

CURRICULUM VITAE



PERSONAL INFORMATION

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Nationality Italian
Date of birth 02-02-1959

WORK EXPERIENCE

- Dates 2000 – now
- Name and address of employer Psychology Department
University of Milano – Bicocca
Milan, Italy
- Occupation or position held Full Professor of Psychobiology and Physiological Psychology.

- Dates 1995 – 2000
- Name and address of employer Scientific Institute H San Raffaele
Milan, Italy
- Occupation or position held Clinical Scientist

- Dates 1993 – 1994
- Name and address of employer Hammersmith Hospital
MRC-Cyclotron Unit
London, UK
- Occupation or position held Clinical Scientist

- Dates 1992 – 1993
- Name and address of employer Hammersmith Hospital
MRC-Cyclotron Unit
London, UK
- Occupation or position held Research Fellow

- Dates 1988 – 1991
- Name and address of employer Scientific Institute H San Raffaele
Milan, Italy
- Occupation or position held Research Fellow

EDUCATION

- Date 1990
- Name and type of organisation providing education and training University of Milan
Italy
- Title of qualification awarded Specialisation in Neurology

- Date 1986
- Name and type of organisation providing education and training University of Milan
Italy
- Title of qualification awarded Doctor of Medicine and Surgery (M.D.)

- Date 1978
- Name and type of organisation providing education and training Liceo Classico, Como
Italy
- Title of qualification awarded Maturità classica (M.A.)

SCIENTIFIC INTERESTS

Reading, dyslexia and related cross-cultural differences. Working memory. Motor control and motor awareness. Spatial cognition. Plasticity of the motor system. Normal and pathological aging. Functional and structural brain imaging.

SCIENTIFIC PRODUCTION

I published 87 papers in the peer-review literature. On August 31st 2017, the H-index of my publications is 47; the articles have been cited 15586 times overall (Google Scholar).

Publications of the last 3 years

- 1: Zapparoli L, Tettamanti M, Porta M, Zerbi A, Servello D, Banfi G, Paulesu E. A tug of war: antagonistic effective connectivity patterns over the motor cortex and the severity of motor symptoms in Gilles de la Tourette syndrome. *Eur J Neurosci*. 2017 Aug 22. doi: 10.1111/ejn.13658. [Epub ahead of print] PubMed PMID: 28833746.
- 2: Gandola M, Bruno M, Zapparoli L, Saetta G, Rolandi E, De Santis A, Banfi G, Zerbi A, Sansone V, Paulesu E. Functional brain effects of hand disuse in patients with trapeziometacarpal joint osteoarthritis: executed and imagined movements. *Exp Brain Res*. 2017 Jul 31. doi: 10.1007/s00221-017-5049-6. [Epub ahead of print] PubMed PMID: 28762056.
- 3: Sacheli LM, Zapparoli L, De Santis C, Preti M, Pelosi C, Ursino N, Zerbi A, Banfi G, Paulesu E. Mental steps: Differential activation of internal pacemakers in motor imagery and in mental imitation of gait. *Hum Brain Mapp*. 2017 Jul 21. doi: 10.1002/hbm.23725. [Epub ahead of print] PubMed PMID: 28731517.
- 4: Zapparoli L, Seghezzi S, Paulesu E. The What, the When, and the Whether of Intentional Action in the Brain: A Meta-Analytical Review. *Front Hum Neurosci*. 2017 May 17;11:238. doi: 10.3389/fnhum.2017.00238. eCollection 2017. PubMed PMID: 28567010; PubMed Central PMCID: PMC5434171.
- 5: Paulesu E, Shallice T, Danelli L, Sberna M, Frackowiak RSJ, Frith CD. Anatomical Modularity of Verbal Working Memory? Functional Anatomical Evidence from a Famous Patient with Short-Term Memory Deficits. *Front Hum Neurosci*. 2017 May 17;11:231. doi: 10.3389/fnhum.2017.00231. eCollection 2017. PubMed PMID: 28567009; PubMed Central PMCID: PMC5434108.
- 6: Berlinger M, Losasso D, Girolo A, Cozzolino E, Masullo T, Scotto M, Sberna M, Bottini G, Paulesu E. Resting state brain connectivity patterns before eventual relapse into cocaine abuse. *Behav Brain Res*. 2017 Jun 1;327:121-132. doi: 10.1016/j.bbr.2017.01.002. Epub 2017 Jan 3. PubMed PMID: 28057531.
- 7: Berlinger M, Gallucci M, Danelli L, Forgiarini M, Sberna M, Paulesu E. Guess who's coming to dinner: Brain signatures of racially biased and politically correct behaviors. *Neuroscience*. 2016 Sep 22;332:231-41. doi:10.1016/j.neuroscience.2016.06.048. Epub 2016 Jul 1. PubMed PMID: 27378559.
- 8: Zapparoli L, Saetta G, De Santis C, Gandola M, Zerbi A, Banfi G, Paulesu E. When I am (almost) 64: The effect

of normal ageing on implicit motor imagery in young elderly. *Behav Brain Res.* 2016 Apr 15;303:137-51. doi: 10.1016/j.bbr.2016.01.058. Epub 2016 Feb 5. PubMed PMID: 26851363.

9: Zapparoli L, Porta M, Gandola M, Invernizzi P, Colajanni V, Servello D, Zerbi A, Banfi G, Paulesu E. A functional magnetic resonance imaging investigation of motor control in Gilles de la Tourette syndrome during imagined and executed movements. *Eur J Neurosci.* 2016 Feb;43(4):494-508. doi: 10.1111/ejn.13130. Epub 2015 Dec 23. PubMed PMID: 26566185.

10: Danelli L, Marelli M, Berlinger M, Tettamanti M, Sberna M, Paulesu E, Luzzatti C. Framing effects reveal discrete lexical-semantic and sublexical procedures in reading: an fMRI study. *Front Psychol.* 2015 Sep 23;6:1328. doi: 10.3389/fpsyg.2015.01328. eCollection 2015. PubMed PMID: 26441712; PubMed Central PMCID: PMC4585139.

11: Zapparoli L, Porta M, Paulesu E. The anarchic brain in action: the contribution of task-based fMRI studies to the understanding of Gilles de la Tourette syndrome. *Curr Opin Neurol.* 2015 Dec;28(6):604-11. doi: 10.1097/WCO.0000000000000261. Review. PubMed PMID: 26402403.

12: Berlinger M, Ravasio A, Cranna S, Basilico S, Sberna M, Bottini G, Paulesu E. Unrealistic representations of "the self": A cognitive neuroscience assessment of anosognosia for memory deficit. *Conscious Cogn.* 2015 Dec;37:160-77. doi: 10.1016/j.concog.2015.08.010. Epub 2015 Sep 20. PubMed PMID: 26397037.

Complete list of publications.

Papers published in peer-reviewed journals covered by the Science Citation Index

- Bench, C. J., Frith, C. D., Grasby, P. M., Friston, K. J., Paulesu, E., Frackowiak, R. S., & Dolan, R. J. (1993). Investigations of the functional anatomy of attention using the Stroop test. *Neuropsychologia*, 31(9), 907-922.
- Berlinger, M., Bottini, G., Basilico, S., Silani, G., Zanardi, G., Sberna, M., . . . Paulesu, E. (2008). Anatomy of the episodic buffer: a voxel-based morphometry study in patients with dementia. *Behav Neurol*, 19(1-2), 29-34.
- Berlinger, M., Bottini, G., Danelli, L., Ferri, F., Traficante, D., Sacheli, L., . . . Paulesu, E. (2010). With time on our side? Task-dependent compensatory processes in graceful aging. *Exp Brain Res*, 205(3), 307-324. doi: 10.1007/s00221-010-2363-7
- Berlinger, M., Crepaldi, D., Roberti, R., Scialfa, G., Luzzatti, C., & Paulesu, E. (2008). Nouns and verbs in the brain: grammatical class and task specific effects as revealed by fMRI. *Cogn Neuropsychol*, 25(4), 528-558. doi: 10.1080/02643290701674943
- Berlinger, M., Danelli, L., Bottini, G., Sberna, M., & Paulesu, E. (2013). Reassessing the HAROLD model: is the hemispheric asymmetry reduction in older adults a special case of compensatory-related utilisation of neural circuits? *Exp Brain Res*, 224(3), 393-410. doi: 10.1007/s00221-012-3319-x
- Berlinger, M., Sacheli, L., Danelli, L., Ferri, F., Traficante, D., Basilico, S., .Paulesu, E. (2010). Neurofunctional and neuromorphological evidence of the lack of compensation in pathological aging. *Behav Neurol*, 23(4), 185-187. doi: 10.3233/BEN-2010-0290
- Berlinger M, Ravasio A, Cranna S, Basilico S, Sberna M, Bottini G, Paulesu E. (2015) Unrealistic representations of "the self": A cognitive neuroscience assessment of anosognosia for

- memory deficit. [Epub ahead of print] PMID: 26397037
- Berlingeri M, Losasso D, Girolo A, Cozzolino E, Masullo T, Scotto M, Sberna M, Bottini G, Paulesu E. Resting state brain connectivity patterns before eventual relapse into cocaine abuse. *Behav Brain Res.* 2017 Jun 1;327:121-132. doi: 10.1016/j.bbr.2017.01.002. Epub 2017 Jan 3. PubMed PMID: 28057531.
- Berlingeri M, Gallucci M, Danelli L, Forgiarini M, Sberna M, Paulesu E. Guess who's coming to dinner: Brain signatures of racially biased and politically correct behaviors. *Neuroscience.* 2016 Sep 22;332:231-41. doi:10.1016/j.neuroscience.2016.06.048. Epub 2016 Jul 1. PubMed PMID: 27378559.
- Berti, A., Bottini, G., Gandola, M., Pia, L., Smania, N., Stracciari, A., . . . Paulesu, E. (2005). Shared cortical anatomy for motor awareness and motor control. *Science*, 309(5733), 488-491. doi: 10.1126/science.1110625
- Bettinardi, V., Scardaoni, R., Gilardi, M. C., Rizzo, G., Perani, D., Paulesu, E., . . . Fazio, F. (1991). Head holder for PET, CT, and MR studies. *J Comput Assist Tomogr*, 15(5), 886-892.
- Biella, G., Sotgiu, M. L., Pellegata, G., Paulesu, E., Castiglioni, I., & Fazio, F. (2001). Acupuncture produces central activations in pain regions. *Neuroimage*, 14(1 Pt 1), 60-66. doi: 10.1006/nimg.2001.0798
- Bottini, G., Berlingeri, M., Basilico, S., Passoni, S., Danelli, L., Colombo, N., . . . Paulesu, E. (2012). GOOD or BAD responder? Behavioural and neuroanatomical markers of clinical response to donepezil in dementia. *Behav Neurol*, 25(2), 61-72.
- Bottini, G., Corcoran, R., Sterzi, R., Paulesu, E., Schenone, P., Scarpa, P., . . . Frith, C. D. (1994). The role of the right hemisphere in the interpretation of figurative aspects of language. A positron emission tomography activation study. *Brain*, 117 (Pt 6), 1241-1253.
- Bottini, G., Karnath, H. O., Vallar, G., Sterzi, R., Frith, C. D., Frackowiak, R. S., & Paulesu, E. (2001). Cerebral representations for egocentric space: Functional-anatomical evidence from caloric vestibular stimulation and neck vibration. *Brain*, 124(Pt 6), 1182-1196.
- Bottini, G., Paulesu, E., Gandola, M., Loffredo, S., Scarpa, P., Sterzi, R., . . . Vallar, G. (2005). Left caloric vestibular stimulation ameliorates right hemianesthesia. *Neurology*, 65(8), 1278-1283. doi: 10.1212/01.wnl.0000182398.14088.e8
- Bottini, G., Paulesu, E., Sterzi, R., Warburton, E., Wise, R. J., Vallar, G., . . . Frith, C. D. (1995). Modulation of conscious experience by peripheral sensory stimuli. *Nature*, 376(6543), 778-781. doi: 10.1038/376778a0
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- Bottini, G., Sterzi, R., Paulesu, E., Vallar, G., Cappa, S. F., Erminio, F., . . . Frackowiak, R. S. (1994). Identification of the central vestibular projections in man: a positron emission

- tomography activation study. *Exp Brain Res*, 99(1), 164-169.
- Cappa, S. F., Perani, D., Bressi, S., Paulesu, E., Franceschi, M., & Fazio, F. (1993). Crossed aphasia: a PET follow up study of two cases. *J Neurol Neurosurg Psychiatry*, 56(6), 665-671.
- Carlesimo, G. A., Turriziani, P., Paulesu, E., Gorini, A., Caltagirone, C., Fazio, F., & Perani, D. (2004). Brain activity during intra- and cross-modal priming: new empirical data and review of the literature. *Neuropsychologia*, 42(1), 14-24.
- Cattinelli, I., Valentini, G., Paulesu, E., & Borghese, N. A. (2013). A novel approach to the problem of non-uniqueness of the solution in hierarchical clustering. *IEEE Trans Neural Netw Learn Syst*, 24(7), 1166-1173. doi: 10.1109/TNNLS.2013.2247058
- Comi, G., Rovaris, M., Falautano, M., Santuccio, G., Martinelli, V., Rocca, M. A., . . . Filippi, M. (1999). A multiparametric MRI study of frontal lobe dementia in multiple sclerosis. *J Neurol Sci*, 171(2), 135-144.
- Crepaldi, D., Berlingeri, M., Cattinelli, I., Borghese, N. A., Luzzatti, C., & Paulesu, E. (2013). Clustering the lexicon in the brain: a meta-analysis of the neurofunctional evidence on noun and verb processing. *Front Hum Neurosci*, 7, 303. doi: 10.3389/fnhum.2013.00303
- Crepaldi, D., Berlingeri, M., Paulesu, E., & Luzzatti, C. (2011). A place for nouns and a place for verbs? A critical review of neurocognitive data on grammatical-class effects. *Brain Lang*, 116(1), 33-49. doi: 10.1016/j.bandl.2010.09.005
- Danelli, L., Berlingeri, M., Bottini, G., Ferri, F., Vacchi, L., Sberna, M., & Paulesu, E. (2013). Neural intersections of the phonological, visual magnocellular and motor/cerebellar systems in normal readers: implications for imaging studies on dyslexia. *Hum Brain Mapp*, 34(10), 2669-2687. doi: 10.1002/hbm.22098
- Danelli, L., Cossu, G., Berlingeri, M., Bottini, G., Sberna, M., & Paulesu, E. (2013). Is a lone right hemisphere enough? Neurolinguistic architecture in a case with a very early left hemispherectomy. *Neurocase*, 19(3), 209-231. doi: 10.1080/13554794.2011.654226
- Danelli L, Marelli M, Berlingeri M, Tettamanti M, Sberna M, Paulesu E, Luzzatti C. Framing effects reveal discrete lexical-semantic and sublexical procedures in reading: an fMRI study. *Front Psychol*. 2015 Sep 23;6:1328. doi: 10.3389/fpsyg.2015.01328. eCollection 2015. PubMed PMID: 26441712; PubMed Central PMCID: PMC4585139.
- Deblieck, C., Pesenti, G., Scifo, P., Fazio, F., Bricolo, E., Lo Russo, G., . . . Paulesu, E. (2003). Preserved functional competence of perilesional areas in drug-resistant epilepsy with lesion in supplementary motor cortex: fMRI and neuropsychological observations. *Neuroimage*, 20(4), 2225-2234.
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- Fazio, F., Perani, D., Gilardi, M. C., Colombo, F., Cappa, S. F., Vallar, G., . . . et al. (1992). Metabolic impairment in human amnesia: a PET study of memory networks. *J Cereb Blood Flow Metab*, 12(3), 353-358. doi: 10.1038/jcbfm.1992.52
- Gandola, M., Bottini, G., Zapparoli, L., Invernizzi, P., Verardi, M., Sterzi, R., . . . Paulesu, E. (2014). The physiology of motor delusions in anosognosia for hemiplegia: implications for current models of motor awareness. *Conscious Cogn*, 24, 98-112. doi: 10.1016/j.concog.2014.01.001
- Gandola, M., Invernizzi, P., Sedda, A., Ferre, E. R., Sterzi, R., Sberna, M., . . . Bottini, G. (2012). An anatomical account of somatoparaphrenia. *Cortex*, 48(9), 1165-1178. doi: 10.1016/j.cortex.2011.06.012
- Gandola, M., Toraldo, A., Invernizzi, P., Corrado, L., Sberna, M., Santilli, I., . . . Paulesu, E. (2013). How many forms of perseveration? Evidence from cancellation tasks in right hemisphere patients. *Neuropsychologia*, 51(14), 2960-2975. doi: 10.1016/j.neuropsychologia.2013.10.023
- Gandola M, Bruno M, Zapparoli L, Sietta G, Rolandi E, De Santis A, Banfi G, Zerbi A, Sansone V, Paulesu E. Functional brain effects of hand disuse in patients with trapeziometacarpal joint osteoarthritis: executed and imagined movements. *Exp Brain Res*. 2017 Jul 31. doi: 10.1007/s00221-017-5049-6. [Epub ahead of print] PubMed PMID: 28762056.
- Grasby, P. M., Friston, K. J., Bench, C. J., Frith, C. D., Paulesu, E., Cowen, P. J., . . . Dolan, R. (1992). The effect of apomorphine and buspirone on regional cerebral blood flow during the performance of a cognitive task-measuring neuromodulatory effects of psychotropic drugs in man. *Eur J Neurosci*, 4(12), 1203-1212.
- Grasby, P. M., Frith, C. D., Paulesu, E., Friston, K. J., Frackowiak, R. S., & Dolan, R. J. (1995). The effect of the muscarinic antagonist scopolamine on regional cerebral blood flow during the performance of a memory task. *Exp Brain Res*, 104(2), 337-348.
- Invernizzi, P., Gandola, M., Romano, D., Zapparoli, L., Bottini, G., & Paulesu, E. (2013). What is mine? Behavioral and anatomical dissociations between somatoparaphrenia and anosognosia for hemiplegia. *Behav Neurol*, 26(1-2), 139-150. doi: 10.3233/BEN-2012-110226
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Res, 126(4), 451-458.

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- Paulesu, E., Vallar, G., Berlingeri, M., Signorini, M., Vitali, P., Burani, C., . . . Fazio, F. (2009). Supercalifragilisticexpialidocious: how the brain learns words never heard before. *Neuroimage*, *45*(4), 1368-1377. doi: 10.1016/j.neuroimage.2008.12.043
- Paulesu E, Shallice T, Danelli L, Sberna M, Frackowiak RSJ, Frith CD. Anatomical Modularity of Verbal Working Memory? Functional Anatomical Evidence from a Famous Patient with Short-Term Memory Deficits. *Front Hum Neurosci*. 2017 May 17;11:231. doi: 10.3389/fnhum.2017.00231. eCollection 2017. PubMed PMID: 28567009; PubMed Central PMCID: PMC5434108.
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- Reverberi, C., Bonatti, L. L., Frackowiak, R. S., Paulesu, E., Cherubini, P., & Macaluso, E. (2012). Large scale brain activations predict reasoning profiles. *Neuroimage*, *59*(2), 1752-1764. doi: 10.1016/j.neuroimage.2011.08.027

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Selected Book Chapters

Paulesu E, Invernizzi P (2011). Tecniche di Neuroimmagine dalla ricerca alla clinica.

Bottini G, Paulesu E, Gandola M, Pia P, Invernizzi P, Berti A (2010). Anosognosia for hemiplegia and models of motor control: insights from lesional data.

Bottini G, Paulesu E, Gandola M, Invernizzi P (2010). Functional neuroanatomy of spatial perception, spatial processes and attention.

Vallar G., Bottini G., Paulesu E (2003). Neglect syndromes: the role of the parietal cortex. In: Siegel A., Andersen R.A., Freund H.J., Spencer D.

Paulesu E, Bottini G., Frackowiak R.S.J. (1997). Maps of somatosensory systems.

PERSONAL SKILLS

MOTHER TONGUE

ITALIAN

OTHER LANGUAGES

- Reading
- Writing
- Oral expression

ENGLISH

VERY GOOD

VERY GOOD

VERY GOOD

OTHER INFORMATION

Sports and hobbies: tennis, skiing; blues guitar playing, cinema, theatre.

RESEARCH INTEREST

Cognitive neuroscience. Motor function and awareness. Language, reading, bilingualism, dyslexia. Spatial neglect. Functional Neuroimaging.

GRANTS

Italian coordinator for the BIOMED II EEC Grant Brain Imaging on Developmental Dyslexia, 1995-1998.

PRIN grants in year 2001, 2003, 2005, 2007, 2010-2011

EDITORIAL ACTIVITY

Referee for Brain, Cerebral Cortex, Cognition, Cortex, Experimental Brain Research, Human Brain Mapping, Journal of Neuroscience, Nature, Nature Neuroscience, Neuroimage, Neuron, Neuropsychologia, NeuroReport

HONOURS

1999 Geshwind-Rodin Prize for studies on developmental dyslexia