

# Dr. Emiliano Macaluso

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**Date of Birth** 27 September 1972  
**Place of Birth** Bellinzona, Switzerland  
**Nationality** Swiss and Italian  
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## Work

2015 -	Claude Bernard University Lyon 1, Lyon, France.	Professor of Neuroimaging
2007 - 2016	Fondazione Santa Lucia, I.R.C.C.S. Roma, Italy.	Director of The Neuroimaging Laboratory
2003 - 2007	Fondazione Santa Lucia, I.R.C.C.S. Roma, Italy.	Acting Director of The Neuroimaging Laboratory
1999 - 2003	Institute of Cognitive Neuroscience Department of Psychology University College London London, UK.	Research Fellow with Prof. J. Driver, working on " <i>Crossmodal spatial attention and multisensory integration</i> ".

## Education

1996-1999	Functional Imaging Laboratory Institute of Neurology University College London London, UK.	PhD under supervision of Prof. C.D. Frith: <i>"Unimodal and multimodal mechanisms of spatial attention in the human brain"</i> .
1994-1995	Biozentrum Department of Pharmacology University of Basel, Basel, Switzerland.	Thesis in Neurobiology under supervision of Prof. J.G. Nicholls: " <i>Actin-binding Proteins in neuronal growth</i> ".
1991-1994	University of Basel Basel, Switzerland.	Diploma in Biology and Biochemistry.
1987-1991	Lugano High School Lugano, Switzerland.	A- level equivalent in Mathematics, Physics, Italian, German, English.

## Research and Expertise

My main research interest concerns the neural basis of multisensory integration, attention and memory. I have used several non-invasive brain imaging and behavioural techniques to investigate these processes in the human brain. Of particular interest to me are the dynamic interactions arising from the combination of top-down endogenous signals related to task, expectations and prior-knowledge with bottom-up inputs triggered by stimuli in the external world. I use both standard laboratory paradigms and innovative protocols based of virtual reality and mobile-phone technology seeking to bridge the gap between basic neuroscientific knowledge and brain functioning in the everyday life.

I am Author of more than one hundred and thirty peer-reviewed scientific papers, including publications in high-impact factor journals such as Science (2 papers), Neuron (4 papers) and Current Biology (2 papers). Scientific expertise:

*Functional Magnetic Resonance Imaging*  
*Statistical Parametric Mapping*  
*Event-related Brain Potentials*

*Positron Emission Tomography*  
*Analysis of Effective Connectivity*  
*Eye-movement Analysis*

### **Grants and Awards**

- 2022-2028 **Co-applicant:** Responsible of the "*Neurosciences Graduate School: from Neurons to Brains*" created in the context of the Graduate-Plus initiative of the UCBL1 (SFRI-ANR program, France). Approx. funding to the school: 200.000 Euros/year.
- 2018-2021 **Principal Investigator:** "*Developing a Multi-scale account of Attentional Control as the constraining interface between vision and action: A cross-species investigation of relevant neural circuits in the human and macaque Brain*". FLAG-ERA JTC 2017 (EU). 135.000 Euros.
- 2016-2020 **Co-applicant:** "*111 Project*": *Programme of Introducing Talents of Discipline to Universities* (n.B16018). Ministry of Education and State Administration of Foreign Experts Affairs (China). Total funding, approx. \$1.4 million.
- 2016-2017 **Principal Investigator:** Programme Avenir Lyon Saint-Etienne (PALSE), in the framework of the national program 'Investissements d'Avenir' (ANR-11-IDEX-0007). "*Retrieval of memories about real-life and life-like episodes: New approaches to study attention and memory in naturalistic conditions*". University of Lyon (France). 67.000 Euros.
- 2015-2020 Awarded **INSERM-UCBL1 chair** (Institut national de la santé et de la recherche médicale - University Claude Bernard Lyon 1, France), including 2/3 teaching reduction, 3 years funding for a PhD student and INSERM research support of 76.500 Euros.
- 2014 **Abilitazione scientifica nazionale (prima fascia, settore 11/E1):** University qualification at the level "full-professor" in the fields of *general psychology, psychobiology and psychophysics*. Ministry of Education, University and Research (Italy). Renewed in 2018.
- 2012-2015 **Principal Investigator:** Progetto Giovani Ricercatori (GR-2010-2311171) "*Attention control in complex environments: mechanisms of spatial orienting in the intact and the damaged human brain*". Ministero della Salute (Italy). 210.000 Euros.
- 2010-2015 **Principal Investigator:** ERC Starting-Grant (n.242809) "*Travels of the Mind: Modes of brain functioning in complex dynamic environments*". European Research Council (EU). 1.220.000 Euros.
- 2008 Awarded the **Cortex Prize 2008** at the first meeting of the Federation of European Societies of Neuropsychology
- 2007-2008 **Co-applicant:** "*Early diagnosis of dementia with Lewy bodies using advanced neuroimaging techniques*". Ministero della Salute (Italy). 48.000 Euros.
- 2006-2007 **Principal Investigator:** "*Cognitive control during aging: physiology and pre-clinical evaluation*". Ministero della Salute (Italy). 95.000 Euros.
- 2005-2006 **Principal Investigator:** "*Connectivity after stroke: a new tool to evaluate mechanisms of motor recovery*". Istituto Superiore di Sanità (Italy). 80.000 Euros.
- 2004-2005 **Principal Investigator:** "*Multisensory interactions in the human brain*". Telecom Italia Mobile (Italy). 350.000 Euros.
- 2004-1016 **Co-applicant:** Responsible for components of the block-grant "*Ricerca Corrente*". Ministero della Salute (Italy). 250.000-300.000 Euros, per year.
- 2003 Awarded **Honorary Fellowship** at the Functional Imaging Laboratory, University College London (UK)

1996-1999 **Bursary:** Jaeggen-Pohen Stiftung (Switzerland). 50.000 Euros.

1996-1999 **Scholarship:** Training and Mobility Research: 83EU-048816. Swiss National Science Foundation (Switzerland). 120.000 Euros.

### **Editorial activities and society memberships**

I routinely act as a reviewer for many international journals including *Science*, *Neuron*, *Current Biology*, *Journal of Neuroscience*, *Proceedings of the IEEE*, *Cerebral Cortex*, *Neuroimage* and *Human Brain Mapping*. Also, grant reviewer for the National Science Foundation (USA), for the European Research Council (EU), for the START-Program of the Austrian Federal Minister of Science (Austria), for the Neurosciences-program of French National Agency of Research (France), for the SIR-Program of the Italian Ministry of Education, Universities and Research (MIUR), and reviewer of promotion-proposals for the Academic Promotion Committee of University College London (UK). From 2019 to 2021 I have been a member of the French *National Council of the Universities* in the Neurosciences section (CNU - section 69).

I am Co-Editor of *Experimental Brain Research* (2008-), Associate Editor of *Frontiers in Integrative Neuroscience* (2007-) and of *Neuroscience Letters* (2010-).

### **Selected Invited Lectures**

March 2021	"L'homme cerebral: You said... memories?". 2nd meeting of the Fondation pour l'Étude du Système Nerveux central et périphérique, Monaco, <i>Monaco</i>	" <i>Memories in the real world</i> "
June 2019	The dynamic and flexible nature of memories . International meeting of the LabEx CORTEX, Lyon, <i>France</i>	" <i>Memory retrieval of complex and naturalistic episodes</i> "
October 2018	Department of Systems Neuroscience, Hamburg, <i>Germany</i>	" <i>Functional imaging of stimulus-related and endogenous signals during spatial orienting in naturalistic conditions</i> "
March 2017	International Convention of Psychological Science - ICPS, Vienna, <i>Austria</i>	" <i>Attention control in naturalistic conditions</i> "
June 2016	International Neuropsychological Symposium, Baiona, <i>Spain</i> .	" <i>Guidance from 'within': endogenous signals for attention control in life-like conditions</i> "
October 2015	Forschungszentrum Juelich, Juelich, <i>Germany</i> .	" <i>Functional neuroimaging of attention control in complex environments</i> "
May 2014	Neuroscience Center, University of Geneva, Geneva, <i>Switzerland</i> .	" <i>Spatial orienting in complex environments: selection and integration</i> "
August 2012	Brain Mind Institute, EPFL, Lausanne, <i>Switzerland</i> .	" <i>Attentional guidance of selective processing in the human brain</i> "
October 2011	Interdisciplinary Center (IDC), Herzeliya, <i>Israel</i> .	" <i>Functional imaging of attention and memory in complex environments</i> "
December 2010	Centre Hospitalier Universitaire Vaudois, Lausanne, <i>Switzerland</i> .	" <i>Attention and memory in complex visual environments</i> "

September 2008	First Meeting of the Federation of European Societies of Neuropsychology, Edinburgh, UK.	Cortex Prize Lecture: "Orienting of spatial attention and the interplay between the senses"
February 2008	Institute of Cognitive Neuroscience, University College London, London, UK.	"Interactions between endogenous and exogenous factors during control of spatial attention"
March 2006	SEIRIKEN / SOKENDAI International Symposium, Okazaki, Japan.	"Multisensory spatial representations and attention control"
February 2003	Zangwill Lecture, Cambridge, UK.	"Multisensory integration and spatial representations: insights from functional neuroimaging"

### Peer-reviewed Publications

1. Foudil S. and **Macaluso E.** (2024) The influence of the precuneus on the medial temporal cortex determines the subjective quality of memory during the retrieval of naturalistic episodes. *Scientific Reports* 14:7943.
2. Dolci C., Rashal E., Santandrea E., Ben-Hamed S., Chelazzi L., **Macaluso E.** and Boehler C.N. (2024) The dynamics of statistical learning in visual search and its interaction with salience processing: an EEG study. *Neuroimage* 286:120514.
3. Beffara B., Hadj-Bouziane F., Ben Hamed S., Boehler C.N., Chelazzi L., Santandrea E. and **Macaluso E.** (2023) Separate and overlapping mechanisms of statistical regularities and salience processing in the occipital cortex and dorsal attention network. *Human Brain Mapping* 44:6439-6458.
4. Cantarella G., Mastroberardino S., Bisiacchi P. and **Macaluso E.** (2023) Prospective Memory: the combined impact of cognitive load and task focality. *Brain Structure and Function* 228:1425-1441.
5. Dolci C., Boehler C.N., Santandrea E., Anneleen Dewulf A., Ben-Hamed S., **Macaluso E.**, Chelazzi L. and Rashal E. (2023) Integrated effects of top-down attention and statistical learning during visual search: an EEG study. *Attention, Perception, & Psychophysics* 85:1819-1833.
6. Rashal E., Santandrea E., Ben-Hamed S., **Macaluso E.**, Chelazzi L. and Boehler N.C. (2023). Effects of top-down and bottom-up attention on post-selection posterior contralateral negativity. *Attention, Perception & Psychophysics* 85:705-717.
7. Merzon L., Pettersson K., Aronen E.T., Huhdanpää H., Seesjärvi E., Henriksson L., MacInnes J., Mannerkoski M., **Macaluso E.** and Salmi J. (2022). Eye movement behavior in a real-world virtual reality task reveals ADHD in children. *Scientific Reports* 12:20308.
8. DiNuzzo M., Mascali D., Bussu G., Moraschi M., Guidi M., **Macaluso E.**, Mangia S., Giove F. (2022) Hemispheric functional segregation facilitates target detection during sustained visuospatial attention. *Human Brain Mapping* 43:4529-4539.
9. Beffara B., Hadj-Bouziane F., Ben Hamed S., Boehler C.N., Chelazzi L., Santandrea E. and **Macaluso E.** (2022) Dynamic causal interactions between occipital and parietal cortex explain how endogenous spatial attention and stimulus-driven salience jointly shape the distribution of processing priorities in 2D visual space. *Neuroimage* 255:119206.
10. Rashal E., Senoussi M., Santandrea E., Ben-Hamed S., **Macaluso E.**, Chelazzi C. and Boehler C.N. (2022). An EEG study of the combined effects of top-down and bottom-up attentional selection under varying task difficulty. *Psychophysiology* 59:e14002.
11. Foudil S., Pleche .C. and **Macaluso E.** (2021) Memory for spatio-temporal contextual details during the retrieval of naturalistic episodes. *Scientific Reports* 11:14577.
12. Salsano I., Santangelo S. and **Macaluso E.** (2021) The lateral intraparietal sulcus takes viewpoint-changes into account during memory-guided attention in natural scenes. *Brain Structure and Function* 226:989-1006.

13. Reynaud A.J, Blini E., Koun E., **Macaluso E.**, Meunier M. and Hadj-Bouziane F. (2021) Atomoxetine modulates the contribution of low-level signals during free viewing of natural images in rhesus monkeys. *Neuropharmacology* 182:108377.
14. Mascali D., Moraschi M., DiNuzzo M., Tommasin S., Fratini M., Gili T., Wise R.G., Mangia S., **Macaluso E.**, Giove F. (2021) . Evaluation of denoising strategies for task-based functional connectivity: equalizing residual motion artifacts between rest and cognitively demanding tasks. *Human Brain Mapping* 42:1805-1828.
15. Scalici F., Carlesimo G.A., Santangelo V., Barban F., **Macaluso E.**, Caltagirone C. and Costa A. (2021) Does Cue Focality Modulate Age-related Performance in Prospective Memory? An fMRI Investigation. *Experimental Aging Research* 47:1-20.
16. Maffei V., Indovina I., Mazzarella E., Giusti M.A., **Macaluso E.**, Lacquaniti F. and Viviani P. (2020) Sensitivity of occipito-temporal cortex, premotor and Broca's areas to visible speech gestures in a familiar language. *PLoS ONE* 15(6):e0234695
17. Moraschi M., Mascali D., Tommasin S., Gili T., Hassan I.E., Fratini M., DiNuzzo M., Wise R., Mangia S., **Macaluso E.**, Giove F. (2020) Brain network modularity during a sustained working-memory task. *Frontiers in Physiology* 11:422.
18. Foudil S., Kwok S.C. and **Macaluso E.** (2020) Context-dependent coding of temporal distance between cinematic events in the human precuneus. *Journal of Neuroscience* 40:2129-2138.
19. Barban F., Scalici F., Carlesimo G.A., **Macaluso E.**, Caltagirone C., and Costa A. (2020) Medio-lateral functional dissociation of the rostral prefrontal cortex with focal/non-focal cues during a prospective memory task. *Brain Imaging and Behavior* 14:1175-1186.
20. Pedale T., **Macaluso E.**, and Santangelo S. (2019) Enhanced insular/prefrontal connectivity when resisting from emotional distraction during visual search. *Brain Structure and Function* 224:2009-2026
21. Liuzza M.T., **Macaluso E.**, Chiesa P.A., Lingiardi V., and Aglioti S. (2019) An fMRI study on the neural correlates of social conformity to a sexual minority. *Scientific Reports* 9:4691.
22. Nardo D., De Luca M., Rotondaro F., Spanò B., Bozzali M., Doricchi F., Paolucci S. and **Macaluso E.** (2019) Left hemispatial neglect and overt orienting in naturalistic conditions: Role of high-level and stimulus-driven signals. *Cortex* 113:329-346.
23. Guerreri M., Palombo M., Caporale A., Fasano F., **Macaluso E.**, Bozzali M. and Capuani S (2018) Age-related microstructural and physiological changes in normal brain measured by MRI  $\gamma$ -metrics derived from anomalous diffusion signal representation. *NeuroImage* 188:654-667
24. Tommasin S., Mascali D., Moraschi M., Gili T., Eid Assan I., Fratini M., DiNuzzo M., Wise R.G., Mangia S., **Macaluso E.** and Giove F. (2018) Scale-invariant rearrangement of resting state networks under sustained stimulation. *NeuroImage*. 179:570-581
25. Ottaviani C., Fagioli S., Mattei E., Censi F., Edwards L., **Macaluso E.**, Bozzali M., Critchley H. and Calcagnini G. (2018) Brain-Heart Pathways to Blood Pressure-Related Hypoalgesia. *Psychosomatic Medicine* 80:845-852
26. **Macaluso E.**, and Ogawa A. (2018) Visuo-spatial orienting during active exploratory behavior: processing of task-related and stimulus-related signals. *Cortex* 102:26-44
27. Makovac E., Garfinkel S., Bassi A., Basile B., **Macaluso E.**, Cercignani M., Calcagnini G., Mattei E., Mancini M., Agalliu D., Cortelli P., Caltagirone C., Critchley H. and Bozzali M. (2018) Fear processing is differentially affected by lateralized stimulation of carotid baroreceptors. *Cortex* 99:200-212
28. Fernández L.M., **Macaluso E.** and Soto-Faraco S. (2017) Audio-visual integration as conflict resolution: The conflict of the McGurk illusion. *Human brain Mapping* 38:5691-5705
29. Chiesa P.A., Liuzza M.T., **Macaluso E.** and Aglioti S.M. (2017) Brain activity induced by implicit processing of others' pain and pleasure. *Human Brain Mapping* 38:5562-5576
30. Tommasin S., Mascali D., Gili T., Assan I.E., Moraschi M., Fratini M., Wise R.G., **Macaluso E.**, Mangia S., Giove F. (2017) Task-related modulations of BOLD low-frequency fluctuations within the default mode network. *Frontiers in Physics* 5:31

31. Caporale A., Palombo M., **Macaluso E.**, Guerreri M., Bozzali M., and Capuani S. (2017) The  $\gamma$ -parameter of Anomalous Diffusion quantified in human brain by MRI depends on local magnetic susceptibility differences. *Neuroimage* 147:619-631.
32. Nardo D., Console P., Reverberi C., and **Macaluso E.** (2016) Competition between visual events modulates the influence of salience during free-viewing of naturalistic videos. *Frontiers in Human Neuroscience*. 10:320.
33. Fagioli S. and **Macaluso E.** (2016) Neural correlates of divided attention in natural scenes. *Journal of Cognitive Neuroscience*. 28:1392-405.
34. Silvetti M., Lasaponara S., Lecce F., Dragone A., **Macaluso E.** and Doricchi F (2016) The response of the left ventral attentional system to invalid targets and its implication for the spatial neglect syndrome: a multivariate fMRI investigation. *Cerebral Cortex* 26:4551-4562
35. **Macaluso E.**, Noppeney U., Talsma D., Vercillo T., Hartcher-O'Brien J., and Adam R. (2016) The curious incident of attention in multisensory integration: bottom-up vs. top-down. *Multisensory Research* 29: 557–583
36. Lenzi D., Trentini C., **Macaluso E.**, Graziano S., Speranza S.M., Pantano P. and Ammaniti M. (2016) Mothers with depressive symptoms display differential brain activations when empathizing with infant faces. *PsychiatryResearch: Neuroimaging* 249:1–11.
37. Santangelo V., Di Francesco S.A., Mastroberardino S. and **Macaluso E.** (2015) Parietal cortex integrates contextual and saliency signals during the encoding of natural scenes in working memory *Human Brain Mapping* 36:5003-17
38. Bordier C., and **Macaluso E.** (2015) Time-resolved detection of stimulus/task-related networks, via clustering of transient inter-subject synchronization. *Human Brain Mapping* 36:3404-25
39. Cazzato V., Liuzza M.T., Caprara G.V., **Macaluso E.**, and Aglioti S.M. (2015) The attracting power of the gaze of politicians is modulated by the personality and ideological attitude of their voters: an fMRI study. *European Journal of Neuroscience* 42:2534-45.
40. Mastroberardino S., Santangelo V., and **Macaluso E.** (2015) Crossmodal semantic congruence can affect visuo-spatial processing and activity of the fronto-parietal attention networks. *Frontiers in Integrative Neuroscience* 9:45
41. Kwok S.C., and **Macaluso E.** (2015) Exogenous features versus prior experiences modulate different subregions of the right IPL during episodic memory retrieval. *Scientific Reports* 5:11248
42. Kwok S.C., and **Macaluso E.** (2015) Immediate memory for “when, where and what”: Short-delay retrieval using dynamic naturalistic material. *Human Brain Mapping* 36:2495-513.
43. Maffei V., Giusti M.A., **Macaluso E.**, Lacquaniti F. and Viviani P. (2015) Unfamiliar walking movements are detected early in the visual stream: An fMRI study. *Cerebral Cortex* 25:2022-34.
44. Makovac E., Garfinkel S., Bassi A., Basile B., **Macaluso E.**, Cercignani M., Calcagnini G., Mattei E., Agalliu D., Cortelli P., Caltagirone C., Bozzali M., and Critchley H. (2015) Effect of parasympathetic stimulation on brain activity during appraisal of fearful expressions. *Neuropsychopharmacology* 40:1649-58.
45. Kwok S.C., and **Macaluso E.** (2015) Scale-invariance of temporal order discrimination using complex, naturalistic events. *Cognition* 140:111-21.
46. Ogawa A., and **Macaluso E.** (2015) Orienting of visuo-spatial attention in complex 3D space: Search and detection. *Human Brain Mapping* 36:2231-47.
47. Dragone A., Lasaponara S., Silvetti M., **Macaluso E.**, and Doricchi F. (2015) Selective reorienting response of the left hemisphere to invalid visual targets in the right side of space: relevance for the spatial neglect syndrome. *Cortex* 65:31-5.
48. Palombo M., Gentili S., Bozzali M., **Macaluso E.**, and Capuani S. (2015) New insight into the contrast in diffusional kurtosis images: does it depend on magnetic susceptibility? *Magnetic Resonance in Medicine* 73:2015-24.

49. Maffei V., Indovina I., **Macaluso E.**, Ivanenko Y.P., Orban G. and Lacquaniti F (2015) Visual gravity cues in the interpretation of biological movements: Neural correlates in humans. *Neuroimage* 104:221-30.
50. Kwok S.C., Shallice T. and **Macaluso E.** (2014) Set-relevance determines the impact of distractors on episodic memory retrieval. *Journal of Cognitive Neuroscience* 26:2070-86.
51. Basile B., Mancini F., **Macaluso E.**, Caltagirone C., and Bozzali M (2014) Abnormal processing of deontological guilt in obsessive-compulsive disorder. *Brain Structure and Function*. 219:1321-31.
52. Nardo D., Santangelo V., and **Macaluso E.** (2014) Spatial orienting in complex audiovisual environments. *Human Brain Mapping* 35:1597-614.
53. Azevedo R.T., **Macaluso E.**, Viola V., Sani G., and Aglioti, S.M. (2014) Weighing the stigma of weight: an fMRI study of neural reactivity to the pain of obese individuals. *Neuroimage* 91:109-19.
54. Barban F., Carlesimo G.A., **Macaluso E.**, Caltagirone C. and Costa A. (2014) Functional interplay between stimulus-oriented and stimulus-independent attending during a prospective memory task. *Neuropsychologia* 53:203-12.
55. Freeman E.D., **Macaluso E.**, Rees G. and Driver J. (2014) fMRI correlates of object-based attentional facilitation versus suppression of irrelevant stimuli, dependent on global grouping and endogenous cueing. *Frontiers in Integrative Neuroscience* 8(12):1-13.
56. Azevedo R.T., **Macaluso E.**, Avenanti A., Santangelo V., Cazzato V. and Aglioti, S.M. (2013) Their pain is not Our pain: Brain and autonomic correlates of empathic resonance with the pain of same and differentrace individuals. *Human Brain Mapping* 34:3168-81.
57. Ogawa A., Bordier C., and **Macaluso E.** (2013) Audio-visual perception of 3D cinematography: an fMRI study using condition-based and computation-based analyses. *PLoS ONE* 8(10): e76003.
58. **Macaluso E.** and Doricchi F. (2013) Attention and predictions: control of spatial attention beyond the endogenous-exogenous dichotomy. *Frontiers in Human Neuroscience* 7:e685.
59. Basile B., Bassi A., Calcagnini G., Strano S., Caltagirone C., **Macaluso E.**, Cortelli P. and Bozzali M. (2013) Direct stimulation of the autonomic nervous system modulates activity of the brain at rest and when engaged in a cognitive task. *Human Brain Mapping* 34:1605-14.
60. Lenzi D., Trentini C., Pantano P., **Macaluso E.**, Lenzi G.L. and Ammaniti M. (2013) Attachment models affect brain responses in areas related to emotions and empathy in nulliparous women. *Human Brain Mapping* 34:1399-414.
61. Barban F., Zannino G.D., **Macaluso E.**, Caltagirone C. and Carlesimo G.A. (2013) Letters persistence after physical offset: visual word form area and left planum temporale. An fMRI study. *Human Brain Mapping* 34:1282-92.
62. Santangelo V. and **Macaluso E.** (2013) Visual salience improves spatial working memory via enhanced parieto-temporal functional connectivity. *Journal of Neuroscience* 33:4110-7.
63. Bordier C., Puja F., and **Macaluso E.** (2013) Sensory processing during viewing of cinematographic material: computational modeling and functional neuroimaging *Neuroimage* 67:213-26.
64. Ogawa A. and **Macaluso E.** (2013) Audio-visual interactions for motion perception in depth modulate activity in visual area V3A. *Neuroimage* 71C:158-67.
65. Indovina I., Maffei V., Pauwels K., **Macaluso E.**, Orban G.A. and Lacquaniti F. (2013) Simulated self-motion in a visual gravity field: sensitivity to vertical and horizontal heading in the human brain. *Neuroimage* 71C:114-24.
66. Barban F., Carlesimo G.A., **Macaluso E.**, Caltagirone C. and Costa A. (2013) Functional brain activity within the medial and lateral portion of BA10 during a prospective memory task. *Behavioural Neurology* 26(3):207-9.
67. Santangelo V. and **Macaluso E.** (2013) The contribution of working memory to divided attention. *Human Brain Mapping* 34:158-75.

68. Kwok S.C., Shallice T. and **Macaluso E.** (2012) Functional anatomy of temporal organisation and domain-specificity of episodic memory retrieval. *Neuropsychologia* 50:2943-55.
69. Bueti D., Stefano Lasaponara S., Cercignani M. and **Macaluso E.** (2012) Learning about time: plastic changes and inter-individual brain differences. *Neuron* 75:725-37.
70. Abreu A.M., **Macaluso E.**, Azevedo R.T., Cesari P., Urgesi C. and Aglioti S.M. (2012) Action anticipation beyond the action observation network: An fMRI study in expert basketball players. *European Journal of Neuroscience* 35:1646-54.
71. Reverberi C., Bonatti L., Frackowiak R., Paulesu E., Cherubini P. and **Macaluso E.** (2012) Large scale brain activations predict reasoning profiles. *Neuroimage* 59:1752-64.
72. De Santis S., Gabriellia A., Bozzali M., Maraviglia B., **Macaluso E.**, and Capuani S. (2012) Anisotropic Anomalous Diffusion assessed in the human brain by scalar invariant indices. *Magnetic Resonance in Medicine* 65:1043-52.
73. Cazzato V., **Macaluso E.**, Crostella F., and Aglioti S.M. (2012) Mapping reflexive shifts of attention in eye- and hand-centred coordinate systems. *Human Brain Mapping* 33:165-78.
74. Bueti D. and **Macaluso E.** (2011) Physiological correlates of subjective time: evidence for the temporal accumulator hypothesis. *Neuroimage* 57:1251-63.
75. Zannino G.D., Barban F., **Macaluso E.**, Caltagirone C. and Carlesimo G.A. (2011) The neural correlates of object familiarity and domain-specificity in the human visual cortex: an fMRI study. *Journal of Cognitive Neuroscience* 23:2878-91.
76. Lenzi D., Serra L., Perri R., Pantano P., Lenzi G.L., Paulesu E., Caltagirone C., Bozzali M., and **Macaluso E.** (2011) Single domain amnesic MCI: a multiple cognitive domains fMRI investigation. *Neurobiology of Aging* 32:1542-57.
77. Nardo D., Santangelo V., and **Macaluso E.** (2011) Stimulus-driven orienting of visuo-spatial attention in complex dynamic environments. *Neuron* 69:1015-28.
78. Basile B., Mancini F., **Macaluso E.**, Caltagirone C., Frackowiak R. and Bozzali M. (2011) Deontological and altruistic guilt: evidence for distinct neurobiological substrates. *Human Brain Mapping* 32:229-39.
79. Bueti D. and **Macaluso E.** (2010) Auditory temporal expectations modulate activity in visual cortex. *Neuroimage* 51:1168-83.
80. Barban F., Zannino G.D., Santangelo V., **Macaluso E.**, Serra L., Caltagirone C. and Carlesimo G.A. (2010) Amblyopic dyslexia: a little investigated reading disorder. *Neurocase* 16:397-407.
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### **Patents**

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