

## Recent publications by Luciano Fadiga (2007-):

1. Ansaldo A., Castagnola E., Maggiolini E., Fadiga L., Ricci D. Superior Electrochemical Performance of Carbon Nanotubes Directly Grown on Sharp Microelectrodes. *ACS Nano*, 5, 3, p2206–2214. 2011
2. Baranauskas G, Maggiolini E, Castagnola E, Ansaldo A, Mazzoni A, Angotzi GN, Vato A, Ricci D, Panzeri S, Fadiga L. Carbon nanotube composite coating of neural microelectrodes preferentially improves the multiunit signal-to-noise ratio. *J Neural Eng.* 2011 (in press)
3. Baranauskas G, Maggiolini E, Vato A, Angotzi G, Bonfanti A, Zambra G, Spinelli A, Fadiga L. The origins of 1/f<sup>2</sup> scaling in the power spectrum of intra-cortical local field potential. *J Neurophysiol.* 2011 (in press)
4. Bonfanti A., Zambra G., Baranauskas G., Angotzi G.N., Maggiolini E., Semprini M., Vato A., Fadiga L., Spinelli A.S. & Lacaíta A.L. A wireless microsystem with digital data compression for neural spike recording. *Microelectronic Engineering*, vol. 88, no. 8, pp. 1672–1675. 2011
5. Busan P., D'Ausilio A., Borelli M., Monti F., Pelamatti G., Pizzolato G., Fadiga L. Altered left cortico-motor excitability in developmental stuttering. *Cortex.* 2011, in press
6. Castellini C, Badino L, Metta G, Sandini G, Tavella M, Grimaldi M, Fadiga L. The Use of Phonetic Motor Invariants Can Improve Automatic Phoneme Discrimination. *PLoS ONE* 6(9):e24055. 2011
7. Censolo R, Craighero L, Ponti G, Rizzo L, Canto R, Fadiga L. Electromyographic activity of hand muscles in a motor coordination game: effect of incentive scheme and its relation with social capital. *PLoS One.* 2011 Mar 25;6(3):e17372, 2011
8. Clerget E, Poncin W, Fadiga L, Olivier E. Role of Broca's Area in Implicit Motor Skill Learning: Evidence from Continuous Theta-burst Magnetic Stimulation. *J Cogn Neurosci.* 24:80-92, 2011, in press
9. D'Ausilio A., Bufalari I., Salmas P., Busan P., Fadiga L. Vocal pitch discrimination in the motor system. *Brain & Lang.* 118, 9-14. 2011
10. D'Ausilio A., Bufalari I., Salmas P., Fadiga L. The role of the motor system in discriminating degraded speech sounds. *Cortex*, 2011, in press
11. D'Ausilio A., Craighero L., Fadiga L., The contribution of the frontal lobe to the perception of speech and language, *J Neurolinguist.* 2011, in press
12. Senot P., D'Ausilio A., Franca M., Caselli L., Craighero L., Fadiga L. Effect of weight-related labels on corticospinal excitability during observation of grasping: a TMS study. *Exp Brain Res.* 211(1), 161-167. 2011
13. Skrap M, Mondani M, Tomasino B, Weis L, Budai R, Pauletto G, Eleopra R, Fadiga L, Ius T. Surgery of insular non-enhancing Gliomas: volumetric analysis of tumoral resection, clinical outcome and survival in a consecutive series of 66 cases. *Neurosurgery.* 2011 (in press)
14. Tia B, Saimpont A, Paizis C, Mourey F, Fadiga L, Pozzo T. Does observation of postural imbalance induce a postural reaction? *PLoS One.* 2011 Mar 15;6(3):e17799, 2011.
15. Pulvermüller F, Fadiga L (2010) Active perception: sensorimotor circuits as a cortical basis for language. *Nat Rev Neurosci.* 11:351

16. Alaerts K, Senot P, Swinnen SP, Craighero L, Wenderoth N and Fadiga L (2010) Force requirements of observed object lifting are encoded by the observer's motor system: a TMS study, *European Journal of Neuroscience*, vol. 31, pp. 1144–53.
17. Cangelosi A, Metta G, Sagerer G, Nolfi S, Nehaniv C, Fischer K, Tani J, Belpaeme T, Sandini G, Nori F, Fadiga L, Wrede B, Rohlfing K, Tuci E, Dautenhahn K, Saunders J and Zeschel A. (2010) 'Integration of Action and Language Knowledge: A Roadmap for Developmental Robotics', *IEEE Transactions on Autonomous Mental Development*.
18. Castagnola E, Ansaldo A, Fadiga L and Ricci D (2010) Chemical vapour deposited carbon nanotube coated microelectrodes for intracortical neural recording, *Physica status solidi b*, in press.
19. Metta G, Natale L, Nori F, Sandini G, Vernon D, Fadiga L, von Hofsten C, Santos-Victor J, Bernardino A and Montesano L (2010) The iCub Humanoid Robot: An Open-Systems Platform for Research in Cognitive Development, *Neural Networks, special issue on Social Cognition: From Babies to Robots*.
20. D'Ausilio A, Craighero L, Fadiga L (2010) The Contribution Of The Frontal Lobe to the Perception of Speech, *Journal of Neurolinguistics* (in press)
21. Bonfanti A., M. Ceravolo, G. Zambra, R. Gusmeroli, A. S. Spinelli, A. L. Lacaita, G. N. Angotzi, G. Baranauskas & L. Fadiga 2010, 'A Multi-Channel Low-Power System-on-Chip for Single-Unit Recording and Narrowband Wireless Transmission of Neural Signal', *32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society*.
22. Kotz SA, D'Ausilio A, Raettig T, Begliomini C, Craighero L, Fabbri-Destro M, Zingales C, Haggard P, Fadiga L (2010) Lexicality drives audio-motor transformations in Broca's area. *Brain Lang.* 112:3-11.
23. Mussa-Ivaldi FA, Alford ST, Chiappalone M, Fadiga L, Karniel A, Kositsky M, Maggiolini E, Panzeri S, Sanguineti V, Semprini M, Vato A (2010) New Perspectives on the Dialogue between Brains and Machines. *Front Neurosci.* 4:44.
24. Fazio P, Cantagallo A, Craighero L, D'Ausilio A, Roy AC, Pozzo T, Calzolari F, Granieri E, Fadiga L (2009) Encoding of human action in Broca's area. *Brain.* 132:1980-8.
25. Fadiga L, Craighero L and D'Ausilio A. (2009) Broca's area in language, action, and music', *Annals of the New York Academy of Sciences*, 1169:448–58.
26. D'Ausilio A, Pulvermüller F, Salmas P, Bufalari I, Begliomini C, Fadiga L (2009) The motor somatotopy of speech perception. *Curr Biol.* 19:381-5.
27. Bonfanti A, Borghi T, Gusmeroli R, Zambra G, Spinelli AS, Oliynyk A, Fadiga L and Baranauskas G (2009) A Low-Power Integrated Circuit for Analog Spike Detection and Sorting in Neural Prosthesis Systems, in *IEEE International Conference on Biomedical Devices and Electronics*, pp. 67–74.
28. Clerget E, Winderickx A, Fadiga L, Olivier E. (2009), Role of Broca's area in encoding sequential human actions: a virtual lesion study. *Neuroreport.* 20:1496-9.
29. Ricciardi E, Bonino D, Sani L, Vecchi T, Guazzelli M, Haxby JV, Fadiga L, Pietrini P (2009) Do we really need vision? How blind people "see" the actions of others. *J Neurosci.* 29:9719-24.
30. Rochat MJ, Serra E, Fadiga L, Gallese V (2008) The evolution of social cognition: goal familiarity shapes monkeys' action understanding. *Curr Biol.* 18: 227-32.
31. Rossi S, De Capua A, Pasqualetti P, Ulivelli M, Fadiga L, Falzarano V, Bartalini S, Passero S, Nuti D, Rossini PM (2008) Distinct olfactory cross-modal effects on the human motor system. *PLoS ONE.* 3: 1702-12.
32. Roy A.C., Craighero L., Fabbri-Destro M., and Fadiga L (2008) Phonological and Lexical Motor Facilitation during Speech Listening: A Transcranial Magnetic Stimulation Study. *Journal of Neurophysiology*, Paris 102(1-3):101-5.

33. Schütz-Bosbach S, Haggard P, Fadiga L, Craighero L (2008) Motor cognition: TMS studies of action generation. In *Oxford Handbook of Transcranial Stimulation*, Oxford University Press, Oxford.
34. Craighero L, Bonetti F, Massarenti L, Canto R, Fabbri Destro M and Fadiga L (2008) Temporal prediction of touch instant during human and robot grasping observation. *Brain Research Bulletin*. 75(6):770-4.
35. De Lussanet MH, Fadiga L, Michels L, Seitz RJ, Kleiser R, Lappe M (2008) Interaction of visual hemifield and body view in biological motion perception. *Eur J Neurosci*. 27: 514-22.
36. Craighero L, Metta G, Sandini G, Fadiga L (2007) The mirror-neurons system: data and models. *Progr. Brain Res*. 164: 39-59.
37. Fadiga L, Craighero L (2007) Cues on the origin of language. From electrophysiological data on mirror neurons and motor representations In S. Bråten (Ed.), *On Being Moved: From mirror neurons to empathy*. Amsterdam, John Benjamins.
38. Fadiga L, Roy AC, Fazio P, Craighero L (2007) From hand actions to speech: evidence and speculations. In P. Haggard, Y. Rossetti, M. Kawato (Eds.) *Sensorimotor Foundations of Higher Cognition, Attention and Performance XXII*. Oxford University Press, Oxford, New York.
39. Fadiga L (2007) Functional magnetic resonance imaging: measuring versus estimating. *Neuroimage*. 37: 1042-4.
40. Olivier E, Davare M, Andres M, Fadiga L (2007) Precision grasping in humans: from motor control to cognition. *Curr Opin Neurobiol*. 17: 644-8.
41. Porro CA, Facchin P, Fusi S, Dri G, Fadiga L (2007) Enhancement of force after action observation: behavioural and neurophysiological studies. *Neuropsychologia*. 45: 3114-21.
42. Porro CA, Martinig M, Facchin P, Maieron M, Jones AK, Fadiga L (2007) Parietal cortex involvement in the localization of tactile and noxious mechanical stimuli: a transcranial magnetic stimulation study. *Behav Brain Res*. 178: 183-9.

### **Other Selected Publications**

1. Fadiga L, Craighero L, Fabbri-Destro M, Finos L, Cotillon-Williams N, Smith AT, Castiello U. Language in shadow. *Social Neuroscience*. 1: 77-89, 2006.
2. Fadiga L, Craighero L, Roy A. Broca's Region: A Speech Area? In Y Grodzinsky, K Amunts (Eds.). *Broca's Region*. Oxford University Press, Oxford, New York, 2006.
3. Fadiga L, Craighero L. Hand actions and speech representation in Broca's area. *Cortex* 42: 486-90, 2006.
4. Metta G, Sandini G, Natale L, Craighero L, Fadiga L. Understanding mirror neurons: a bio-robotic approach. *Interaction Studies* 7: 197-232, 2006.
5. Fadiga L, Craighero L, Olivier E. Human motor cortex excitability during the perception of others' action. *Current Opinion in Neurobiology* 15: 213-18, 2005.
6. Rizzolatti G, Fadiga L. The mirror neuron system and action recognition. In HJ Freund and M Jeannerod (Eds.), *Higher-order motor disorders*, 141-58. Oxford University Press, 2005.
7. Fadiga L, Craighero L, Buccino G, and Rizzolatti G. "Speech Listening Specifically Modulates the Excitability of Tongue Muscles: A TMS Study." *European Journal of Neuroscience* 15: 399-402, 2002.
8. Umiltà MA, Kohler E, Gallese V, Fogassi L, L Fadiga, Keysers C, and Rizzolatti G. "I Know What You Are Doing: A Neurophysiological Study." *Neuron* 31: 155-65, 2001.
9. Fadiga L, Fogassi L, Gallese V, and Rizzolatti G. "Visuomotor Neurons: Ambiguity of the Discharge Or 'Motor' Perception?" *International Journal of Psychophysiology* 35: 165-77, 2000.

10. Fadiga L, Buccino G, Craighero L, Fogassi L, Gallese V, and Pavesi G. "Corticospinal Excitability Is Specifically Modulated By Motor Imagery: A Magnetic Stimulation Study." *Neuropsychologia* 37: 147-58, 1999.
11. Rizzolatti G, and Fadiga L. "Grasping Objects and Grasping Action Meanings: The Dual Role of Monkey Rostroventral Premotor Cortex (Area F5)." In *Sensory Guidance Of Movement*, Novartis Foundation Symposia, 1998.
12. Fadiga L, and Gallese V. "Action Representation and Language in the Brain." *Theoretical Linguistics* 23: 267-80, 1997.
13. Grafton ST, L Fadiga, Arbib MA, and Rizzolatti G. "Promotor Cortex Activation During Observation and Naming of Familiar Tools." *Neuroimage* 6: 231-36, 1997.
14. Murata A, L Fadiga, Fogassi L, Gallese V, Raos V, and Rizzolatti G. "Object Representation in the Ventral Premotor Cortex (Area F5) of the Monkey." *Journal of Neurophysiology* 78: 2226-30, 1997.
15. Rizzolatti G, L Fadiga, Fogassi L, and Gallese V. "The Space Around Us." *Science* 277: 190-91, 1997.
16. Fogassi L, Gallese V, Fadiga L, Luppino G, Matelli M, and Rizzolatti G. "Coding of Peripersonal Space in Inferior Premotor Cortex (Area F4)." *Journal of Neurophysiology* 76: 141-57, 1996.
17. Gallese V, Fadiga L, Fogassi L, and Rizzolatti G. "Action Recognition in the Premotor Cortex." *Brain* 119: 593-609, 1996.
18. Grafton ST, Arbib MA, L Fadiga, and Rizzolatti G. "Localization of Grasp Representations in Humans by Positron Emission Tomography .2. Observation Compared With Imagination." *Experimental Brain Research* 112: 103-11, 1996.
19. Rizzolatti G, Fadiga L, Gallese V, and Fogassi L. "Premotor Cortex and the Recognition of Motor Actions." *Cognitive Brain Research* 3: 131-41, 1996.
20. Rizzolatti G, Fadiga L, Matelli M, Bettinardi V, Paulesu E, Perani D, and Fazio F. "Localization of Grasp Representations in Humans by Pet. 1. Observation Versus Execution." *Experimental Brain Research* 111: 246-52, 1996.
21. Fadiga L, Fogassi L, Pavesi G, and Rizzolatti G. "Motor Facilitation During Action Observation - a Magnetic Stimulation Study." *Journal of Neurophysiology* 73: 2608-11, 1995.
22. Di Pellegrino G, Fadiga L, Fogassi L, Gallese V, and Rizzolatti G. "Understanding Motor Events - a Neurophysiological Study." *Experimental Brain Research* 91: 176-80, 1992.