

Marcello Maniglia

Curriculum Vitae

Assistant Research Psychologist
UC Riverside Department of Psychology
Riverside, CA (USA)
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RESEARCH AREAS

Perceptual learning, neural plasticity, macular degeneration (MD), oculomotor behavior under central vision loss, clinical neuroscience, brain stimulation, neural basis of visual effects, visual contextual modulation, cross-modal interaction

ACADEMIC CAREER

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|-------------------------------|---|
| May 2020-current | Assistant Research Psychologist at UC Riverside, California (USA).
Supervisor: Prof. Aaron Seitz <ul style="list-style-type: none">- <i>Mechanisms of learning and generalization in perceptual learning</i>- <i>Simulated central vision loss in healthy population</i> |
| July 2019-May 2020 | Post Doctoral Researcher at UAB, Birmingham, Alabama (USA).
Supervisor: Prof. Kristina Visscher <ul style="list-style-type: none">- <i>Neural plasticity in Macular Degeneration (MD)</i>- <i>Simulated central vision loss in healthy population</i> |
| September 2016- December 2016 | Visiting Researcher at UAB, Birmingham, Alabama (USA). Supervisor: Prof. Kristina Visscher <ul style="list-style-type: none">- <i>Perceptual Learning in MD</i>- <i>Diagnostic and monitoring techniques in MD</i> |
| May 2016- July 2019 | Post Doctoral Researcher at UCR, Riverside, California (USA).
Supervisor: Prof. Aaron Seitz. <ul style="list-style-type: none">- <i>Mechanisms of Perceptual learning</i>- <i>Perceptual learning in MD</i>- <i>Brain stimulation and contextual modulation</i> |
| September 2013 - May 2016 | Post Doctoral Researcher at CerCo, Toulouse (France), supported by two national French grants (Fondation Fouassier and Fondation de l'Avenir).
Supervisor: Prof. Yves Trotter <ul style="list-style-type: none">- <i>Neural plasticity and visual rehabilitation in MD</i>- <i>Brain stimulation and perceptual learning</i>- <i>Perceptual Learning in healthy brain</i>- <i>Visual contextual modulation</i> |

EDUCATION

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| 2004-2007 | Bachelor Degree in Psychological and Psychobiological Sciences, University of Padua (Italy). |
| 2007-2009 | Master Degree in Behavioural Neuroscience and Experimental Psychology, University of Padua (Italy). |
| 2010-2013 | Ph.D. in Experimental Psychology, University of Padua (Italy). |
| January 2012-June 2012 | Visiting Ph.D Student at the Sussex University, Brighton (UK). |

PUBLICATIONS

- Maniglia M^o**, Contemori G, Marini E, Battaglini L (2022). Contrast adaptation of flankers reduces collinear facilitation and inhibition. *Vision Research* 193, 107979
- Ghiani, A, **Maniglia, M**, Battaglini, L, Melcher, D, Ronconi, L (2021). Binding mechanisms in visual perception and their link with neural oscillations: a review of evidence from tACS. *Frontiers in Psychology* 12, 779.
- Maniglia, M^o**, Jogin, R, Visscher, KM, Seitz, AR (2020). We don't all look the same; detailed examination of peripheral looking strategies after simulated central vision loss. *Journal of vision* 20 (13), 5-5.

- Maniglia, M[°]**, Soler, V, Trotter, Y (2020). Combining fixation and lateral masking training enhances perceptual learning effects in patients with macular degeneration. *Journal of Vision* 20 (10), 19-19.
- Maniglia, M[°]**, Visscher, KM, Seitz, AR (2020). A method to characterize compensatory oculomotor strategies following simulated central vision loss. *Journal of Vision* 20 (9), 15-15.
- Lee, YH, **Maniglia, M**, Velez, F, Demer, JL, Seitz, AR, Pineles, S (2020). Short-term Perceptual Learning Game Does Not Improve Patching-Resistant Amblyopia in Older Children. *Journal of Pediatric Ophthalmology and Strabismus* 57 (3), 176-184
- Battaglini L, Contemori G, Penzo S, **Maniglia M[°]**. (2019) tRNS effects on contrast detection. *Neuroscience Letters*, 134696
- Maniglia M[°]**, Trotter Y, Aedo-Jury F. (2019) TMS reveals inhibitory extrastriate cortico-cortical feedback modulation of V1 activity in humans. *Brain Structure and Function*, 1-10
- Lee YH, **Maniglia M**, Velez F, Demer JL, Seitz AR, Pineles S. (2019). Effect of an Integrated Perceptual Learning Game on Visual Function in Children with Amblyopia. *Journal of Pediatric Ophthalmology & Strabismus*, 23(4), e39–e40
- Contemori G⁺, Cottureau B, Trotter Y, **Maniglia M[°]**. (2019). tRNS boosts Perceptual Learning in Peripheral Vision. *Neuropsychologia* 125, 129-136
- Maniglia M**, Seitz AR (2018) A New Look at Visual System Plasticity. *Trends in Cognitive Sciences* 23 (2), 82-83
- Thurman^{*} SM, **Maniglia M^{*}**, Davey PG, Biles MK, Visscher KM, Seitz AR. (2018). Multi-line Adaptive Perimetry (MAP): A New Procedure for Quantifying Visual Field Integrity for Rapid Assessment of Macular Diseases. *Translational vision science & technology* 7 (5), 28-28
- Battaglini L, **Maniglia M**, Konishi M, Contemori G, Coccaro A, Casco C. (2018). Fast random motion biases judgments of visible and occluded motion speed. *Vision research* 150, 38-43
- Rima S, Poujade M, **Maniglia M**, Durand JB. (2018) Rewarding objects appear larger but not brighter. *Journal of Vision* 18 (7), 9-9
- Maniglia M**, Thurman S, Seitz AR, Davey P. (2018). Effect of Varying Levels of Glare on Contrast Sensitivity Measurements of Young Healthy Individuals Under Photopic and Mesopic Vision. *Frontiers in Psychology* 9, 899
- Maniglia M[°]**, Soler V, Cottureau B, Trotter Y. (2018). Spontaneous and training-induced cortical plasticity in MD patients: Hints from lateral masking. *Scientific Reports* 8, 90.
- Maniglia M**, Seitz AR. (2018). Towards a whole brain model of Perceptual Learning. *Current Opinion in Behavioral Sciences* 20, 47-55.
- Maniglia M**, Grassi M, Ward J. (2017). Sounds are perceived as louder when accompanied by visual movement. *Multisensory Research* 30 (2), 159-177
- Maniglia M[°]**, Cottureau BR, Soler V, Trotter Y. (2016) Rehabilitation approaches in macular degeneration patients. *Frontiers in systems neuroscience* 10, 107,
- Battaglini L, Contemori G, **Maniglia M**, Casco C. (2016). Fast moving texture has opposite effects on the perceived speed of visible and occluded object trajectories. *Acta Psychologica* 170, 206-214
- Maniglia M[°]**, Pavan A, Sato G, Contemori G, Montemurro S, Battaglini L, Casco C. (2016). Perceptual learning leads to long lasting visual improvement in patients with macular degeneration. *Restorative Neurology and Neuroscience*, 1-24
- Maniglia M[°]**, Pavan A, Aedo-Jury F, Trotter Y. (2015) The spatial range of peripheral collinear facilitation. *Scientific Reports*, 5, 15530
- Campana G, **Maniglia M**. (2015) Editorial: Improving visual deficits with perceptual learning. *Frontiers in Psychology*, 6, 491
- Maniglia M[°]**, Pavan A, Trotter Y. (2015) The effect of spatial frequency on peripheral collinear facilitation. *Vision Research*, 107, 146-154
- Campana G, **Maniglia M**, Pavan A. (2013). Common (and multiple) neural substrates for static and dynamic motion after-effects: A rTMS investigation. *Cortex*. 49(9):2590-2594
- Maniglia M**, Grassi M, Casco C, Campana G. (2012) The origin of the Audiovisual bounce-inducing effect: a TMS study. *Neuropsychologia* 50(7):1478-82
- Maniglia, M**, Pavan A, Cuturi FL, Campana G, Sato G, Casco C. (2011). Reducing crowding by weakening inhibitory lateral interactions in the periphery with perceptual learning. *Plos One*, 6(10)
- Campana G, Pavan A, **Maniglia M**, Casco C. (2011). The fastest (and simplest), the earliest: The locus of processing of rapid forms of motion aftereffect. *Neuropsychologia*, 49 (10), 2929-34
- Pavan A, Cuturi LF, **Maniglia M**, Casco C, Campana G. (2011) Implied motion form static photographs influences the perceived position of stationary objects. *Vision Research*, 51 (1), 187-194
- Pavan A, Campana G, **Maniglia M**, Casco C. (2010). The role of high-level visual areas in short- and longer-lasting forms of neural plasticity. *Neuropsychologia*, 48(10), 3069-3079.

*equal contribution authors

⁺denotes a student mentored

[°]corresponding author

MANUSCRIPTS ACCEPTED OR UNDER REVIEW

Biles MK, **Maniglia M**, Yadav IS, Stewart PD, DeSilva BD, Visscher KM. Constraining the possible mechanisms underlying performance improvements following peripheral vision training (under review in Journal of Vision).

Biles MK, **Maniglia M**, Yadav IS, Stewart PD, DeSilva BD, Visscher KM. Training with simulated scotoma leads to behavioral improvements through at least two distinct mechanisms (under review in Journal of Vision).

PROFESSIONAL AFFILIATION

Vision Science Society: 2015-current

TRAINING AND WORKSHOPS

2-8 June 2018. Perceptual Learning Workshop, Moorea (French Polynesia).

19-31 August 2012: Visual Neuroscience Summer School in Rauischhulzhausen, Germany.

28-29 June 2010. "Magstim/University of Oxford TMS Summer School", Department of Experimental Psychology, University of Oxford (UK).

INVITED SPEAKER

May 3rd 2021 Talk title: 'Perceptual and oculomotor plasticity in pathological and simulated central vision loss'. Psychology graduate student's 2021 lecture series, Department of Psychology University of Padova, Padova (Italy), invited by Prof. Mario Bonato.

March 3rd 2021 Talk title: 'Perceptual and oculomotor plasticity in pathological and simulated central vision loss'. Psychology graduate student's Spring 2021 lecture series, Department of Psychology Rutgers University, Camden (USA), invited by Prof. Lisa Payne.

June 24th 2013 Talk title: "Perceptual Learning and lateral interactions", University of Regensburg (Germany), invited by Professor Mark Greenlee

TEACHING AND MENTORING

Co-instructor for PSYC_203A_001 - EXPERIMENTAL PSYCHOLOGY, UC Riverside, Department of Psychology (Fall 2021)

Co-instructor for PSYC_256_001 - SEMINAR IN PERCEPTION, UC Riverside, Department of Psychology (Fall 2021)

Co-instructor for SEMINAR IN COGNITIVE NEUROSCIENCE (PSYC_251_001), UC Riverside, Department of Psychology (Fall 2020)

Thesis committee for Saikrishna Sriraman, Science and technology honors program, UAB (2020)

Mentoring and supervising undergraduate students during post doc at UCR (2016-2019).

Supervising three undergrad research projects presented at the Undergraduate research symposium, UCR (2019)

Mentoring and supervising one Erasmus Mundus student at CerCo, Toulouse (France) (January-May 2016)

Mentoring and supervising one graduate student at CerCo Stage M2R (September 2014-June 2015)

Mentoring and supervising several undergraduate students during PhD (2010-2013)

Teacher for course in Perception, University of Padova (Italy), Department of Psychology (Fall 2012)

OTHER

Review Editor for Frontiers in Psychology (Editorial Board of Consciousness Research and Neuropsychology)

Guest editor Frontiers Research Topic: 'Learning to see (better)' (2014) and 'Neural modulation of conscious perception' (2020)

Ad-hoc reviewer for Journal of Vision, Neurorehabilitation & Neural Repair, eLife, Neuroimage, Disability and Rehabilitation, Scientific Reports, Restorative Neurology and Neuroscience

Grant reviewer for Macular Society

GRANTS

NEI 1R21EY033623-01 12/2021-11/2023. 'New methods to quantify and train eye movement strategies in macular degeneration'. PI: Maniglia. Total Award Amount (including Indirect Costs): \$413,729.

2/2016, **Institut des Sciences du Cerveau de Toulouse (ISCT)**, "Nouvelles approches de réhabilitation chez les patients atteints de dégénérescence maculaire". 7,920 euros (33 fMRI sessions)

9/2015-4/2016 **Fondation de l'Avenir** Title "Nouvelles approches de réhabilitation chez les patients atteints de dégénérescence maculaire (DM)" 25,000 euros (AP-RMA-2015-003)

6/2015, **Appel d'offre CerCo 2015** (Toulouse, France), 4.000 euros (tDCS machine, BrainStim)

University of Lincoln college Research Fund 2014/2015, Co-PI on the project "Perceptual learning and electrical brain stimulation: a combined approach to improve human visual functions". 3.000 euros, 9 months.

9/2013-9/2015: **Fouassier Foundation Grant**. Title: "Apprendre du coin de l'œil: nouvelles approches de réhabilitation chez les patients atteints de dégénérescence maculaire" 110,000 euros. Engt : / 20013 00039351 and 2014 00048124)