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***CURRENT POSITIONS

October 2023-present: Head of the Department of Humanities and Life Sciences, University School for Advanced Studies IUSS Pavia;

2014-present: Associate professor of Neuropsychology and Cognitive Neuroscience (M-PSI/02), University School for Advanced Studies IUSS-Pavia, Italy;

2017-present: Director of the IUSS-Maugeri Cognitive Neuroscience Laboratory (IRCCS Maugeri, Pavia); coordination of a research team currently including 2 associate professors, 1 research fellow, 5 PhD students and 2 interns, with national and international collaborations.

***CURRENT TEACHING ACTIVITIES

Teaching to undergraduate students: Neuroscience of decision-making (IUSS and Università degli Studi di Pavia); Social cognitive neuroscience, Affective neuroscience, Research Methods in Cognitive Neuroscience, Social and brain connections (IUSS).

Advanced teaching to PhD students (IUSS): Neuroscience of decision-making; Social Neuroscience; Research methods in cognitive neuroscience.

***CURRENT and PAST INSTITUTIONAL POSITIONS and RESPONSIBILITIES

2018-Present: Vice-head, Department of Humanities and Life Sciences (IUSS)

2019-Present: Head, Biomedical Sciences sector (IUSS)

2022-Present: Member of the Academic Senate (IUSS)

2018-Present: Chair of the Joint Student Teacher Committee (Commissione Paritetica Docenti-Studenti) (IUSS)

2017-Present: Development, management and direction of the IUSS-Maugeri Cognitive Neuroscience Laboratory (IRCCS Maugeri, Pavia)

2019-Present: Member of the Technical-Scientific Committee of IRCCS ICS Maugeri-Pavia

2017-Present: Member of the selection committee for PhD School admission (PhD in Cognitive Neuroscience and Philosophy of Mind; PhD in Cognitive Brain Sciences; PhD in Sustainable Development and Climate Change; IUSS)

2015-Present: Member of the PhD Board, PhD in Cognitive Neuroscience and Philosophy of Mind (IUSS)

2022-Present: Member of the PhD Board, PhD in Cognitive Brain Sciences (IUSS-Università degli Studi di Pavia)

October 2020-Present: Vice-coordinator of the PhD program in Cognitive Neuroscience and Philosophy of Mind (IUSS)

October 2020-March 2021: Pro-Rector for PhD programs (IUSS)

2012-2013: Member of the Committee for Erasmus projects (Vita-Salute San Raffaele University)

***CURRENT RESEARCH ACTIVITIES

My research activity is mainly focused on the neural bases of cognitive functions, and particularly social cognition, decision-making and executive functioning in normal and pathological conditions (e.g., brain injury, dementia, addiction and other neuro-psychiatric disorders), with behavioral, neuroimaging (MRI-fMRI, EEG), neuromodulation (tDCS, TMS), brain training techniques, and their combination. These aims are grounded in the notion that a real advancement of knowledge in cognitive neurosciences requires a continuous integration between correlational evidence provided by neuroimaging techniques and causal evidence provided by neuromodulation techniques and/or the observation of cognitive impairments in pathological conditions.

***SCIENTIFIC PRODUCTION and DISSEMINATION (see details below)

Published articles on international indexed peer-reviewed journals: 75 (18 as first or co-first author; 26 as last or corresponding author)

Published book-chapters: 11

Curatorship: 1 book

Educational books and articles: 6

Invited talks: 35

***BIBLIOMETRIC INDICES

Scopus (ID: 24334215800): h-index: 29; total citations: 3510

Google Scholar: h-index: 35; i10 index: 57; total citations: 5652
Orcid ID: <http://orcid.org/0000-0002-0179-6384>
Web of Science ResearcherID: K-3223-2016

*****SCIENTIFIC SOCIETIES**

- Italian Society of Neuropsychology (SINP) (since January 2021)
- Italian Society of Neuroethics (2017-18)

***** QUALIFICATIONS**

- National Academic Qualification for Full Professor ("Abilitazione Scientifica Nazionale") M-PSI/02 since November 2018
- Qualified as psychologist and registered to the professional register of psychologists (Ordine Psicologi Lombardia- OPL) since 2009 (#12570)

*****PARTICIPATION IN FUNDED PROJECTS**

- Principal investigator for of the project "Innovative Mobile Brain/Body Imaging (MoBI) techniques for identifying and monitoring novel functional biomarkers underlying neuro-rehabilitative processes" (Progetto Conto Capitale 2021) funded by the Italian Minister of Health with €228430
- Co-investigator in the Cariplo 2009/10 project "Formazione Universitaria d'Eccellenza: applicazioni neuro-scientifiche per la formazione nella gestione dell'innovazione e della sostenibilità" (Bocconi University and Vita-Salute San Raffaele University, 36 months)
- Co-investigator in the PRIN 2010-11 project "I meccanismi neurocognitivi alla base delle interazioni sociali" (Vita-Salute San Raffaele University Unit, 36 months)

*****MANAGEMENT OF INTERNAL FUNDS**

- Principal investigator for the sub-projects in the Neuroeconomics and Social Neuroscience areas within the strategic project "IUSS 2.0. Dalla Gestione dei Rischi alla Neurocognizione" (2016)
- Principal investigator for the sub-projects "Technological development of the IUSS-Maugeri Cognitive Neuroscience Lab", "Neuroeconomics" and "Social Neuroscience" within the strategic project "Next: Piano di potenziamento della ricerca IUSS nelle neuroscienze cognitive" (2018)

*****CONSULTING ACTIVITIES**

- Participation in research-projects funded by Banca Prossima (2015), Allianz Bank (2017), Havas (2021) within the activities of the IUSS "Reputation lab"

*****EDITORIAL AND REVIEWING ACTIVITIES**

Participation in editorial boards

Associate Editor for Scientific Reports (sections Neuroscience, Psychology); Associate Editor for Frontiers in Psychology-Neuropsychology (since June 2019) and Frontiers in Psychology-Cognition (since June 2020); Review Editor for Frontiers in Psychology-Cognition (since December 2016).

Reviewing activity for scientific journals

JAMA, Cerebral Cortex, Neuroimage, Neuroimage: clinical, Human Brain Mapping, Neuroscience & Biobehavioral Reviews, Brain Structure and Function, Scientific Reports, Addiction Biology, Neurology: Clinical Practice; Brain and Cognition, Brain and Behavior, Brain imaging and behavior, Neuropsychologia, Neural Plasticity, SCAN, Brain Research, Frontiers in Human Neuroscience, Journal of Neural Transmission, Frontiers in Behavioral Neuroscience, Frontiers in Aging Neuroscience, Frontiers in Psychology, Cortex, PLoS ONE, Heliyon, Behavioural Brain Research, Neuropsychiatry, Social Neuroscience, Behavioral Neurology, American Journal of Neuroradiology, Sleep Medicine, Neurological Sciences, Brain Sciences, Progress in Neuropsychopharmacology & Biological Psychiatry, Giornale Italiano di Psicologia, Psicologia Sociale, Journal of Cognitive Psychology.

Reviewing activity for funding agencies

Ministero Istruzione Università Ricerca for PRIN (2012-onwards), SIR and Rita Levi-Montalcini (2014) projects; Agence nationale de la recherche (ANR, Francia) years 2009-2011, 2018; Health Research Board (Ireland) 2013; DAAD – German Academic Exchange Service (2015, 2017); European Research Council (ERC;2016); Israel Science Foundation (2017); HFSP Career Development Award (2018); European Science Foundation (2019-2023).

*****AWARDS AND ACKNOWLEDGMENTS**

- Trainee abstract travel award (1000\$) for the annual meeting of the Organization of Human Brain Mapping, June 2008, Melbourne;
- Fellowship Ingenio-Regione Lombardia (8.000 Euro) supporting research activity, 2007;
- Postgraduate fellowships from SISSA (Trieste) (2006) and Vita-Salute San Raffaele University (Milan) (2006-2010);
- Undergraduate fellowship (4 years) from the Department of Neuroscience, University of Parma, Italy (2002-2006);
- Fellowship for the workshop in Experimental Economics (organizer: Nobel-Prize Vernon Smith) at the Economic Science Laboratory (ESL) of the University of Arizona, USA (2000);

***CURRENT SCIENTIFIC COLLABORATIONS

- ENIGMA Addiction Consortium (P.I. Scott Mackey, University of Vermont, USA)
- Stefano Brusoni, Daniella Laureiro Martinez (ETH-Zurich, Switzerland)
- Maurizio Zollo (Imperial College, London, UK)
- Claudia Gianelli (Università degli Studi di Messina)
- Martina Amanzio, Pietro Cipresso (Università degli Studi di Torino)
- Alice Chirico (Università Cattolica del Sacro Cuore, Milano)
- Klaus Gramann (Technische Universität Berlin, Germany)
- Stefano Tamburin (Università degli Studi di Verona)
- Zaira Cattaneo, Maria Arioli (università degli Studi di Bergamo)
- Giovanni de Girolamo (IRCCS Fatebenefratelli, Brescia) and the EUVIORMED international team (<https://www.eu-viormed.eu/>)
- Luigi Ferini-Strambi, Andrea Galbiati, Nicola Del Maschio, Jubin Abutalebi, Jacopo Lamanna, Alberto Sanna (Università Vita-Salute San Raffaele, Milano)
- Antonio Nardone, Antonio Pisani, Chiara Pavese, Sara Mascheretti (Università degli Studi di Pavia)
- Valeria Pingue, Cira Fundarò, Giuseppe Trifirò (IRCCS ICS Maugeri, Pavia)
- Leonor Romero, Gianpaolo Basso, Simone Sulpizio (Università degli Studi di Milano-Bicocca)
- Carmen Morawetz (University of Innsbruck, Austria)
- Simona Scaini (Sigmund Freud University, Milano)
- Matteo Innocenti, Pablo Zuglian (Association for Climate Change Anxiety - Italian branch)

***WORKING-EXPERIENCE

2010-2014

Assistant professor (M-PSI/05), Vita-Salute San Raffaele University, Faculty of Psychology, Milan; position confirmed for 3 years from March 1st 2013.

- Teaching and supervision of undergraduate and graduate students. Assistant Professor in Social psychology (2010-2014), Social cognition (Social Cognitive Neuroscience; 2010-2014), Social psychology of learning and motivation (Affective Neuroscience; 2010-2014), Cognitive psychology (2010), Psychophysiology (2010) and Fundamental Neuroscience (2010).
- Design and performance of cognitive and neuroimaging studies on the neural bases of social cognition and decision-making processes in healthy and pathological conditions.

2013

Teaching assignment on “Nuove tecniche di neuroimaging applicate alla neuropsicologia” at the International School for Advanced Studies (SISSA), Trieste, Italy

2009

Adjunct professor of Neuroeconomics, Vita-Salute San Raffaele University, Faculty of Psychology, Milan

2006-2010

Postdoctoral fellow in cognitive neuroscience, Vita-Salute San Raffaele University, Faculty of Psychology, Milan

2006

Post-doc in Cognitive Neuroscience, International School for Advanced Studies (SISSA), Trieste. Neuropsychological studies on the neural representation of action processing

2001-2010

Teaching assistant (“cultore della materia”) for the following courses: General psychology (2001-03), Psychology of reasoning (2001-05), Elements of neuroscience (2006-08), Cognitive economics (2006-08), Social psychology (2010) at the Vita-Salute San Raffaele University, Milan.

***EDUCATION

- 2002-2006: Ph.D in Neuroscience, University of Parma, Italy. Dissertation on “Neuroimaging evidence on the neural correlates of action and functional knowledge in semantic memory”. Final result: Excellent.
- 1996-2001: 5-years degree in Experimental Psychology, San Raffaele University, Milan. Dissertation on “The neural bases of social cognition”. Final result: Summa cum Laude.
- July-August 2000: workshop in Experimental Economics (organizer: Nobel-Prize Vernon Smith), Economic Science Laboratory (ESL) of the University of Arizona, USA.

***MENTORING

Post-docs (supervisor)

Chiara Crespi (2015-16; 2017-2019); Alessandra Dodich (2015-16); Claudia Gianelli (2018-21)

PhD students (supervisor)

Caterina Galandra (2015-18); Maria Arioli (2016-19); Sara Lo Presti (2019-2022); Carlotta Maiocchi (2021-present); Marta Milanesi, Letizia Richelli (2022-present)

PhD students (co- supervisor)

Chiara Crespi (2011-14); Alessandra Dodich (2012-15); Elia Zanin (2014-17)

PhD students (outside examiner)

Sara Garofalo (Università degli Studi di Bologna, 2015); Elisabetta Viganò (Università Vita-Salute San Raffaele; 2016); Virginia Borsa, Irene Bollettini (Università Vita-Salute San Raffaele; 2017)

Research Fellows (supervisor)

Riccardo Pirone (2023)

BS or MSc students (supervisor)

>45 theses as advisor; >10 theses as co-advisor; >50 theses as outside examiner.

Guidance activities

Participation in guidance activities at Vita-Salute San Raffaele University (2010-2014) and IUSS (coordination of “neuroscience labs” ever since 2015).

*** PEER-REVIEWED SCIENTIFIC PAPERS

- Mattavelli G, Pirone R, Gianelli C, Canessa N (ongoing). Modulating Inhibitory Capacity with tDCS: A pre-registered Comparison of High Definition and Conventional Montages on the Stop Signal Task. Accepted Registered Report on PCI Registered Reports
- Maiocchi C, Canessa N, Sozzi S, Mattavelli G, Nardone A, Gianelli C (ongoing): Dual-task effects of walking-speed on inhibitory control and decision-making under risk. Accepted Registered Report on Scientific Reports
- De Francesco S, Crema C, Archetti D, Muscio C, Reid RI, Nigri A, Bruzzone MG, Tagliavini F, Lodi R, D’Angelo E, Boeve B, Kantarci K, Firbank M, Taylor J-P, Tiraboschi P, Redolfi A, for the ADNI, Frontotemporal Lobar Degeneration Neuroimaging; NIA Alzheimer’s Disease Centers; and the RIN – Neuroimaging Network, Bruzzone MG, Tiraboschi P, Gandini Wheeler-Kingshott CAM, Tosetti M, Forloni G, Redolfi A, D’Angelo E, Tagliavini F, Lodi R, Agati R, Aiello M, Alberici E, Amato C, Aquino D, Arrigoni F, Baglio F, Biagi L, Bonanno L, Bosco P, Bottino F, Bozzali M, Canessa N, Carducci C, Carne I, Carnevale L, Castellano A, Cavaliere C, Colnaghi M, Contarino VE, Conte G, Costagli M, Demichelis G, De Francesco S, Falini A, Ferraro S, Ferrazzi G, Figà Talamanca L, Fundarò C, Gaudino S, Ghielmetti F, Gianeri R, Giulietti G, Grimaldi M, Iadanza A, Inglese M, Laganà MM, Lancione M, Levrero F, Longo D, Lucignani G, Lucignani M, Malosio ML, Manzo V, Marino S, Medina JP, Micotti E, Morelli C, Muscio C, Napolitano A, Nigri A, Padelli F, Palesi F, Pantano P, Parrillo C, Pavone L, Peruzzo D, Petsas N, Pichiechio A, Pirastru A, Politi LS, Roccatagliata L, Rognone E, Rossi A, Rossi-Espagnet MC, Ruvolo C, Salvatore M, Savini G, Tagliente E, Testa C, Tonon C, Tortora D, Triulzi FM (2023): Differential diagnosis of neurodegenerative dementias with the explainable MRI based machine learning algorithm MUQUBIA. Sci Rep 13:17355.
- Gorrino I, Canessa N, Mattavelli G (2023): Testing the effect of high-definition transcranial direct current stimulation of the insular cortex to modulate decision-making and executive control. Front Behav Neurosci 17:1234837.

- Mattavelli G, Gorrino I, Tornaghi D, Canessa N (2023): Cognitive and motor impulsivity in the healthy brain, and implications for eating disorders and obesity: a coordinate-based meta-analysis and systematic review. *Cortex*:S0010945223002605.
- Borghesi F, Chirico A, Pedroli E, Cipriani GE, Canessa N, Amanzio M, Cipresso P (2023): Exploring Biomarkers of Mental Flexibility in Healthy Aging: A Computational Psychometric Study. *Sensors* 23:6983, doi:10.3390/s23156983
- Canessa N, Iozzino L, Andreose S, Castelletti L, Conte G, Dvorak A, Ferrari C, Heitzman J, Macis A, Markiewicz I, Mattavelli G, Nicolò G, Picchioni M, Restuccia G, Rivellini G, Teti F, De Girolamo G (2023): Risk aversion in Italian forensic and non-forensic patients with schizophrenia spectrum disorders. Ed. Ayse Ulgen. *PLoS ONE* 18:e0289152, doi: 10.1371/journal.pone.0289152
- Lo Presti S, Origlia S, Gianelli C, Canessa N (2023): Cognition, body, and mind: A three-in-one coordinate-based fMRI meta-analysis on cognitive, physical, and meditative trainings. *Human Brain Mapping* 44:3795–3814, doi: 10.1002/hbm.26312
- Arioli M, Basso G, Mattioni L, Poggi P, Canessa N (2023). Neural bases of loss aversion when choosing for oneself vs. known or unknown others. *Cerebral Cortex* May 24;33(11):7120-7135. doi: 10.1093/cercor/bhad025
- Arioli M, Cattaneo Z, Parimbelli S, Canessa N. Relational vs. representational social cognitive processing: a coordinate-based meta-analysis of neuroimaging data (2023). *Social Cognitive and Affective Neuroscience (SCAN)*, doi: 10.1093/scan/nsad003
- Canessa, N., Basso, G., Manera, M., Poggi, P., Gianelli, C. (2023) Functional Coherence in Intrinsic Frontal Executive Networks Predicts Cognitive Impairments in Alcohol Use Disorder, *Brain Sciences*, 13(1):45, doi: 10.3390/brainsci13010045.
- Conca, F., Esposito, V., Rundo, F., Quaranta, D., Muscio, C., Manenti, R., Caruso, G., Lucca, U., Galbussera, A.A., Di Tella, S., Baglio, F., L'Abbate, F., Canu, E., Catania, V., Filippi, M., Mattavelli, G., Poletti, B., Silani, V., Lodi, R., De Matteis, M., Stanzani Maserati, M., Arighi, A., Rotondo, E., Tanzilli, A., Pace, A., Garramone, F., Cavaliere, C., Pardini, M., Rizzetto, C., Sorbi, S., Perri, R., Tiraboschi, P., Canessa, N., Cotelli, M., Ferri, R., Weintraub, S., Marra, C., Tagliavini, F., Catricalà, E., Cappa, S.F., 2022. Italian adaptation of the Uniform Data Set Neuropsychological Test Battery (I-UDSNB 1.0): development and normative data. *Alz Res Therapy* 14, 113. <https://doi.org/10.1186/s13195-022-01056-x>
- Iozzino, L., Canessa, N., Rucci, P., Iommi, M., Dvorak, A., Heitzman, J., Markiewicz, I., Picchioni, M., Pilszyk, A., Wancata, J., de Girolamo, G., Castelletti, L., Galluzzo, A., Nicolò, G., Restuccia, G., Rivellini, G., Teti, F., Rossi, G., Gosek, P., 2022. Decision-making and risk-taking in forensic and non-forensic patients with schizophrenia spectrum disorders: A multicenter European study. *Schizophrenia Research: Cognition* 29, 100257. <https://doi.org/10.1016/j.scog.2022.100257>
- Canessa, N., Basso, G., Poggi, P., Gianelli, C., 2022. Altered striatal-opercular intrinsic connectivity reflects decreased aversion to losses in alcohol use disorder. *Neuropsychologia* 108258. <https://doi.org/10.1016/j.neuropsychologia.2022.108258>
- Mattavelli, G., Lo Presti, S., Tornaghi, D., Canessa, N., 2022. High-definition transcranial direct current stimulation of the dorsal anterior cingulate cortex modulates decision-making and executive control. *Brain Struct Funct.* <https://doi.org/10.1007/s00429-022-02456-3>
- Lo Presti, S., Mattavelli, G., Canessa, N., Gianelli, C. Risk perception and behaviour during the COVID-19 pandemic: Predicting variables of compliance with lockdown measures. *PLoS ONE*, 2022, 17(1 January), e0262319
- Iozzino L, Harvey PD, Canessa N, et al. Neurocognition and social cognition in patients with schizophrenia spectrum disorders with and without a history of violence: results of a multinational European study. *Transl Psychiatry*. 2021;11(1):620. doi:10.1038/s41398-021-01749-1
- Gianelli C, Maiocchi C, Canessa N. (2021). Action fluency in Parkinson's disease: a mini-review and viewpoint. *Frontiers in Aging Neuroscience*
- Canessa N, Basso G, Carne I, Poggi P, Gianelli C. Oct 1;11(1):19581. Increased decision latency in alcohol use disorder reflects altered resting-state synchrony in the anterior salience network. *Scientific Reports*, doi: 10.1038/s41598-021-99211-1.
- Lo Presti, S., Mattavelli, G., Canessa, N., Gianelli, C. 2021 November, 182, 111090. Psychological precursors of individual differences in COVID-19 lockdown adherence: Moderated-moderation by personality and moral cognition measures. *Personality and Individual Differences*, doi: <https://doi.org/10.1016/j.paid.2021.111090>, November 1 2021
- Gianelli C, Basso G, Manera M, Poggi P, Canessa N. 2021 Aug 7:e13088. Posterior fronto-medial atrophy reflects decreased loss aversion, but not executive impairment, in alcohol use disorder. *Addiction Biology*, doi: 10.1111/adb.13088. Online ahead of print. PMID: 34363622, August 7 2021
- Arioli M, Cattaneo Z, Ricciardi E, Canessa N. 2021 Oct 1;42(14):4777-4804. Overlapping and specific neural correlates for empathizing, affective mentalizing, and cognitive mentalizing: A coordinate-based meta-analytic study. *Human Brain Mapping*, doi: 10.1002/hbm.25570. Epub 2021 Jul 29. PMID: 34322943, July 29 2021

- Salsone M, Caligiuri ME, Castronovo V, Canessa N, Marelli S, Quattrone A, Quattrone A, Ferini-Strambi L. 2021 Jul 1. Microstructural changes in normal-appearing white matter in male sleep apnea patients are reversible after treatment: A pilot study. *Journal of Neuroscience Research*, doi: 10.1002/jnr.24858. Online ahead of print. PMID: 34197014, July 1 2021
- Amanzio M*, Canessa N*, Bartoli M, Cipriani GE, Palermo S, Cappa SF. 2021 May 24;12:685180. Lockdown Effects on Healthy Cognitive Aging During the COVID-19 Pandemic: A Longitudinal Study. *Frontiers in Psychology*, doi: 10.3389/fpsyg.2021.685180. eCollection 2021. PMID: 34108923, May 24, 2021
- Bartoli M*, Canessa N*, Cipriani GE, Cappa SF, Amanzio M. 2021 May 29;18(11):5847. The Role of Neuropsychological Factors in Perceived Threat of SARS-CoV-2 in Healthy Ageing. *Int J Environ Res Public Health*, doi: 10.3390/ijerph18115847. PMID: 34072431, May 29 2021
- Arioli M, Basso G, Carne I, Poggi P, Canessa N. (2020) Increased pSTS activity and decreased pSTS-mPFC connectivity when processing negative social interactions. *Behavioural Brain Research*, <https://doi.org/10.1016/j.bbr.2020.113027>, February 5 2021
- Arioli M, Basso G, Poggi P, Canessa N. (2020) Fronto-temporal brain activity and connectivity track implicit attention to positive and negative social words in a novel socio-emotional Stroop task. *Neuroimage*, <https://doi.org/10.1016/j.neuroimage.2020.117580>, February 1 2021
- Arioli M., Gianelli C., Canessa N. (2020) Neural representation of social concepts: a coordinate-based meta-analysis of fMRI studies. *Brain Imaging and Behavior*, <https://doi.org/10.1007/s11682-020-00384-6>, September 8 2020
- Galandra C., C. Crespi, Basso G., Canessa N. (2020) Impaired learning from regret and disappointment in alcohol use disorder. *Scientific Reports*, 287, July 21 2020
- Brusoni, S., Laureiro Martinez, D., Canessa, N., Zollo, M. (2020) Exploring exploration: the role of affective states as forces that hinder change. *Industrial and Corporate Change*, 29:207–223, December 31 2019
- Galandra, C., Crespi, C., Basso, G., Manera, M., Giorgi, I., Poggi, P., & Canessa, N. (2020). Decreased information processing speed and decision-making performance in alcohol use disorder: combined neurostructural evidence from VBM and TBSS. *Brain Imaging and Behavior*, March 2 2020.
- Crespi, C., Galandra, C., Manera, M., Basso, G., Poggi, P., Canessa, N. (2019) Executive Impairment in Alcohol Use Disorder Reflects Structural Changes in Large-Scale Brain Networks: A Joint Independent Component Analysis on Gray-Matter and White-Matter Features. *Frontiers in Psychology*, 10, November 26 2019.
- Crespi, C., Galandra, C., Canessa, N., Manera, M., Poggi, P., & Basso, G. (2020). Microstructural damage of white-matter tracts connecting large-scale networks is related to impaired executive profile in Alcohol Use Disorder. *Neuroimage Clinical*. doi: 10.1016/j.nicl.2019.102141, December 23 2019
- Rolandi, E., Dodich, A., Galluzzi, S., Ferrari, C., Mandelli, S., Ribaldi, F., . . . Cavedo, E. (2019). Randomized controlled trial on the efficacy of a multilevel non-pharmacologic intervention in older adults with subjective memory decline: design and baseline findings of the E.Mu.N.I. study. *Aging Clin Exp Res*. doi: 10.1007/s40520-019-01403-3, December 23 2020.
- Arioli, M., Canessa, N. (2019) Neural processing of social interaction: Coordinate-based meta-analytic evidence from human neuroimaging studies. *Human brain mapping*, 40:3712-3737, September 1 2019.
- Galandra, C., Basso, G., Manera, M., Crespi, C., Giorgi, I., Vittadini, G., . . . Canessa, N. (2019). Abnormal fronto-striatal intrinsic connectivity reflects executive dysfunction in alcohol use disorders. *Cortex*, 115, 27-42. doi: 10.1016/j.cortex.2019.01.004, January 23 2019
- Dodich, A., Zollo, M., Crespi, C., Cappa, S. F., Laureiro Martinez, D., Falini, A., & Canessa, N. (2019). Short-term Sahaja Yoga meditation training modulates brain structure and spontaneous activity in the executive control network. *Brain Behav*, 9(1), e01159. doi: 10.1002/brb3.1159, November 28 2018
- Realmuto, S., Dodich, A., Meli, R., Canessa, N., Ragonese, P., Salemi, G., & Cerami, C. (2018). Moral Cognition and Multiple Sclerosis: A Neuropsychological Study. *Arch Clin Neuropsychol*. doi: 10.1093/arclin/acy047, May 30 2018
- Galandra, C., Basso, G., Manera, M., Crespi, C., Giorgi, I., Vittadini, G., . . . Canessa, N. (2018). Salience network structural integrity predicts executive impairment in alcohol use disorders. *Sci Rep*, 8(1), 14481. doi: 10.1038/s41598-018-32828-x, September 27 2018
- Galandra, C., Basso, G., Cappa, S., & Canessa, N. (2018). The alcoholic brain: neural bases of impaired reward-based decision-making in alcohol use disorders. *Neurol Sci*, 39(3), 423-435. doi: 10.1007/s10072-017-3205-1
- Crespi, C., Laureiro-Martinez, D., Dodich, A., Cappa, S. F., Brusoni, S., Zollo, M., . . . Canessa, N. (2018). Improving innovative decision-making: Training-induced changes in fronto-parietal networks. *Brain Cogn*, 128, 46-55. doi: 10.1016/j.bandc.2018.11.004
- Crespi, C., Dodich, A., Cappa, S. F., Canessa, N., Iannaccone, S., Corbo, M., . . . Cerami, C. (2018). Multimodal MRI quantification of the common neurostructural bases within the FTD-ALS continuum. *Neurobiol Aging*, 62, 95-104. doi: 10.1016/j.neurobiolaging.2017.09.019

- Canessa, N., Castronovo, V., Cappa, S. F., Marelli, S., Iadanza, A., Falini, A., & Ferini-Strambi, L. (2018). Sleep apnea: Altered brain connectivity underlying a working-memory challenge. *Neuroimage Clin*, 19, 56-65. doi: 10.1016/j.nicl.2018.03.036
- Arioli, M., Perani, D., Cappa, S., Proverbio, A. M., Zani, A., Falini, A., & Canessa, N. (2018). Affective and cooperative social interactions modulate effective connectivity within and between the mirror and mentalizing systems. *Hum Brain Mapp*, 39(3), 1412-1427. doi: 10.1002/hbm.23930
- Arioli, M., Crespi, C., Canessa, N. (2018) Social Cognition through the Lens of Cognitive and Clinical Neuroscience. *BioMed research international*, 2018:4283427.
- Layden, E. A., Cacioppo, J. T., Cacioppo, S., Cappa, S. F., Dodich, A., Falini, A., & Canessa, N. (2017). Perceived social isolation is associated with altered functional connectivity in neural networks associated with tonic alertness and executive control. *Neuroimage*, 145(Pt A), 58-73. doi: 10.1016/j.neuroimage.2016.09.050
- Canessa, N., Crespi, C., Baud-Bovy, G., Dodich, A., Falini, A., Antonellis, G., & Cappa, S. F. (2017). Neural markers of loss aversion in resting-state brain activity. *Neuroimage*, 146, 257-265. doi: 10.1016/j.neuroimage.2016.11.050
- Dodich, A., Cerami, C., Iannaccone, S., Marcone, A., Alongi, P., Crespi, C., . . . Perani, D. (2016). Neuropsychological and FDG-PET profiles in VGKC autoimmune limbic encephalitis. *Brain Cogn*, 108, 81-87. doi: 10.1016/j.bandc.2016.07.010
- Dodich, A., Cerami, C., Crespi, C., Canessa, N., Lettieri, G., Iannaccone, S., . . . Cacioppo, J. T. (2016). Differential Impairment of Cognitive and Affective Mentalizing Abilities in Neurodegenerative Dementias: Evidence from Behavioral Variant of Frontotemporal Dementia, Alzheimer's Disease, and Mild Cognitive Impairment. *J Alzheimers Dis*, 50(4), 1011-1022. doi: 10.3233/JAD-150605
- Crespi, C., Cerami, C., Dodich, A., Canessa, N., Iannaccone, S., Corbo, M., . . . Cappa, S. F. (2016). Microstructural Correlates of Emotional Attribution Impairment in Non-Demented Patients with Amyotrophic Lateral Sclerosis. *PLoS One*, 11(8), e0161034. doi: 10.1371/journal.pone.0161034
- Realmuto, S., Zummo, L., Cerami, C., Agro, L., Dodich, A., Canessa, N., . . . Daniele, O. (2015). Social cognition dysfunctions in patients with epilepsy: Evidence from patients with temporal lobe and idiopathic generalized epilepsies. *Epilepsy Behav*, 47, 98-103. doi: 10.1016/j.yebeh.2015.04.048
- Laureiro-Martínez, D., Brusoni, S., Canessa, N., & Zollo, M. (2015). Understanding the exploration–exploitation dilemma: An fMRI study of attention control and decision-making performance. *Strategic Management Journal*, 36(3), 319-338.
- Dodich, A., Cerami, C., Canessa, N., Crespi, C., Iannaccone, S., Marcone, A., . . . Cappa, S. F. (2015). A novel task assessing intention and emotion attribution: Italian standardization and normative data of the Story-based Empathy Task. *Neurol Sci*, 36(10), 1907-1912. doi: 10.1007/s10072-015-2281-3
- Caminiti, S. P. *, Canessa, N. *, Cerami, C., Dodich, A., Crespi, C., Iannaccone, S., . . . Cappa, S. F. (2015). Affective mentalizing and brain activity at rest in the behavioral variant of frontotemporal dementia. *Neuroimage Clin*, 9, 484-497. doi: 10.1016/j.nicl.2015.08.012
- Dodich, A., Cerami, C., Canessa, N., Crespi, C., Marcone, A., Arpone, M., . . . Cappa, S. F. (2014). Emotion recognition from facial expressions: a normative study of the Ekman 60-Faces Test in the Italian population. *Neurol Sci*, 35(7), 1015-1021. doi: 10.1007/s10072-014-1631-x
- Crespi, C., Cerami, C., Dodich, A., Canessa, N., Arpone, M., Iannaccone, S., . . . Cappa, S. F. (2014). Microstructural white matter correlates of emotion recognition impairment in Amyotrophic Lateral Sclerosis. *Cortex*, 53, 1-8. doi: 10.1016/j.cortex.2014.01.002
- Cerami, C., Dodich, A., Canessa, N., Crespi, C., Marcone, A., Cortese, F., . . . Cappa, S. F. (2014). Neural correlates of empathic impairment in the behavioral variant of frontotemporal dementia. *Alzheimers Dement*, 10(6), 827-834. doi: 10.1016/j.jalz.2014.01.005
- Cerami, C., Dodich, A., Canessa, N., Crespi, C., Iannaccone, S., Corbo, M., . . . Cappa, S. F. (2014). Emotional empathy in amyotrophic lateral sclerosis: a behavioural and voxel-based morphometry study. *Amyotroph Lateral Scler Frontotemporal Degener*, 15(1-2), 21-29. doi: 10.3109/21678421.2013.785568
- Canessa, N., Pantaleo, G., Crespi, C., Gorini, A., & Cappa, S. F. (2014). The impact of egocentric vs. allocentric agency attributions on the neural bases of reasoning about social rules. *Brain Res*, 1581, 40-50. doi: 10.1016/j.brainres.2014.06.001
- Laureiro-Martínez, D., Canessa, N., Brusoni, S., Zollo, M., Hare, T., Alemanno, F., & Cappa, S. F. (2013). Frontopolar cortex and decision-making efficiency: comparing brain activity of experts with different professional background during an exploration-exploitation task. *Front Hum Neurosci*, 7, 927. doi: 10.3389/fnhum.2013.00927
- Canessa, N., Crespi, C., Motterlini, M., Baud-Bovy, G., Chierchia, G., Pantaleo, G., . . . Cappa, S. F. (2013). The functional and structural neural basis of individual differences in loss aversion. *J Neurosci*, 33(36), 14307-14317. doi: 10.1523/JNEUROSCI.0497-13.2013

- Canessa, N., Alemanno, F., Riva, F., Zani, A., Proverbio, A. M., Mannara, N., . . . Cappa, S. F. (2012). The neural bases of social intention understanding: the role of interaction goals. *PLoS One*, 7(7), e42347. doi: 10.1371/journal.pone.0042347
- Proverbio, A. M., Riva, F., Paganelli, L., Cappa, S. F., Canessa, N., Perani, D., & Zani, A. (2011). Neural coding of cooperative vs. affective human interactions: 150 ms to code the action's purpose. *PLoS One*, 6(7), e22026. doi: 10.1371/journal.pone.0022026
- Di Dio, C., Canessa, N., Cappa, S. F., & Rizzolatti, G. (2011). Specificity of esthetic experience for artworks: an fMRI study. *Front Hum Neurosci*, 5, 139. doi: 10.3389/fnhum.2011.00139
- Canessa, N., Motterlini, M., Alemanno, F., Perani, D., & Cappa, S. F. (2011). Learning from other people's experience: a neuroimaging study of decisional interactive-learning. *Neuroimage*, 55(1), 353-362. doi: 10.1016/j.neuroimage.2010.11.065
- Canessa, N., & Ferini-Strambi, L. (2011). Sleep-disordered breathing and cognitive decline in older adults. *JAMA*, 306(6), 654-655. doi: 10.1001/jama.2011.1124
- Canessa, N., Castronovo, V., Cappa, S. F., Aloia, M. S., Marelli, S., Falini, A., . . . Ferini-Strambi, L. (2011). Obstructive sleep apnea: brain structural changes and neurocognitive function before and after treatment. *Am J Respir Crit Care Med*, 183(10), 1419-1426. doi: 10.1164/rccm.201005-0693OC
- Marques, J. F., Canessa, N., & Cappa, S. (2009). Neural differences in the processing of true and false sentences: insights into the nature of 'truth' in language comprehension. *Cortex*, 45(6), 759-768. doi: 10.1016/j.cortex.2008.07.004
- Castronovo, V., Canessa, N., Strambi, L. F., Aloia, M. S., Consonni, M., Marelli, S., . . . Cappa, S. F. (2009). Brain activation changes before and after PAP treatment in obstructive sleep apnea. *Sleep*, 32(9), 1161-1172.
- Canessa, N., Motterlini, M., Di Dio, C., Perani, D., Scifo, P., Cappa, S. F., & Rizzolatti, G. (2009). Understanding others' regret: a fMRI study. *PLoS One*, 4(10), e7402. doi: 10.1371/journal.pone.0007402
- Marques, J. F., Canessa, N., Siri, S., Catricala, E., & Cappa, S. (2008). Conceptual knowledge in the brain: fMRI evidence for a featural organization. *Brain Res*, 1194, 90-99. doi: 10.1016/j.brainres.2007.11.070
- Canessa, N., Borgo, F., Cappa, S. F., Perani, D., Falini, A., Buccino, G., . . . Shallice, T. (2008). The different neural correlates of action and functional knowledge in semantic memory: an fMRI study. *Cereb Cortex*, 18(4), 740-751. doi: 10.1093/cercor/bhm110
- Vogt, S., Buccino, G., Wohlschlager, A. M., Canessa, N., Shah, N. J., Zilles, K., . . . Fink, G. R. (2007). Prefrontal involvement in imitation learning of hand actions: effects of practice and expertise. *Neuroimage*, 37(4), 1371-1383. doi: 10.1016/j.neuroimage.2007.07.005
- Tessari, A., Canessa, N., Ukmair, M., & Rumiat, R. I. (2007). Neuropsychological evidence for a strategic control of multiple routes in imitation. *Brain*, 130(Pt 4), 1111-1126. doi: 10.1093/brain/awm003
- Canessa, N., Gorini, A., Cappa, S. F., Piattelli-Palmarini, M., Danna, M., Fazio, F., & Perani, D. (2005). The effect of social content on deductive reasoning: an fMRI study. *Hum Brain Mapp*, 26(1), 30-43. doi: 10.1002/hbm.20114
- Buccino, G., Lui, F., Canessa, N., Patteri, I., Lagravinese, G., Benuzzi, F., . . . Rizzolatti, G. (2004). Neural circuits involved in the recognition of actions performed by nonconspecifics: an fMRI study. *J Cogn Neurosci*, 16(1), 114-126. doi: 10.1162/089892904322755601

***BOOKS (CURATORSHIP)

Canessa N., Gorini A., (Eds.) (2008) Massimo Piattelli Palmarini, *Le scienze cognitive classiche: un panorama*. Einaudi.

***BOOK CHAPTERS

- Rumiat R, Castiello U, Canessa N (2019). "Le aprassie". In: Denes, Pizzamiglio, Guariglia, Cappa, Grossi, Luzzatti (Eds.), *Manuale di Neuropsicologia. Normalità e patologia dei processi cognitivi*. Zanichelli (Bologna)
- Canessa N, Cappa S (2018). "Il ruolo delle neuroimmagini nello studio dei processi empatici nel paziente neurologico". In: *Empatia, danno cerebrale, ricostruzione del sé*, Umberto Bivona & Alberto Costa (Eds). Armando Editore.
- Cappa S., Canessa N. (2015) *Neuroeconomics*. In: *International Encyclopedia of the Social and Behavioral Sciences*, 2nd edition – Elsevier.
- Canessa N., Dodich A., Crespi C., Cappa S. (2015) *Neuroscience of decision-making*. In *De las Neurosciences a la Neuropsicología - estudio del cerebro humano - Corporación Universitaria Reformada Editions*.
- Crespi, C., Pantaleo, G., Cappa, S. F., & Canessa, N. (2013). Private and social counterfactual emotions: Behavioural and neural effects. In *Neuroscience and the Economics of Decision Making* (pp. 3-20). Routledge (London and New York), ISBN 9781138799134
- Pantaleo G., & Canessa N. (2011). 'Prospettive multiple', comportamento prosociale e altruismo: oltre la Civiltà dell'empatia. In: S. Boca & C. Scaffidi-Abbate (Eds.), *Altruismo e comportamento prosociale: Temi e prospettive a confronto* (pp. 186-240), Milano: Franco Angeli, ISBN: 9788856837964

- Canessa N., Pantaleo G. (2011), Il "cervello sociale" alla scoperta delle intenzioni altrui. In: S. Boca & C. Scaffidi-Abbate (Eds.), *Altruismo e comportamento prosociale: Temi e prospettive a confronto* (pp. 186-240), Milano: Franco Angeli, ISBN: 9788856837964
- Canessa N., Pantaleo G., Cappa S., Scaffidi Abbate C. (2011), Le basi (neuro) biologiche dei processi cognitivi e affettivi sottostanti il comportamento prosociale. In: S. Boca & C. Scaffidi-Abbate (Eds.), *Altruismo e comportamento prosociale: Temi e prospettive a confronto* (pp. 186-240), Milano: Franco Angeli, ISBN: 9788856837964
- Canessa N. (2008) Emozione, cognizione e lobo frontale: lo strano caso di Phineas Gage. In Massimo Piattelli-Palmarini, *Le scienze cognitive classiche: un panorama*. Einaudi
- Canessa N. (2008) Azione, percezione e cognizione: i neuroni specchio. in Massimo Piattelli-Palmarini, *Le scienze cognitive classiche: un panorama*. Einaudi
- Canessa N. (2008) Deficit semantici selettivi. In Massimo Piattelli-Palmarini, *Le scienze cognitive classiche: un panorama*. Einaudi

***EDUCATIONAL BOOKS and ARTICLES

- Canessa N. *Il sogno della ragione. Come funziona il cervello* (2016). Hachette editore, collana "Scoprire la scienza". Traduzioni in spagnolo (*El sueño de la razón*; Emse Publishing) e portoghese (*O sonho da razão*; Emse Publishing).
- Canessa N. Perché si rifiuta il vaccino? (April 2021). *Risk-Management News*, ANRA (Associazione Nazionale dei Risk Manager e Responsabili Assicurazioni Aziendali)
- Canessa N., Arioli M. (2017). Dalla neuroeconomia alla neuroetica: verso una neuroscienza delle decisioni individuali e socio-morali. *Rivista Internazionale di Filosofia e Psicologia* 8 (2):134-150
- Canessa N. Pensare il rischio, la prospettiva delle neuroscienze cognitive (Novembre 2017) *Risk-Management News*, ANRA (Associazione Nazionale dei Risk Manager e Responsabili Assicurazioni Aziendali)
- Canessa N. (2011). Il cervello decisore. *neuroeconomia tra passato e futuro*. *Scienza e Filosofia*. ISSN 2036-2927
- Motterlini M. , Canessa N. (2009) Alla ricerca delle basi neurobiologiche della decisione: il ruolo del rimpianto. In *Nuova civiltà delle macchine* 4: 80-94

**INVITED LECTURES in MASTER COURSES

- "Neuropsicologia delle funzioni esecutive: meccanismi neurali", Master course "Neuropsicologia clinica e sperimentale", Università degli Studi di Verona, 2019-2022
- "Funzioni esecutive e decision-making nei disturbi dell'alimentazione", Master course INPS Executive in "Cibo & Società", Università degli Studi di Milano-Bicocca, 2020-2023
- "Basi cerebrali dei processi cognitivi", Master course "Gestione sanitaria dell'anziano fragile, multicomorbido sul territorio", Università degli Studi di Pavia, 2020
- "Siamo il nostro cervello?"; Master course Bioethics, 2014-2017, Padova

*** INVITED TALKS

- "Neuroscienze, decisioni e libero arbitrio"; Workshop "Premeditazione o no? come comprenderlo. i criteri di valutazione tra neuroscienze e diritto", *Neuroscienze, Diritti e Società - VII Edizione*, (22 Giugno 2023), Collegio Cairoli, Pavia
- "Neuro-scienze delle decisioni: dalla ricerca di base al trattamento clinico" (Dicembre 2021); webinar per associazione scientifica The Way (https://www.youtube.com/watch?v=a_900v739oU)
- "Le fluttuazioni della percezione del rischio"; *Global Risk Forum 2021* (Giugno 2021); <https://www.businessinternational.it/Eventi/4641/Global-Risk-Forum-2021>
- "Il cervello alla prova dei sensi" (Giugno 2021); I Martedì di Bonvesin de la Riva, Accademia Gualtiero Marchesi, Milano
- TEDxPavia, Rassegna "AudaceMente" (Aprile 2021); <https://www.tedxpavia.com/speaker/nicola-canessa/>
- "Neural processing of social interaction: from perception to representation and action". Invited web-talk for the University of Montreal (Marzo 2021)
- "Neuroeconomia, cervello e processi decisionali: implicazioni per le scienze economiche"; XIX Annual Meeting "I caratteri del family business", November 29 2019, Università di Tor Vergata, Roma
- "Neurobiologia dell'amore romantico"; Convegno di neuroscienze *Amor che nella mente mi ragiona*, October 19, Vercelli
- "Il cervello sociale"; 3° Meeting Pietro Prini, "Noi e gli altri: tra empatia e aggressività", June 8 2019, Collegio Rosmini, Stresa
- "La Neuroeconomia"; Ciclo di conferenze "Potenziali d'azione"; April 15 2019, Collegio Cairoli, Pavia
- "Il cervello decisore"; Family Business Festival 2019 (*Corriere della Sera Economia*), April 6 2019, Teatro Grande, Brescia
- "Neuroestetica: un confronto tra arte e metodo scientifico"; MIA Photo Fair, March 25, The Mall Porta Nuova, Milano
- "Il ruolo delle neuroimmagini nello studio delle abilità di Social Cognition nel paziente neurologico"; National Meeting GIRN, May 11 2018, Torino

- "The neural bases of decision-making in normal and pathological conditions"; April 26, Scuola Universitaria Superiore Sant'Anna, Pisa
- "Emozioni e neuroimmagini"; Congresso Nazionale Associazione Italiana di Psicogeriatrica, April 11 2018, Firenze
- "Empatia e neuroeconomia: scelte alimentari e opzioni etiche"; Settimana del cervello, March 13 2018, Università Milano-Bicocca, Milan
- "Functional connectivity"; FESN (Federation of the European Societies of Neuropsychology) Autumn School, September 1-5 2018, Berlin
- Il ruolo delle neuroimmagini nello studio dei processi empatici nel paziente neurologico, IRCCS Santa Lucia, October 7 2017, Rome
- "Il valore della Diversity nel Risk Management alla prova delle neuroscienze"; Meeting ANRA (Associazione Nazionale dei Risk Manager e Responsabili assicurazioni aziendali), September 20 2017, Milan
- "Il cervello sociale: tra norma e patologia"; Parolario, June 21 2017, Como
- The neural bases of outcome anticipation in decision-making under risk; June 2017, Invited talk at the Faculty of Psychology of the University of Dusseldorf, Germany
- Le neuroimmagini della cognitiv  sociale; Congresso Nazionale Associazione Italiana di Psicogeriatrica, March 29, 2017, Firenze
- Neuroscienze delle decisioni: che cosa ci guida nelle nostre scelte economiche?, Meeting della Societ  italiana di Neuroetica, April 1, 2017, Cassino
- "Cervello, empatia e decisioni"; Parolario, June 21 2016, Como
- "Risk, choice and emotions under the light of Neuroeconomics"; Meeting ANRA (Associazione Nazionale dei Risk Manager e Responsabili assicurazioni aziendali), April 2016, Milan
- Resting-state brain activity observed with functional magnetic resonance imaging; invited talk at the National Research University Higher School of Economics, November 12, 2015, Moscow
- "The neural bases of decision-making processes in healthy and pathological conditions"; Annual Meeting of the Italian Society of Neurology, October 2015, Genova
- "The neural bases of decision-making processes"; Meeting "Sclerosi multipla: orientarsi tra opportunit  e rischio", June 10 2015, Monza
- Annual Meeting of the Italian Society of Neuropsychology (Societ  Italiana di Neuropsicologia; SINP), Napoli, October 2014
- Annual Meeting of the Italian Society of Neuropsychology (Societ  Italiana di Neuropsicologia; SINP), Bologna, October 2010
- "Neuro-estetica. Ragioni scientifiche e sperimentazioni artistiche"; Vicino/Lontano, Udine, May 9 2010;
- Distinct neural correlates for the processing of magnitude, probability and uncertainty of potential monetary wins and losses; June 2009, Meeting of the Organization for Human Brain Mapping, San Francisco
- Neural bases of decision-making under risk; Annual Meeting of the Italian Society of Neuroscience (SINS), Milano, 2009
- "Your regret is my regret: empathy in post-decisional outcome evaluation"; June 2008, Meeting of the Organization for Human Brain Mapping, Melbourne
- "Neuropsicologia e neuroimaging" meeting, Trieste, 25-26 Maggio, 2007.

Autorizzo il trattamento dei dati personali ai sensi del D.lgs. 196/2003.

Milano, 8 Novembre 2023