fisiologia, patologia generale e dell'apparato masticatorio	Anatomia e fisiologia del sistema orofacciale	italian	8 hours	2014-2015
University of Verona	Corso di laurea triennale in fisioterapia – Sede di Verona	Fisiologia generale (BIO/09)	italian	30 hours	2015-2016 2016-2017 2017-2018 2018-2019
University of Verona	Corso di laurea triennale in infermieristica – Sede di Trento	Fondamenti Morfo-Funzionali della Vita, modulo di Fisiologia (BIO/09)	italian	36 hours	2014-2015 2015-2016 2016-2017 2017-2018 2018-2019
University of Verona	Scuola di specialità in Neurochirurgia	Fisiologia (BIO/09)	italian	12 hours	2016-2017 2017-2018 2018-2019
University of Verona	Scuola di specialità in ORL	Fisiologia (BIO/09)	italian	12 hours	2016-2017 2017-2018 2018-2019
University of Verona	Corso di laurea in Medicina e Chirurgia	Tirocinio di ricerca sperimentale (BIO/09)	italian	25 hours	2017-2018 2018-2019
University of Verona	Corso di laurea triennale in logopedia	Fisiologia (BIO/09)	italian	20 hours	2018-2019
University of Verona	Corso di laurea in Medicina e Chirurgia	Fisiologia I – esercitazioni (BIO/09)	italian	13 hours	2018-2019

University of Trento	Master Program in Cognitive Science	Clinical Neuropsychology	english	40 hours	2019-2020
University of Trento	Master Program in Cognitive Science	Neuroscience (BIO/09)	english	40 hours	2019-2020
University of Trento	Master Program in Cognitive Science	Clinical Neurology and Neuropsychology	english	30 hours	2020-2021
University of Trento	Corso di laurea triennale Scienze e Tecniche di Psicologia Cognitiva	Basi biologiche del comportamento	italian	63 hours	2020-2021

17.2. Current teaching:

Sede	Corso di laurea/Scuola	Titolo del corso	Lingua	Ore/ anno	Anno di corso
University of Trento	Master Program in Cognitive Science	Neural bases of human behavior (BIO/09)	english	42 hours	2021-2022 - current
University of Trento	Corso di Laurea in Medicina e Chirurgia	Fisiologia umana (II modulo) (BIO/09)	italiano	84 hours	2021-2022 - current
University of Trento	PhD Cognitive and Brain Sciences	Neuroanatomy	english	6	2022-23 – current
University of Trento	Dottorato Nazionale in Space Science and Technology - SST	Physiological adaptations to microgravity, altitude and hypoxia	english	8	2022-23 – current

17.3. Student supervision:

- 2010-2016 – member of the council of the PhD program in Cognitive and Brain Sciences University of Trento. Supervisor of 4 PhD students: Guido Barchiesi, Francesca Maule, Silvia Ubaldi e Sara Parmigiani.
- 2017-2020 – member of the council of the PhD program in Neuroscience of the University of Verona. Supervisor of one student: Martina Pirruccio.
- Supervisor of more than 20 students' thesis in Psychology, Bioinformatics and Medicine.
- 2022-now – member of the council of the PhD program in Cognitive and Brain Sciences University of Trento. Supervisor of 1 PhD student: Marco Tagliaferri.

17.4. Post-doctoral supervision: 2012-present: Supervision of 5 research fellows for a total of 11 years/person.

18. SCIENTIFIC PRODUCTION

18.1. BIBLIOMETRIC INDEXES: As of January 2024 (Scopus database), I have published 97 peer-reviewed publications, 43 of which as corresponding author, 28 as first author and 27 as last author. I have on average 46 citations per article. The mean Journal Citation Report (Impact Factor) is of 4.62, with reference to the year of publication. *H*-index=30, Citations= 4339.

18.2. TEXTBOOK CHAPTERS:

- Chapter “Language”. Series “Handbook of Clinical Neurology” – Volume 116 “Brain Stimulation” edited by Mark Hallett and Andres Lozano. Elsevier Publishers.
- Chapter “Transcranial magnetic stimulation in the study of brain lateralization” – Serie Neuromethods, Volume “Lateralized brain functions” – edited by Leslie Rogers and Giorgio Vallortigara.

18.3. PEER-REVIEWED PUBLICATIONS:

#	authors	title	year	source	reference	type	1st author	last author	Corr. author	Impact factor
	Tagliaferri, M., Giampiccolo, D., Parmigiani, S., Avesani, P., Cattaneo, L.	Connectivity by the Frontal Aslant Tract (FAT) explains local functional specialization of the superior and inferior frontal gyri in humans when choosing predictive over reactive strategies: a tractography-guided TMS study	2023	The Journal of Neuroscience	43(41):6820–6829	Article		y	y	5.3
	Giampiccolo, D., Cattaneo, L., Sala, F.	Untangling wave characteristics in direct axono-cortical evoked potentials to understand cortico-cortical evoked potentials	2023	Clinical Neurophysiology	153:187–188	Article				4.7
	Lega, C., Cattaneo, L., Costantini, G.	How to Test the Association Between Baseline Performance Level and the Modulatory Effects of Non-Invasive Brain Stimulation Techniques	2023	Frontiers in Human Neuroscience	16:920558	Article				2.9
91	Giampiccolo, D., Nunes, S., Cattaneo, L., Sala, F.	Functional Approaches to the Surgery of Brain Gliomas	2022	Advances and technical standards in neurosurgery	45:35-96	Article				-
90	Velji-Ibrahim, J., Crawford, J.D., Cattaneo, L., Monaco, S.	Action planning modulates the representation of object features in human fronto-parietal and occipital cortex	2022	European Journal of Neuroscience		Article				3.4

89	Giampiccolo, D., Parmigiani, S., Basaldella, F., Russo, S., Pigorini, A., Rosanova, M., Cattaneo, L., Sala, F.	Reply to "Intraoperative cortico-cortical evoked potentials for monitoring the arcuate fasciculus: Feasible under general anesthesia?"	2022	Clinical Neurophysiology	133:177-178	Letter				3.708
88	Giampiccolo, D., Parmigiani, S., Basaldella, F., Russo, S., Pigorini, A., Rosanova, M., Cattaneo, L., Sala, F.	Recording cortico-cortical evoked potentials of the human arcuate fasciculus under general anaesthesia	2021	Clinical Neurophysiology	132:1966-1973	Article		y		3.708
87	Finocchiaro, C., Cattaneo, L., Lega, C., Miceli, G.	Thematic Reanalysis in the Left Posterior Parietal Sulcus: A TMS Study	2021	Neurobiology of Language	2:416-432	Article				-
86	Sala, F., Giampiccolo, D., Cattaneo, L.	Novel Asleep Techniques for Intraoperative Assessment of Brain Connectivity	2021	Frontiers in Neurology	12:687030	Review		y		4.003
85	Cattaneo, L., Parmigiani, S.	Stimulation of different sectors of the human dorsal premotor cortex induces a shift from reactive to predictive action strategies and changes in motor inhibition: A dense transcranial magnetic stimulation (tms) mapping study	2021	Brain Sciences	11:534	Article	y		y	3.394
84	Giampiccolo, D., Basaldella, F., Badari, A., Squintani, G.M., Cattaneo, L., Sala, F.	Feasibility of cerebello-cortical stimulation for intraoperative neurophysiological monitoring of cerebellar mutism	2021	Child's Nervous System	37:1505-1514	Article				1.475
83	Lega, C., Santandrea, E., Ferrante, O., Serpe, R., Dolci, C., Baldini, E., Cattaneo, L., Chelazzi, L.	Modulating the influence of recent trial history on attentional capture via transcranial magnetic stimulation (TMS) of right TPJ	2020	Cortex	133:149-160	Article				4.027
82	Pirruccio, M., Monaco, S., Della Libera, C., Cattaneo, L.	Gaze direction influences grasping actions towards unseen, haptically explored, objects	2020	Scientific Reports	10:15774	Article		y	y	4.38

81	Vercesi, L., Sabnis, P., Finocchiaro, C., Cattaneo, L., Tonolli, E., Miceli, G.	The role of the I-IPS in the comprehension of reversible and irreversible sentences: an rTMS study	2020	Brain Structure and Function	225:2403-2414	Article				3.27
80	Giampiccolo, D., Cattaneo, L., Basaldella, F., Kenneth Ricciardi, G., Sala, F.	Intraoperative neuromonitoring predicts motor recovery in a long-term hemiplegic patient with a Rolandic metastasis	2020	Clinical Neurophysiology	131:2276-2278	Article				3.708
79	Monaco, S., Malfatti, G., Culham, J.C., Cattaneo, L., Turella, L.	Decoding motor imagery and action planning in the early visual cortex: Overlapping but distinct neural mechanisms	2020	NeuroImage	218:116981	Article				6.556
78	Lega, C., Pirruccio, M., Bicego, M., Parmigiani, L., Chelazzi, L., Cattaneo, L.	The Topography of Visually Guided Grasping in the Premotor Cortex: A Dense-Transcranial Magnetic Stimulation (TMS) Mapping Study	2020	Journal of Neuroscience	40:6790-6800	Article		y	y	6.167
77	Cattaneo, L., Giampiccolo, D., Meneghelli, P., Tramontano, V., Sala, F.	Cortico-cortical connectivity between the superior and inferior parietal lobules and the motor cortex assessed by intraoperative dual cortical stimulation	2020	Brain Stimulation	13:819-831	Article	y		y	8.955
76	Lega, C., Chelazzi, L., Cattaneo, L.	Two distinct systems represent contralateral and ipsilateral sensorimotor processes in the human premotor cortex: A dense tms mapping study	2020	Cerebral Cortex	30:2250-2266	Article		y	y	5.357
75	Pilurzi, G., Ginatempo, F., Mercante, B., Cattaneo, L., Pavese, G., Rothwell, J.C., Deriu, F.	Role of cutaneous and proprioceptive inputs in sensorimotor integration and plasticity occurring in the facial primary motor cortex	2020	Journal of Physiology	598:839-851	Article				5.182
74	Vergallito, A., Petilli, M.A., Cattaneo, L., Marelli, M.	Somatic and visceral effects of word valence, arousal and concreteness in a continuum lexical space	2019	Scientific Reports	9:20254	Article				3.998
73	Lega, C., Ferrante, O., Marini, F., Santandrea,	Probing the neural mechanisms for distractor filtering and their history-	2019	Journal of Neuroscience	39:7591-7603	Article				5.674

	E., Cattaneo, L., Chelazzi, L.	contingent modulation by means of TMS								
72	De Pisapia, N., Barchiesi, G., Jovicich, J., Cattaneo, L.	The role of medial prefrontal cortex in processing emotional self-referential information: a combined TMS/fMRI study	2019	Brain Imaging and Behavior	13:603-614	Article		y		3.391
71	Taga, A., Poma, G., Cattaneo, L., Saccani, E., Tinchelli, S., Pavesi, G.	Radial Nerve F-wave reference values with surface electrodes from the anconeus muscle	2019	Muscle and Nerve	59:244-246	Article				2.505
70	Parmigiani, S., Cattaneo, L.	Stimulation of the Dorsal Premotor Cortex, But Not of the Supplementary Motor Area Proper, Impairs the Stop Function in a STOP Signal Task	2018	Neuroscience	394:14-22	Article		y	y	3.244
69	Parmigiani, S., Zattera, B., Barchiesi, G., Cattaneo, L.	Spatial and Temporal Characteristics of Set-Related Inhibitory and Excitatory Inputs from the Dorsal Premotor Cortex to the Ipsilateral Motor Cortex Assessed by Dual-Coil Transcranial Magnetic Stimulation	2018	Brain Topography	31:795-810	Article			y	3.104
68	Cattaneo, L.	Fancies and fallacies of spatial sampling with transcranial magnetic stimulation (TMS)	2018	Frontiers in Psychology	9:1171	Article	y	y	y	2.129
67	Cattaneo, L., Veroni, V., Boria, S., Tassinari, G., Turella, L.	Sex Differences in Affective Facial Reactions Are Present in Childhood	2018	Frontiers in Integrative Neuroscience	12:19	Article				2.81
66	Scarpazza, C., Làdavas, E., Cattaneo, L.	Invisible side of emotions: somato-motor responses to affective facial displays in alexithymia	2018	Experimental Brain Research	236:195-206	Article		y		1.878
65	Zuanazzi, A., Cattaneo, L.	The right hemisphere is independent from the left hemisphere in allocating visuospatial attention	2017	Neuropsychologia	102:197-205	Article			y	2.889
64	Mazzoni, N., Jacobs, C., Venuti, P., Silvanto, J., Cattaneo, L.	State-dependent TMS reveals representation of affective body movements in the anterior intraparietal cortex	2017	Journal of Neuroscience	37:7231-7239	Article		y		5.971

62	Papadelis, C., Arfeller, C., Erla, S., Nollo, G., Cattaneo, L., Braun, C.	Inferior frontal gyrus links visual and motor cortices during a visuomotor precision grip force task	2016	Brain Research	1650:252-266	Article				2.746
61	Messina, I., Cattaneo, L., Venuti, P., de Pisapia, N., Serra, M., Esposito, G., Rigo, P., Farneti, A., Bornstein, M.H.	Sex-specific automatic responses to infant cries: TMS reveals greater excitability in females than males in motor evoked potentials	2016	Frontiers in Psychology	6:1909	Article				2.321
60	Cattaneo, L., Maule, F., Tabarelli, D., Brochier, T., Barchiesi, G.	Online repetitive transcranial magnetic stimulation (TMS) to the parietal operculum disrupts haptic memory for grasping	2015	Human Brain Mapping	36:4262-4271	Article	y		y	4.962
59	Parmigiani, S., Barchiesi, G., Cattaneo, L.	The dorsal premotor cortex exerts a powerful and specific inhibitory effect on the ipsilateral corticofacial system: a dual-coil transcranial magnetic stimulation study	2015	Experimental Brain Research	233:3253-3260	Article			y	2.057
58	Finocchiaro, C., Capasso, R., Cattaneo, L., Zuanazzi, A., Miceli, G.	Thematic role assignment in the posterior parietal cortex: A TMS study	2015	Neuropsychologia	77:223-232	Article				2.989
57	Cattaneo, L., Barchiesi, G.	The auditory space in the motor system	2015	Neuroscience	304:81-89	Article			y	3.231
56	Ubaldi, S., Barchiesi, G., Cattaneo, L.	Bottom-up and top-down visuomotor responses to action observation	2015	Cerebral Cortex	25:1032-1041	Article	y	y	y	8.285
55	Cattaneo, L.	Granularity within the mirror system is not informative on action perception. Comment on "Grasping synergies: A motor-control approach to the mirror neuron mechanism" by D'Ausilio et al.	2015	Physics of Life Reviews	12:123-125	Note	y	y	y	8.615
54	Barchiesi, G., Cattaneo, L.	Motor resonance meets motor performance	2015	Neuropsychologia	69:93-104	Article		y	y	2.989
53	Maule, F., Barchiesi, G., Brochier, T., Cattaneo, L.	Haptic working memory for grasping: The role of the parietal operculum	2015	Cerebral Cortex	25:528-537	Article		y	y	8.285

52	Rizzolatti, G., Cattaneo, L., Fabbri-Destro, M., Rozzi, S.	Cortical mechanisms underlying the organization of goal-directed actions and mirror neuron-based action understanding	2014	Physiological Reviews	94:655-706	Article				27.324
51	Cattaneo, L., Pavesi, G.	The facial motor system	2014	Neuroscience and Biobehavioral Reviews	38:135-	Review	y		y	8.802
50	Cattaneo, L., Maule, F., Barchiesi, G., Rizzolatti, G.	The motor system resonates to the distal goal of observed actions: Testing the inverse pliers paradigm in an ecological setting	2013	Experimental Brain Research	231:37-49	Article	y		y	2.168
49	Avanzini, P., Fabbri-Destro, M., Campi, C., Pascarella, A., Barchiesi, G., Cattaneo, L., Rizzolatti, G.	Spatiotemporal dynamics in understanding hand-object interactions	2013	Proceedings of the National Academy of Sciences of the United States of America	110:15878-15885	Article				9.809
48	Barchiesi, G., Cattaneo, L.	Early and late motor responses to action observation	2013	Social Cognitive and Affective Neuroscience	8:711-719	Article		y	y	5.884
47	Arfeller, C., Schwarzbach, J., Ubaldi, S., Ferrari, P., Barchiesi, G., Cattaneo, L.	Whole-brain haemodynamic after-effects of 1-Hz magnetic stimulation of the posterior superior temporal cortex during action observation	2013	Brain Topography	26:278-291	Article			y	2.519
45	Perini, F., Cattaneo, L., Carrasco, M., Schwarzbach, J.V.	Occipital transcranial magnetic stimulation has an activity-dependent suppressive effect	2012	Journal of Neuroscience	32:12361-12365	Article				6.908
44	de Pisapia, N., Sandrini, M., Braver, T.S., Cattaneo, L.	Integration in working memory: A magnetic stimulation study on the role of left anterior prefrontal cortex	2012	PLoS ONE	7:e43731	Article		y		3.73
43	Barchiesi, G., Wache, S., Cattaneo, L.	The frames of reference of the motor-visual aftereffect	2012	PLoS ONE	7:e40892	Article		y	y	3.73
42	Cattaneo, L., Fasanelli, M., Andreatta, O., Bonifati, D.M.,	Your actions in my cerebellum: Subclinical deficits in action observation in patients with unilateral chronic cerebellar stroke	2012	Cerebellum	11:264-271	Article	y		y	2.595

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41	Cattaneo, L., Barchiesi, G.	Transcranial magnetic mapping of the short-latency modulations of corticospinal activity from the ipsilateral hemisphere during rest	2011	Frontiers in Neural Circuits	5:14	Article	y		y 5.098
40	Cattaneo, L., Barchiesi, G., Tabarelli, D., Arfeller, C., Sato, M., Glenberg, A.M.	One's motor performance predictably modulates the understanding of others' actions through adaptation of premotor visuo-motor neurons	2011	Social Cognitive and Affective Neuroscience	6:nsq099	Article	y		y 6.132
39	Sato, M., Grabski, K., Glenberg, A.M., Brisebois, A., Basirat, A., Ménard, L., Cattaneo, L.	Articulatory bias in speech categorization: Evidence from use-induced motor plasticity	2011	Cortex	47:1001-1003	Article		y	6.08
38	Cattaneo, L.	Tuning of ventral premotor cortex neurons to distinct observed grasp types: A TMS-priming study	2010	Experimental Brain Research	207:165-172	Article	y		y 2.296
37	Cattaneo, L., Sandrini, M., Schwarzbach, J.	State-dependent TMS reveals a hierarchical representation of observed acts in the temporal, parietal, and premotor cortices	2010	Cerebral Cortex	20:2252-2258	Article	y		y 6.844
36	Sato, M., Buccino, G., Gentilucci, M., Cattaneo, L.	On the tip of the tongue: Modulation of the primary motor cortex during audiovisual speech perception	2010	Speech Communication	52:533-541	Article		y	1.012
35	Cattaneo, L., Pavesi, G.	Recording the trigemino-facial inhibitory reflex: Technique and normal findings	2010	Journal of Clinical Neurophysiology	27:126-129	Article	y		y 1.154
34	Wood, R., Gallese, V., Cattaneo, L.	Visuotactile empathy within the primary somatosensory cortex revealed by short-latency afferent inhibition	2010	Neuroscience Letters	473:28-31	Article		y	y 2.055
33	Glenberg, A.M., Lopez-Mobilia, G., McBeath, M., Toma, M., Sato, M., Cattaneo, L.	Knowing beans: Human mirror mechanisms revealed through motor adaptation	2010	Frontiers in Human Neuroscience	4:-	Article		y	1.94

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31	Cattaneo, L., Cucurachi, L., Pavesi, G.	Isolated toe paralysis caused by a small cortical infarction	2009	Journal of Neurology, Neurosurgery and Psychiatry	80:1142-	Article	y		y	4.869
30	Cattaneo, L., Caruana, F., Jezzini, A., Rizzolatti, G.	Representation of goal and movements without overt motor behavior in the human motor cortex: A transcranial magnetic stimulation study	2009	Journal of Neuroscience	29:11134-11138	Article	y		y	7.178
29	Cucurachi, L., Cattaneo, L., Gemignani, F., Pavesi, G.	Late onset generalized myasthenia gravis presenting with facial weakness and bulbar signs without extraocular muscle involvement	2009	Neurological Sciences	30:343-344	Article			y	1.12
28	Montepietra, S., Cattaneo, L., Granella, F., Maurizio, A., Sasso, E., Pavesi, G., Bortone, E.	Myocardial infarction following convulsive and nonconvulsive seizures	2009	Seizure	18:379-381	Article			y	2.233
27	Boria, S., Fabbri-Destro, M., Cattaneo, L., Sparaci, L., Sinigaglia, C., Santelli, E., Cossu, G., Rizzolatti, G.	Intention understanding in autism	2009	PLoS ONE	4:e5596	Article				4.351
26	Cattaneo, L., Rizzolatti, G.	The mirror neuron system	2009	Archives of Neurology	66:557-560	Review	y			6.312
25	Rizzolatti, G., Fabbri-Destro, M., Cattaneo, L.	Mirror neurons and their clinical relevance	2009	Nature Clinical Practice Neurology	5:24-34	Review		y		6.362
24	Buccino, G., Sato, M., Cattaneo, L., Rodà, F., Riggio, L.	Broken affordances, broken objects: A TMS study	2009	Neuropsychologia	47:3074-3078	Article				4.345

23	Fabbri-Destro, M., Cattaneo, L., Boria, S., Rizzolatti, G.	Planning actions in autism	2009	Experimental Brain Research	192:521-525	Article				2.256
22	Cucurachi, L., Immovilli, P., Granella, F., Pavesi, G., Cattaneo, L.	Short-latency afferent inhibition predicts verbal memory performance in patients with multiple sclerosis	2008	Journal of Neurology	255:1949-1956	Article		y	y	2.536
21	Glenberg, A.M., Sato, M., Cattaneo, L.	Use-induced motor plasticity affects the processing of abstract and concrete language	2008	Current Biology	18:R290-R291	Article		y		10.777
20	Glenberg, A.M., Sato, M., Cattaneo, L., Riggio, L., Palumbo, D., Buccino, G.	Processing abstract language modulates motor system activity	2008	Quarterly Journal of Experimental Psychology	61:905-919	Article				1.76
19	Cattaneo, L., Fabbri-Destro, M., Boria, S., Pieraccini, C., Monti, A., Cossu, G., Rizzolatti, G.	Impairment of actions chains in autism and its possible role in intention understanding	2007	Proceedings of the National Academy of Sciences of the United States of America	104:17825-17830	Article	y			9.598
18	Prabhu, G., Voss, M., Brochier, T., Cattaneo, L., Haggard, P., Lemon, R.	Excitability of human motor cortex inputs prior to grasp	2007	Journal of Physiology	581:189-201	Article				4.58
17	Sato, M., Cattaneo, L., Rizzolatti, G., Gallese, V.	Numbers within our hands: Modulation of corticospinal excitability of hand muscles during numerical judgment	2007	Journal of Cognitive Neuroscience	19:684-693	Article				4.997
16	Cattaneo, L., Macaluso, G.M., Pavesi, G.	Inhibitory reflexes in human perioral facial muscles: A single-motor unit study	2007	Clinical Neurophysiology	118:794-801	Article	y		y	2.468
15	Cattaneo, L., Chierici, E., Pavone, L., Grasselli, C., Manganelli, P., Buzio, C., Pavesi, G.	Peripheral neuropathy in Wegener's granulomatosis, Churg-Strauss syndrome and microscopic polyangiitis	2007	Journal of Neurology, Neurosurgery and Psychiatry	78:1119-1123	Article	y		y	3.857

14	Cattaneo, L., Cucurachi, L., Pavesi, G.	Concentric needle recording of neuromuscular jitter in the temporalis muscle	2007	Neurophysiologie Clinique	37:50-51	Letter	y		y	0.649
13	Cattaneo, L., Chierici, E., Cucurachi, L., Cobelli, R., Pavesi, G.	Posterior insular stroke causing selective loss of contralateral nonpainful thermal sensation	2007	Neurology	68:237-	Article	y		y	6.014
12	Cattaneo, L., Chierici, E., Bianchi, B., Sesenna, E., Pavesi, G.	The localization of facial motor impairment in sporadic Möbius syndrome	2006	Neurology	66:1907-1912	Article	y		y	5.69
11	Cattaneo, L., Cucurachi, L., Chierici, E., Pavesi, G.	Pathological yawning as a presenting symptom of brain stem ischaemia in two patients	2006	Journal of Neurology, Neurosurgery and Psychiatry	77:98-100	Article	y		y	3.63
10	Gentilucci, M., Cattaneo, L.	Automatic audiovisual integration in speech perception	2005	Experimental Brain Research	167:66-75	Article		y		2.118
9	Cattaneo, L., Chierici, E., Pavesi, G.	Bell's palsy-induced blepharospasm relieved by passive eyelid closure and responsive to apomorphine	2005	Clinical Neurophysiology	116:2348-2353	Article	y		y	2.64
8	Aziz-Zadeh, L., Cattaneo, L., Rochat, M., Rizzolatti, G.	Covert speech arrest induced by rTMS over both motor and nonmotor left hemisphere frontal sites	2005	Journal of Cognitive Neuroscience	17:928-938	Article				4.533
7	Cattaneo, L., Voss, M., Brochier, T., Prabhu, G., Wolpert, D.M., Lemon, R.N.	A cortico-cortical mechanism mediating object-driven grasp in humans	2005	Proceedings of the National Academy of Sciences of the United States of America	102:898-903	Article	y			10.231
5	Pavesi, G., Cattaneo, L., Chierici, E., Mancia, D.	Trigemino-facial inhibitory reflexes in idiopathic hemifacial spasm	2003	Movement Disorders	18:587-592	Article				2.895
4	Pavesi, G., Cattaneo, L., Marbini, A., Gemignani, F., Mancia, D.	Long-term efficacy of interferon-alpha in chronic inflammatory demyelinating polyneuropathy [3]	2002	Journal of Neurology	249:777-779	Article				3.345
3	Cattaneo, L., Pavesi, G., Mancia, D.	Sural nerve abnormalities in sacral perineural (Tarlov) cysts [4]	2001	Journal of Neurology	248:623-624	Article	y			2.653

2	Pavesi, G., Cattaneo, L., Tinchelli, S., Mancia, D.	Masseteric repetitive nerve stimulation in the diagnosis of myasthenia gravis	2001	Clinical Neurophysiology	112:1064-1069	Article				1.922
1	Pavesi, G., Macaluso, G.M., Marchetti, P., Cattaneo, L., Tinchelli, S., De Laat, A., Mancia, D.	Trigemino-facial reflex inhibitory responses in some lower facial muscles	2000	Muscle and Nerve	23:939-945	Article				1.969

18.4. Non- peer reviewed publications:

- G. Pavesi, D. Medici, L. Cattaneo, P. Marchetti, S. Tinchelli, D. Mancia. *Mielopatie traumatiche acute: il contributo del neurofisiologo*. Italian Journal of Neurological Sciences, 1998. 19: p. S51-S53.
- G. Pavesi, L. Cattaneo, S. Tinchelli, D. Mancia. *Le neuropatie infettive*. Neurological Sciences, 2000. 21: p. S393-S400.
- A. Tullio, M.T. Raho, G. Pavesi, L. Cattaneo, E. Sesenna. "Shoulder Syndrome" in neck dissection. Rivista Italiana di Chirurgia Maxillo Facciale. 2001. 12: p. 25-32
- G. Pavesi, L. Cattaneo. *Osservazioni sul ruolo dell'elettromiografia nella diagnosi delle neuropatie periferiche*. Progressi in Reumatologia. 2002. 3: p. 108-111
- P. Manganelli, G. Pavesi, E. Chierici, L. Cattaneo, L. Pavone, G. Garini, C. Buzio. *L'interessamento del sistema nervoso periferico nelle vasculiti ANCA-associate*. Reumatismo, 2004. 56: p. 69-71
- L. Cattaneo, G. Pavesi, E. Chierici, F. Gemignani, A. Marbini. *Capitolo 13: La vasculite isolata del sistema nervoso periferico (neuropatia vasculitica non-sistemica)*. in "Testo atlante delle vasculiti", di Buzio, Manganelli, Pesci, Garini. Casa editrice Mattioli 1885, Parma, anno 2006; ISBN: 978-88-89397-35-7. pp 107-110
- L. Cattaneo, G. Pavesi, E. Chierici, F. Gemignani, A. Marbini. *Capitolo 31: Le vasculiti viste dal neurologo*. in "Testo atlante delle vasculiti", di Buzio, Manganelli, Pesci, Garini. Casa editrice Mattioli 1885, Parma, anno 2006; ISBN: 978-88-89397-35-7. pp 169-172.

19. CLINICAL ACTIVITY:

- 2003-2009. Autonomous clinical activity in general Neurology, emergency Neurology and clinical Neurophysiology.
- 2008-2015: supervising MD for the neurostimulation laboratory of the CIMeC (University of Trento).
- October 2019-2023 "medico responsabile" for the use off the 3T magnet of the CIMeC.