

CURRICULUM VITAE ET STUDIORUM

Elisa Santandrea PhD

Dept. Of Neuroscience, Biomedicine and Movement Sciences - Section of Physiology and Psychology, University of Verona
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ORCID ID : orcid.org/0000-0002-4079-3725

Date and Place of birth: 02/07/1979, Novi Ligure (AL) – Italy.

Current address: via Guastalla Vecchia 31, I-37060 Sona (VR).

Married; mother of Matilde (born 04/05/2006), Lorenzo (born 20/05/2008), Martino (born 24/02/2011) e Amelia (born 11/09/2015)

Current Position

Post-doctoral fellow

Department of Neuroscience, Biomedicine and Movement Sciences
Section of Physiology and Psychology
University of Verona
Research supervisor: **Luigi Cattaneo PhD**

Education

2008 PhD in Psychological and Psychiatric Sciences

Dept. of Neurological and Vision Sciences – Sect. of Physiology – University of Verona – Italy

2003 Degree in Experimental Psychology (*magna cum laude*)

Vita-Salute San Raffaele University, Milano – Italy

Professional experience

2014-2016 Post-doctoral Fellow

Department of Pharmacy and Biotechnology – University of Bologna
Research supervisor: **Annalisa Bosco PhD**

2013-2014 Research Fellow

Dept. of Neurological NMM Sciences – University of Verona
Research supervisors: **Leonardo Chelazzi PhD** and **Chiara Della Libera PhD**

2012-2013 Post-doctoral Fellow

Dept. of Neurological NMM Sciences – University of Verona

Research supervisor: **Chiara Della Libera PhD**

2008-2011 Post-doctoral Fellow

Dept. of Neurological NMM Sciences – University of Verona

Research supervisor: **Leonardo Chelazzi PhD**

2004-2008 PhD Student in Psychological and Psychiatric Sciences

Dept. of Neurological and Vision Sciences – University of Verona

Research supervisor: **Leonardo Chelazzi PhD**

2002-2003 Apprenticeship

Vision Lab – Vita-Salute San Raffaele University – Milano – Italy

Research supervisor: **Maria Concetta Morrone PhD**

2001-2003 Apprenticeship

Visuo-Motor Function Lab – Vita-Salute San Raffaele University – Milano – Italy

Research supervisor: **Claudio de'Sperati PhD**

Main research interests

1. Preparatory signals for reaching and grasping arm/hand actions in the posterior parietal cortex of the macaque monkey
2. Spatial priority maps for attentional control: plasticity, functional organization, permeability to multiple biasing signals.
3. Neural and functional correlates of visual selective attention. Temporal dynamics of perceptual and attentional processes.
4. Behavioral and neural manifestations of perceptual and attentional learning, with a specific interest in reward-based learning and statistical learning processes
5. Role of the cerebellum in cognitive functions, notably in perceptual learning

Ad hoc reviewer for

Cerebral Cortex

Cortex

Frontiers in Psychology - Emotion Science

Journal of Experimental Psychology: General

Journal of Visualized Experiments

PLoS ONE

Scientific Reports

Member of the following scientific societies

European Brain and Behaviour Society (EBBS)

Basel Declaration Society

Society for Neuroscience

Publications

Total number of publications: 11 with IF

H index: 6 (Google Scholar), 6 (Scopus)

Total Impact Factor (IF 2016): 39.277; Average IF/publication (IF 2016): 3.571

Total number of citations: 252 (Google Scholar), 191 (Scopus)

Mean number of citations per publication: 22.9 (Google Scholar), 17.4 (Scopus)

In preparation

Santandrea E, Sani I, Morbioli G, Multari D, Marchini G, Chelazzi L. Optic nerve degeneration and reduced luminance contrast sensitivity due to insufficient dietary intake of folic acid in rhesus monkeys. *In preparation*

Pascucci D, Mancuso G, **Santandrea E**, Della Libera C, Plomp G, Chelazzi L. Laws of concatenated perception: Vision goes for novelty, Decisions for perseverance. *In preparation*

Submitted

Santandrea E, Breveglieri R, Bosco A, Galletti C, Fattori P. Differential preparatory activity for reaching and grasping movements in area V6A of the macaque monkey. *Submitted*

Peer-review Journals

Ferrante O, Patacca A, Di Caro V, Della Libera C, **Santandrea E**, Chelazzi L (2017). Altering spatial priority maps via statistical learning of target selection and distractor filtering. *Cortex, in press*. IF 2016 4.279

Sani I, **Santandrea E**, Morrone MC, Chelazzi L (2017). Temporally Evolving Gain Mechanisms of Attention in Macaque Area V4. *Journal of Neurophysiology* 118, 964-985. IF 2016 2.396

Della Libera C, Calletti R, Eštočinová J, Chelazzi L, **Santandrea E** (2017). Reward-based Plasticity of Spatial Priority Maps: Exploiting Inter-subject Variability to Probe the Underlying Neurobiology. *Cognitive Neuroscience* 8, 85-101. IF 2016 1.870

Eštočinová J, Lo Gerfo E, Della Libera C, Chelazzi L, **Santandrea E** (2016). Augmenting distractor filtering via transcranial magnetic stimulation of the lateral occipital cortex. *Cortex* 84, 63-79. IF 2016 4.279

Perlato A, **Santandrea E**, Della Libera C, Chelazzi L (2014). Biases of attention in chronic smokers: Men and women are not alike. *Cognitive, Affective and Behavioral Neuroscience* 14, 742-755. [IF 2016 3.263](#)

Deluca C*, Golzar A*, **Santandrea E***, Lo Gerfo E, Estocinova J, Moretto G, Fiaschi M, Panzeri C, Mariotti C, Tinazzi M, Chelazzi L (2014). The Cerebellum and Visual Perceptual Learning. *Cortex* 58, 52-71 (*equal contribution). [IF 2016 4.279](#)

Chelazzi L, Estocinova J, Calletti R, Lo Gerfo E, Sani I, Della Libera C, **Santandrea E** (2014). Altering spatial priority maps via reward-based learning. *The Journal of Neuroscience* 34, 8594-860. [IF 2016 5.988](#)

Sani I, **Santandrea E**, Golzar A, Morrone MC, Chelazzi L (2013). Selective tuning for contrast in macaque area V4. *The Journal of Neuroscience* 33, 18583-18596. [IF 2016 5.988](#)

Chelazzi L, Perlato A, **Santandrea E**, Della Libera C (2013). Rewards Teach Visual Selective Attention. *Vision Research* 85, 58-72. [IF 2016 1.971](#)

Chelazzi L, Della Libera C, Sani I, **Santandrea E** (2011). Neural basis of visual selective attention. *Wiley Interdisciplinary Reviews: Cognitive Science* 2, 392-407. [IF 2016 2.218](#)

de'Sperati C, **Santandrea E** (2005). Smooth pursuit-like eye movements during mental extrapolation of motion: the facilitatory effect of drowsiness. *Cognitive Brain Research* 25, 328-338. [IF 2016 2.746](#) (the journal is actually absorbed in *Brain Research*)

Book chapters and proceedings

Ferrante O, Patacca A, Di Caro V, **Santandrea E**, Della Libera C, Chelazzi, L (2017). Statistical learning of distractor suppression. *Journal of Vision* 17, 674.

Santandrea E, Chelazzi L (2015). Meccanismi retinici della visione e proiezioni retiniche secondarie. In F. Grassi, D. Negrini, and C. A. Porro (Eds.), *Fisiologia e biofisica medica* (pp. 9-20), Milano: Poletto Editore.

Santandrea E, Chelazzi L (2015). Controllo dei movimenti oculari (pp. 98-108). In F. Grassi, D. Negrini, and C. A. Porro (Eds.), *Fisiologia e biofisica medica* (pp. 9-20), Milano: Poletto Editore.

Sani I, **Santandrea E**, Golzar A, Morrone MC, Chelazzi L (2013). Non-monotonic Contrast Tuning in macaque area V4. *Journal of Vision* 13, 35.

Ferrari V, Calletti R, Estocinova J, **Santandrea E**, Della Libera C, Codispoti M, Chelazzi L (2013). The deployment of spatial visual attention among multiple targets. *Psychophysiology* 50, S23-S136

Chelazzi L, Della Libera C, **Santandrea E** (2009). Attentional mechanisms in the ventral pathway. In L. Squire, T. Albright, F. Bloom, F. Gage and N. Spitzer (Eds.), *The New Encyclopedia of Neuroscience* (pp. 647-653), Elsevier, Oxford.

Santandrea E, Chelazzi L (2006). Attenzione selettiva e coscienza: Un approccio neurobiologico alla studio di meccanismi cerebrali condivisi. *Accademia Nazionale dei Lincei, Contributi del Centro Linceo Interdisciplinare "Beniamino Segre", XXXII Seminario*, 155-177.

Main research and technical skills

Single-cell electrophysiological recordings in the awake macaque monkey (*Macaca Mulatta*)

- animal training via positive reinforcement learning;
- support to surgical procedures for the chronic implant of recording chambers for subsequent electrode penetrations;
- programming of experimental protocols in C++ (Cortex);
- online discrimination, selection and recording of single-cell signals (SPS-8701, Signal Processing Systems, Prospect; Multichannel Acquisition Processor system, Plexon Inc);
- online recording of eye position and movements in the monkey;
- data analyses (Matlab).

Eye movement recordings in humans with different techniques: *magnetic field coil* (in humans and macaques); *infra-red* o *video-based systems* (in humans). Data analyses (Matlab).

Psychophysical experiments (basic programming skills for experimental design with Matlab, Psychtoolbox). Psychometric curve assessment and data analyses (Matlab):

General computer skills (Office, vector graphics, editing).


(Elisa Santandrea)

Date: 04/10/2017