

CURRICULUM VITAE

GIUSEPPE PAGNONI

November 4, 2022

STUDI E FORMAZIONE

- | | |
|---------------|--|
| 2015–presente | Professore Associato presso il Dip. di Scienze Biomediche, Metaboliche e Neuroscienze, Università di Modena e Reggio Emilia. |
| 2008–2015 | Ricercatore presso il Dip. di Scienze Biomediche, Metaboliche e Neuroscienze, Università di Modena e Reggio Emilia. |
| 2002–2008 | Assistant Professor presso il Dept. of Psychiatry and Behavioral Sciences, Emory University, Atlanta, GA. |
| 2000–2002 | Postdoc Fellowship negli Stati Uniti presso il Dept. of Psychiatry and Behavioral Sciences, Emory University, Atlanta, GA. |
| 1998–1999 | Borsa di Ricerca del Dipartimento di Scienze e Tecnologie Biomediche, Università di Udine (Tutor: Prof. Carlo A. Porro). |
| 1994–1998 | Dottorato in Neuroscienze, Università di Parma (Direttori: Prof. Giacomo Rizzolatti e Ruggero Corazza). Tesi: <i>Percezione ‘semantica’ e percezione ‘esplorativa’: uno studio di imaging funzionale sul riconoscimento implicito di stimoli visivi.</i> |
| 1992 | Laurea in Fisica, Università di Modena. |

RICERCA

Neuroimaging funzionale sull'uomo. Applicazione della teoria dell'inferenza attiva e della codifica predittiva alla modellizzazione dell'attività di circuiti neurali e processi cognitivi. Attività cerebrale intrinseca e metodi per rilevarla. Studio dei correlati neurofisiologici delle pratiche meditative. Basi neurali dello sforzo mentale in individui sani e nella sindrome di affaticamento cronico. Ruolo dei gangli della base nei meccanismi di ricompensa e previsione. Meccanismi centrali della percezione del dolore. Interazione di funzione immunitaria, processi cognitivi e umore nel modello dell'interferone-alfa. Imaging funzionale di modelli di cognizione sociale.

INDICI BIBLIOMETRICI (SCOPUS, APRILE 2022)

h-index: 33

Number of articles: 64

Sum of times cited: 7111

ARTICOLI IN RIVISTE INTERNAZIONALI

1. Gandolfi D, Puglisi FM, Boiani GM, **Pagnoni G**, Friston KJ, D'Angelo E, Mapelli J. "Emergence of associative learning in a neuromorphic inferential network", *J Neural Eng*, 2022, 11.
2. Ramstead MJD, Seth AK, Hesp C, Sandved-Smith L, Mago J, Lifshitz M, **Pagnoni G**, Smith R, Dumas G, Lutz A, Friston K, Constant A. From generative models to generative passages: A computational approach to (neuro) phenomenology. *Review of Philosophy and Psychology*, 2022.
3. Gandolfi D, **Pagnoni G**, Filippini T, Goffi A, Vinceti M, D'Angelo E, Mapelli J. Modeling early phases of COVID-19 pandemic in northern Italy and its implication for outbreak diffusion. *Frontiers in public health*, 2021, 9:1946.
4. Feruglio S, Matiz A, **Pagnoni G**, Fabbro F, Crescentini C. The impact of mindfulness meditation on the wandering mind: a systematic review. *Neurosci Biobehav Rev*, 2021, 131:313–330.
5. Lukemire J, Kundu S, **Pagnoni G**, Guo Y. Bayesian Joint Modeling of Multiple Brain Functional Networks. *J Am Stat Assoc*, 2020, 0:1–13.
6. Bogdanov VB, Bogdanova OV, Dexpert S, Delgado I, Beyer H, Aubert A, Dilharreguy B, Beau C, Forestier D, Ledaguenel P, Magne E, Aouizerate B, Layé S, Ferreira G, Felger J, **Pagnoni G**, Capuron L. Reward-related brain activity and behavior are associated with peripheral ghrelin levels in obesity. *Psychoneuroendocrinology*, 2020, 112:104520
7. Kirk U, **Pagnoni G**, Héту S, Montague R. Short-term mindfulness practice attenuates reward prediction errors signals in the brain. *Sci Rep*. 2019, 9(1):6964.
8. **Pagnoni G**. The contemplative exercise through the lenses of predictive processing: A promising approach. *Progress in brain research*, 2019, 244:299-322
9. Lutz A, Mattout J, **Pagnoni G**. The epistemic and pragmatic value of non-action: a predictive coding perspective on meditation. *Current opinion in psychology*, 2019, 28:166-171
10. Benuzzi F, Lui F, Ardizzi M, Ambrosecchia M, Ballotta D, Righi S, **Pagnoni G**, Gallese V, Porro CA. Pain Mirrors: Neural Correlates of Observing Self or Others' Facial Expressions of Pain. *Frontiers in psychology*, 2018, 9:1825

11. **Pagnoni G**, Guareschi FT. Remembrance of things to come: a conversation between Zen and neuroscience on the predictive nature of the mind. *Mindfulness*, 2017, 8(1):27–37.
12. Khachouf OT, Chen G, Duzzi D, Porro CA, **Pagnoni G**. Voluntary modulation of mental effort investment: an fMRI study. *Scientific Reports*, 2017, 7:17191
13. Chen X, Hackett PD, DeMarco AC, Feng C, Stair S, Haroon E, Ditzen B, **Pagnoni G**, Rilling JK. Effects of oxytocin and vasopressin on the neural response to unreciprocated cooperation within brain regions involved in stress and anxiety in men and women. *Brain Imaging Behav*, 2016, 10(2):581–593.
14. Kemmer PB, Guo Y, Wang Y, **Pagnoni G**. Network-based characterization of brain functional connectivity in Zen practitioners. *Frontiers in Psychology*, 2015, 6.
15. Feng G, Hackett PD, DeMarco AC, Chen X, Stair S, Haroon E, Ditzen B, **Pagnoni G**, Rilling J. Oxytocin and vasopressin effects on the neural response to social cooperation are modulated by sex. *Brain Imaging Behav*, 2015, 9(4):754–764.
16. **Pagnoni G**, Porro CA. Cognitive modulation of pain and predictive coding: Comment on “Facing the experience of pain: A neuropsychological perspective” by Fabbro and Crescentini. *Phys Life Rev*, 2014, 11(3):555-7.
17. Miller AH, Jones JF, Drake DF, Tian H, Unger ER, **Pagnoni G**. Decreased basal ganglia activation in subjects with Chronic Fatigue Syndrome: association with symptoms of fatigue. *PLoS One*, 2014, 9(5):e98156.
18. Favilla S, Huber A, **Pagnoni G**, Lui F, Facchin P, Cocchi M, Baraldi P, Porro CA. Ranking brain areas encoding the perceived level of pain from fMRI data. *Neuroimage*, 2014, 90:153–162.
19. Huber A, Lui F, Duzzi D, **Pagnoni G**, Porro CA. Structural and functional cerebral correlates of hypnotic suggestibility. *PLoS One*, 2014, 9(3):e93187.
20. Rilling JK, DeMarco AC, Hackett PD, Chen X, Gautam P, Stair S, Haroon E, Thompson R, Ditzen B, Patel R, **Pagnoni G**. Sex differences in the neural and behavioral response to intranasal oxytocin and vasopressin during human social interaction. *Psychoneuroendocrinology*, 2014, 39:237–248.
21. Khachouf OT, Poletti S, **Pagnoni G**. The embodied transcendental: a Kantian perspective on neurophenomenology. *Front Hum Neurosci*, 2013, 7, 611.
22. Agnati LF, Guidolin D, Battistin L, **Pagnoni G**, Fuxe K. The neurobiology of imagination: possible role of interaction-dominant dynamics and default mode network. *Front Psychol*, 2013, 4, 296.
23. Molinari E, Baraldi P, Campanella M, Duzzi D, Nocetti L, **Pagnoni P**, Porro CA. Human parieto-frontal networks related to action observation detected at rest. *Cereb Cortex*, 2013, 23:178–186.

24. Capuron L, **Pagnoni G**, Drake DF, Woolwine BJ, Spivey JR, Crowe RJ, Votaw JR, Goodman MM, Miller AH. Dopaminergic mechanisms of reduced basal ganglia responses to hedonic reward during interferon-alpha administration. *Arch Gen Psychiatry*, 2012, 69:1044–1053.
25. Confalonieri L, **Pagnoni G**, Barsalou LW, Rajendra J, Eickhoff SB, Butler AJ. Brain Activation in Primary Motor and Somatosensory Cortices during Motor Imagery Correlates with Motor Imagery Ability in Stroke Patients. *ISRN Neurol*, 2012, 613595.
26. Inman CS, James GA, Hamann S, Rajendra JK, **Pagnoni G**, Butler AJ. Altered resting-state effective connectivity of fronto-parietal motor control systems on the primary motor network following stroke. *Neuroimage*, 2012, 59:227–237.
27. **Pagnoni G**. Dynamical properties of BOLD activity from the ventral posteromedial cortex associated with meditation and attentional skills. *J Neurosci*, 2012, 32(15):5242–5249.
28. Rilling J, DeMarco A, Hackett P, Thompson R, Ditzen B, Patel R, **Pagnoni G**. Effects of intranasal oxytocin and vasopressin on cooperative behavior and associated brain activity in men. *Psychoneuroendocrinology*, 2012, 37:447–461.
29. Inman CS, James GA, Hamann S, Rajendra JK, **Pagnoni G**, Butler AJ. Altered resting-state effective connectivity of fronto-parietal motor control systems on the primary motor network following stroke. *Neuroimage*, 2012, 59:227–237.
30. Raison CL, Borisov AS, Majer M, Drake DF, **Pagnoni G**, Woolwine BJ, Vogt GJ, Massung B, Miller AH. Activation of central nervous system inflammatory pathways by interferon-alpha: relationship to monoamines and depression. *Biol Psychiatry*, 2008, 65(4):296–303.
31. **Pagnoni G**, Cekic M, Guo Y. “Thinking about non-thinking”: neural correlates of conceptual processing during Zen meditation. *PLoS ONE*, 2008, 3(9):e3083.
32. Guo Y, **Pagnoni G**. A unified framework for group independent component analysis for multi-subject fMRI data. *Neuroimage*, 2008, 42(3):1078–93.
33. Majer M, Welberg LA, Capuron L, Miller AH, **Pagnoni G**, Reeves WC. Neuropsychological performance in persons with chronic fatigue syndrome: results from a population-based study. *Psychosomatic Medicine*, 2008, 70(7):829–36.
34. Rilling JK, Dagenais JE, Goldsmith DR, Glenn AL, **Pagnoni G**. Social cognitive neural networks during in-group and out-group interactions. *Neuroimage*, 2008, 41(4):1447–61.
35. Rilling JK, Lacreus A, Barks SK, Elfenbein HA, **Pagnoni G**, Votaw JR, Herndon JG. Effect of the menstrual cycle on resting brain glucose metabolism in female rhesus monkeys, *Neuroreport*, 2008, 19(5):537–41.

36. Majer M, Welberg LA, Capuron L, **Pagnoni G**, Raison CL, Miller AH. IFN-alpha-induced motor slowing is associated with increased depression and fatigue in patients with chronic hepatitis C. *Brain Behav Immun*, 2008, 22(6):870–80.
37. Rilling JK, Goldsmith DR, Glenn AL, Jairam MR, Elfenbein HA, Dagenais JE, Murdock CD, **Pagnoni G**. The neural correlates of the affective response to unreciprocated cooperation. *Neuropsychologia*, 2007, 46(5):1256–66.
38. Rilling JK, Barks SK, Parr LA, Preuss TM, Faber TL, **Pagnoni G**, Brenner JD, Votaw JR. A Comparison of Resting State Brain Activity in Humans and Chimpanzees. *Proc Natl Acad Sci U S A*, 2007, 104(43):17146–51.
39. **Pagnoni G**, Cekic M. Age effects on gray matter volume and attentional performance in Zen meditation. *Neurobiology of Aging*, 2007, 28(10):1623–7.
40. Capuron L, **Pagnoni G**, Demetrashvili M, Lawson DH, Fornwalt F, Woolwine BJ, Berns GS, Nemeroff CB, Miller AH. Basal Ganglia Hypermetabolism and Symptoms of Fatigue during Interferon-alpha Therapy. *Neuropsychopharmacology*, 2007, 32(11):2384–92.
41. Rilling JK, Glenn AL, Jairam MR, **Pagnoni G**, Goldsmith DR, Elfenbein HA, Lilienfeld SO. Neural correlates of social cooperation and non-cooperation as a function of psychopathy. *Biological Psychiatry*, 2007, 61(11): 1260–1271.
42. Berns GS, Chappelow J, Cekic M, Zink CF, **Pagnoni G**, Martin-Skurski ME. Neurobiologic Substrates of Dread. *Science*, 2006, 312(5774):754–8.
43. Zink CF, **Pagnoni G**, Chappelow JC, Martin-Skurski ME, Berns GS. Human striatal activation reflects degree of stimulus saliency. *Neuroimage*, 2006, 29(3):977–983.
44. Capuron L, **Pagnoni G**, Demetrashvili M, Woolwine BJ, Nemeroff CB, Berns GS, Miller AH. Anterior cingulate activation and error processing during interferon-alpha treatment. *Biol Psychiatry*, 2005, 58(3):190–196.
45. Berns GS, Chappelow JC, Zink CF, **Pagnoni G**, Martin-Skurski ME, Richards J. Neurobiological correlates of social conformity and independence during mental rotation. *Biol Psychiatry*, 2005, 58(3):245–253.
46. Zink CF, **Pagnoni G**, Martin-Skurski ME, Chappelow JC, Berns GS. Human striatal responses to monetary reward depend on saliency. *Neuron*, 2004, 42(3):509–517.
47. Nicoletti R, Porro CA, Brighetti G, Monti D, **Pagnoni G**, Guido M, Rubichi S, Franceschi C. Long-term effects of vaccination on attentional performance. *Vaccine*, 2004, 22(29–30):3877–3881.
48. Zink CF, **Pagnoni G**, Martin ME, Dhamala M, Berns GS. Human striatal response to salient nonrewarding stimuli. *J Neurosci*, 2003, 23(22):8092–8097.

49. Dhamala M, **Pagnoni G**, Wiesenfeld K, Zink CF, Martin M, Berns GS. Neural correlates of the complexity of rhythmic finger tapping. *Neuroimage*, 2003, 20(2):918–926.
50. Rilling JK, Gutman D, Zeh T, **Pagnoni G**, Berns GS, Kilts C. A neural basis for social cooperation. *Neuron*, 2002, 35(2):395:405.
51. Porro CA, Baraldi P, **Pagnoni G**, Serafini M, Facchin P, Maieron M, Nichelli P. Does anticipation of pain affect cortical nociceptive systems? *J Neurosci*, 2002, 22(8):3206–3214.
52. **Pagnoni G**, Zink CF, Montague PR, Berns GS. Activity in human ventral striatum locked to errors of reward prediction. *Nat Neurosci*, 2002, 5(2):97–98.
53. Montague PR, Berns GS, Cohen JD, McClure SM, **Pagnoni G**, Dhamala M, Wiest MC, Karpov I, King RD, Apple N, Fisher RE. Hyperscanning: simultaneous fMRI during linked social interactions. *Neuroimage*, 2002, 16(4):1159–1164.
54. Dhamala M, **Pagnoni G**, Wiesenfeld K, Berns GS. Measurements of brain activity complexity for varying mental loads. *Phys Rev E Stat Nonlin Soft Matter Phys*, 2002, 65(4 Pt 1):041917.
55. Calandra-Buonaura G, Basso G, Gorno-Tempini ML, Serafini M, **Pagnoni G**, Baraldi P, Porro CA, Nichelli P. Human brain language processing areas identified by functional magnetic resonance imaging using a lexical decision task. *Funct Neurol*, 2002, 17(4):183–191.
56. Gorno-Tempini ML, Pradelli S, Serafini M, **Pagnoni G**, Baraldi P, Porro CA, Nicoletti R, Umiltà C, Nichelli P. Explicit and incidental facial expression processing: an fMRI study. *Neuroimage*, 2001, 14(2):465–473.
57. Berns GS, McClure SM, **Pagnoni G**, Montague PR. Predictability modulates human brain response to reward. *J Neurosci*, 2001, 21(8):2793–2798.
58. Baraldi P, Porro CA, Serafini M, **Pagnoni G**, Murari C, Corazza R, Nichelli P. Bilateral representation of sequential finger movements in human cortical areas. *Neurosci Lett*, 1999, 269(2):95–98.

CAPITOLI DI LIBRI

1. Haroon E, **Pagnoni G**, Heim C, Berns GS, Mayberg H. Brain Imaging in Psychopharmacology, in *The American Psychiatric Publishing Textbook of Psychopharmacology*, Fourth Edition, Eds: Schatzberg AF and Nemeroff CB, American Psychiatric Publishing, Inc., 2009.
2. **Pagnoni G**, Berns GS. Brain imaging in Psychopharmacology, in *The American Psychiatric Publishing Textbook of Psychopharmacology*, Third Edition, Eds: Schatzberg AF and Nemeroff CB, American Psychiatric Publishing, Inc., 2003.

3. **Pagnoni G.** Metafore e neurofisiologia, in *La Metafora nelle Scienze Cognitive*, Ed: Morabito C, McGraw-Hill Libri Italia, Milano, 2002.

ATTIVITÀ DIDATTICA

- Metodologie Medico-Scientifiche di Base, Corso di Laurea in Medicina e Chirurgia, Università di Modena e Reggio Emilia, 2011–presente.
- Strumenti e modelli di analisi dei dati nella ricerca psicobiologica, Corso di Laurea in Scienze e Tecniche Psicologiche, Università di Modena e Reggio Emilia, 2017–presente.
- Fisiologia cardiovascolare nel Corso Integrato di Fisiologia Umana e Fisiopatologia, Laurea in Medicina e Chirurgia, Università di Modena e Reggio Emilia, 2008–presente.
- Neuroscienze della meditazione, Master in “Mindfulness: pratica, clinica e neuroscienze”, Dipartimento di Psicologia, Università di Roma, La Sapienza, 2015–presente.
- Meditazione e mente predittiva, Master in “Meditazione e neuroscienze”, Università di Udine, 2018, 2020–presente.