

CURRICULUM VITAE

GIORGIO VALLORTIGARA

Nato a

Posizione attuale: Professore di Prima Fascia di 'Neuroscienze' (M-PSI/02)

Pro-Rettore alla Ricerca, Università di Trento

Formazione

Post-doc, 1991-1992, Sussex University

Dottorato di ricerca, 1990, Università di Padova

Laurea in Psicologia sperimentale (*Summa cum laude*)

Università di Padova, 1983

Posizioni ricoperte

Delegato alla valutazione della ricerca e alla divulgazione scientifica e culturale,
Università di Trento (Aprile 2018 -)

Pro-Rettore alla Ricerca, Università di Trento
(Marzo 2015 – Marzo 2018)

Direttore Centro Mente/Cervello (CIMEC)
29 ottobre 2012 – marzo 2015)

Direttore Vicario Centro Mente/Cervello CIMEC
(15 febbraio 2008 – 2012)

Professore ordinario
Facoltà di Scienze Cognitive
Università di Trento
(novembre 2007 -)

Adjunct Professor
School of Biological, Biomedical and Molecular Sciences
University of New England, Australia
(2007 -)

Preside della Facoltà di Psicologia
Università di Trieste
(2003 – 2006)

Direttore del Dipartimento di Psicologia
Università di Trieste
(Aprile 2003 – Ottobre 2003)

Professore ordinario (Psicobiologia e psicologia fisiologica) (Marzo 2003 –
Ottobre 2007)
Università di Trieste

Professore straordinario (Psicobiologia e psicologia fisiologica) (Marzo 2000 –
Marzo 2003)
Università di Trieste

Professore associato (Psicobiologia e psicologia fisiologica) (1999-2000)
Università di Trieste

Ricercatore universitario (Psicobiologia e psicologia fisiologica) (1991- 1999)
Università di Udine

Post-doc (1991)
University of Sussex, U.K.

Graduate Fellow (1990)
University of Sussex, U.K.

Studente di dottorato di ricerca (1985-1990)
Università di Padova

Laureato-frequentatore (1983-1985)
Università di Padova

Esperienze di ricerca

Visiting Professor
School of Biological, Biomedical and Molecular Sciences
University of New England, Australia

Research Fellow (1994)
Sussex Centre for Neuroscience, Sussex University, U.K.

Visiting Fellow (1992)
Sussex Centre for Neuroscience, Sussex University, U.K.

Visiting Fellow (1991)
Sussex Centre for Neuroscience, Sussex University, U.K.

Visiting Research Worker (1988)
Ethology and Neurophysiology Group,
School of Biology, Sussex University, U.K.

Attività professionali

- Etologia applicata presso la MultiTecno S.p.A. (1984-85)

- Consulente scientifico per il C.O.N.I. (Comitato Olimpico Nazionale Italiano)
1985

- Revisore per le riviste scientifiche:

Nature
Current Biology
Brain and Behavioral Sciences
Cognition
Journal of Neuroscience
BMC Biology
Cognitive Brain Research
European Journal of Neuroscience
Current Anthropology
Behavioural Brain Research
Laterality
Brain Research
Behavioural Processes
Ethology
Brain and Language
Journal of Comparative Psychology
Animal Behaviour
Pharmacology Biochemistry and Behavior
Journal of Mind and Behavior
Physiology and Behavior
Perception
Brain Research Bulletin
Developmental Psychobiology
Perception and Psychophysics
International Journal of Comparative Psychology
Bird Behavior
Animal Cognition
Journal of Comparative Psychology
Psychological Review
Journal of Experimental Psychology: General
Journal of Experimental Psychology: Animal Behavior Processes
Journal of Experimental Psychology: Learning, Memory and Cognition
Neuropsychologia
Psychological Science
Behaviour
Developmental Science
Psychological Bulletin
Neuroscience Letters
Ibis
Journal of Experimental Biology
Cognition, Brain and Behavior
Biology Letters
Child Development Research
Neuroscience
Proceedings Royal Society of London B
Journal of Cognitive Neuroscience

Cell Biochemistry and Function
Journal of the Optical Society of America
Cerebral Cortex
Hippocampus
PLoS Biology
Annals of the New York Academy of Sciences
e-Life
Nature Ecology & Evolution
PLoS Computational Biology
Philosophical Transactions of the Royal Society of London
Nature Human Behaviour
Nature Ecology & Evolution
Proceedings of the National Academy of Sciences USA

- Consulente e/o revisore per: *Rockefeller Foundation, National Science Foundation USA, British Biological and Biotechnology Research Council, Wellcome Trust, Leakey Foundation, Italian MIUR, European Community ERC Starting Grant Program and Consolidator Grant Program; Panel ERC Advanced Grant (2015-2018).*
- Membro dello *Scientific Advisory Board* del MUSE (Museo Tridentino di Scienze Naturali)
- Membro del Consiglio Direttivo del Museo Civico di Rovereto (2011-2012)
- Membro del Consiglio di Amministrazione della Fondazione Museo Civico di Rovereto (2013 -)
- Membro dell' Editorial Board delle riviste scientifiche "*Animal Cognition*", "*Journal of Comparative Psychology*", "*International Journal of Comparative Psychology*", "*Frontiers in Behavioural Neuroscience*", "*Frontiers in Emotion Science*", "*Frontiers in Comparative Psychology*", *PsyCh Journal*, "*PeerJ*" e "*Giornale Italiano di Psicologia*". Associate della rivista "*Behavioral Brain Sciences*".
- Consulting Editor del "*Journal of Comparative Psychology*"
- Membro del Comitato Scientifico della rivista "*Le Scienze*" (edizione italiana di *Scientific American*)
- Membro del Comitato Direttivo della rivista "*Sistemi Intelligenti*"
- Membro del Comitato Direttivo della rivista "*Reti, Saperi e Linguaggi - Italian Journal of Cognitive Sciences*"
- Associate Editor della rivista scientifica internazionale "*Frontiers in Comparative Psychology*"
- *Editor* della rivista scientifica internazionale "*Laterality: Asymmetries of Body, Brain and Cognition*"

- Member of the Advisory Board of the Centre for Mind & Cognition, Ruhr University, Germany.

Interessi di ricerca

Cognizione animale, lateralizzazione e memoria nel cervello dei vertebrati, evoluzione delle asimmetrie cerebrali, cognizione spaziale, neurobiologia della memoria spaziale, percezione visiva.

Attività didattica

Ha insegnato cognizione animale, psicologia comparata ed evolutivista e neuroscienze comportamentali ed ha svolto attività di supervisione e di revisione di tesi di dottorato in queste discipline sia in università italiane che straniere.

Seminari e conferenze (selezione relativa agli ultimi due anni)

- Centre for Neuroscience, Sussex University;
- Dipartimento di Psicologia Generale, Università di Padova;
- Dipartimento di Biologia, Università di Padova;
- Laboratory of Experimental Psychology, Sussex University;
- Brain Research Group, Open University, Milton Keynes;
- FBK- Trento
- Centre for Developmental Biology, King College, London University
- Dept. of Physiology, Univ. of Verona
- Dept. Psychol., Université du Quebec, Montreal
- Dip. Sci. Zootechniche, Univ. Sassari
- Dip. Psicol. Univ. di Firenze
- Psychobiologie, Ruhr-Universität, Bochum, Germany
- Dept. of Biology and Preclinical Medicine, Univ. St. Andrews, U.K.
- Konrad Lorenz Institute for Evolution and Cognition, Altenberg, Austria
- SISSA, Cognitive Neuroscience Sector, Trieste, Italy
- Dept. of Biology, Univ. of Groningen, The Netherlands
- Dept. Psychologie, Univ. de Paris V
- CNRS Neurosciences Fonctionnelles, Marseille, France
- Accademia dei Lincei, Roma
- School of Biological, Biomedical and Molecular Sciences, Univ. New England, Australia
- School of Biological Sciences, National Australian University
- Australian Academy of Sciences, Canberra, Australia
- BioZentrum, Vienna University, Austria
- Konrad Lorenz Institute of the Academy of Sciences, Wien
- Istituto Italiano di Tecnologia, Genova
- Université Paris Descartes, Paris
- College de France, Paris

- Central European University, Budapest
- Ecole Polytechnic Federale de Lausanne, Human Brain Project

Premi e onorificenze

- 1996 Award of the *Applied Vision Association* for the best research presented at the *Annual Meeting AVA: From Sensation to Visual Perception* (1-3 April 1996, University of Reading, U.K.).
- 2000 Research Grant Award of the Association for the Study of Animal Behaviour.
- 2001 Research Grant Award of the Universities Federation for Animal Welfare.
- 2004 Research Grant Award of the Waltham Foundation (U.K.)
- 2005 Premio "Giovanni Maria Pace" per la divulgazione scientifica.
- 2007 "Conferenza Lincea Croce", e Medaglia dell'Accademia Italiana dei Lincei.
- 2007 Premio "Enrico Fermi - Città di Cecina" per la divulgazione scientifica.
- Recipient of the "Faculty of Science Distinguished Visitor Award 2007", University of New England, Australia.
- 2007 Appointed "Adjunct Professor", School of Biomedical and Molecular Sciences, University of New England, Australia.
- 2010 - Research Grant Award Waltham Foundation
- 2011 - Elected Fellow of the Royal Society of Biology, FRSB
- 2011 - Elected Member of the Attention & Performance Advisory Council
- 2012 - Awarded an *ERC Advanced Research Grant*
- 2012 - Eletto Socio dell'Accademia degli Agiati
- 2013 - Eletto Socio ordinario della Società Museo Civico di Rovereto
- 2013 - Selezione Giuria Scientifica del Premio letterario Galileo per la divulgazione scientifica - anno 2013
- 2013 - Premio Ferrari Soave per la Biologia animale dell'Accademia delle Scienze di Torino
- 2016 – Member of the American Association for the Advancement of Science (AAAS)
- 2016 – Premio Geoffroy Saint Hilaire per l'Etologia, della Società Francese per l'Etologia e lo Studio del Comportamento Animale (SFECA).
- 2016 – *Doctor Rerum Naturalium Honoris Causa*, for outstanding achievements in the field of psychobiology, University of Bochum, Germany
- 2017 – Nominato Socio corrispondente della Classe di Scienze Fisiche, Matematiche e Naturali dell'Istituto Veneto di Scienze, Lettere ed Arti.

Affiliazione a società scientifiche

- American Association for the Advancement of Science (AAAS)
- Association for the Study of Animal Behaviour (ASAB)
- Association for Psychological Science (APS)
- Psychonomic Society

- New York Academy of Sciences
- European Neuroscience Association
- European Brain and Behaviour Society
- International Society for Comparative Psychology
- International Brain Research Organization, IBRO

Principali conseguimenti nell'attività di ricerca

Ha ottenuto le prime evidenze relative ad asimmetrie cerebrali nelle funzioni superiori in specie non umane, in particolare relativamente ai processi di riconoscimento individuale negli uccelli; inoltre ha riportato per primo fenomeni di lateralità nei cosiddetti vertebrati inferiori (pesci e anfibi)); su questi argomenti ha pubblicato diversi lavori scientifici su riviste quali *Nature*, *Current Biology* e *Proceedings Royal Society*. Ha sviluppato una nuova ipotesi sull'evoluzione delle asimmetrie del cervello e del comportamento, basata su concetti di biologia evoluzionista e di teoria matematica dei giochi; ipotesi che è stata ben ricevuta nella comunità scientifica internazionale (con un "target article" su *Behavioral Brain Sciences* e resoconti giornalistici su riviste quali *Scientific American* e *Nature On-Line*). Si è occupato anche di cognizione animale, in particolare del riconoscimento di oggetti parzialmente occlusi, della percezione del movimento biologico e della codifica della geometria nei processi di orientamento spaziale. Su tutti questi argomenti il suo lavoro è ben noto a livello internazionale e molto citato. Complessivamente ha pubblicato più di 200 articoli su riviste internazionali peer-review, che hanno avuto a tutt'oggi un totale di più di 18000 citazioni con un *h-index* di 60 (source Scopus; mentre su Google Scholar l'*h-index* è pari a 76). Il suo lavoro è stato inoltre riportato in varie occasioni su *Faculty of 1000 Biology* e in numerosi volumi, sia specialistici sia di divulgazione scientifica (per es. in J. Vauclair (1996). *Animal Cognition*. Harvard: Harvard University Press; Pearce, J.M. (1997). *Animal Learning and Cognition*. Psychology Press, Hove, U.K.; S. Rose (1992). *The Making of Memory. From Molecules to Mind*, London: Bantam Press; L.J. Rogers (1997). *Minds of Their Own*, St.Leonards: Allen & Unwin; P.J. Kellman & M.E. Arterberry (1998). *The Cradle of Knowledge*, MIT Press; J. Hochberg (1998). *Perception and Cognition at Century's End*, Academic Press, San Diego; P. Bloom (2004). *Descartes' Baby: How the Science of Child Development Explains What Makes Us Human*. Basic Books, US.); G. Marcus (2004). *The Birth of the Mind*. Basic Books, New York); Shermer M. (2007). *The Mind of the Market. Compassionate Apes, Competitive Humans and Other Tales from Evolutionary Economics*. Times Books- Henry Holt and Co., N.Y.

Media

Le ricerche condotte sono state descritte in numerosi articoli pubblicati su vari testate internazionali e nazionali, tra i quali *New York Times*, *Daily Telegraph*, *Science Now*, *Nature News*, *Conocer Ciencia*, *Biology News*, *Scientific American*, *ABC News*, *BBC News*, *National Geographic*, *The Guardian*, *Focus*, *Wired*, *Corriere della Sera*, *La Repubblica*, *La Stampa*, *Il Sole 24 Ore*, *Panorama*, *Le Scienze*, *L'Espresso*, *Mente & Cervello*.

GIORGIO VALLORTIGARA – ELENCO DELLE PUBBLICAZIONI

Peer-reviewed full-length papers

2019

- (317) Lorenzi, E., Mayer, U., Rosa-Salva, O., Morandi-Raikova, A., Vallortigara, G. (2019). Spontaneous and light-induced lateralization of immediate early genes expression in domestic chicks. *Behavioural Brain Research*, in press.
- (316) Lorenzi, E., Pross, A., Rosa Salva, Versace, E., Sgadò, P., Vallortigara, G. (2019). Embryonic exposure to valproic acid affects social predispositions for dynamic cues of animate motion in newly-hatched chicks. *Frontiers in Physiology*, in press.
- (315) Rogers, L.J., Vallortigara, G. (2019). Complementary specialisations of the left and right sides of the honeybee brain. *Frontiers in Psychology*, in press.
- (314) Buiatti, M., Di Giorgio, E., Piazza, M., Polloni, C., Menna, G., Taddei, F., Baldo, E., Vallortigara, G. (2019). A cortical route for face-like pattern processing in human newborns. *Proceedings of the National Academy of Sciences USA*, 116: 4625-4630.
- (313) Balestrieri, A., Gazzola, A., Pellitteri-Rosa, D., Vallortigara, G. (2019). Discrimination of group numerosness under predation risk in anuran tadpoles, *Animal Cognition*, in press.
- (312) Di Giorgio, E., Lunghi, M., Rugani R., Regolin L., Dalla Barba, B., Vallortigara G., Simion., F. (2019). A mental number line in human newborns. *Developmental Science*, in press.
- (311) Lorenzi, E., Pross, A., Rosa-Salva, O., Versace, E., Sgadò, P., Vallortigara, G. (2019). Embryonic exposure to valproic acid affects social predispositions for dynamic cues of animate motion in newly-hatched chicks. *Frontiers in Physiology*, in press.
- (310) Mayer, U., Rosa-Salva, O., Loveland, J.L., Vallortigara, G. (2019). Selective response of the nucleus taeniae of the amygdala to a naturalistic social stimulus in visually naive domestic chicks (*Gallus gallus*). *subm*
- (309) Gazzola, A., Vallortigara, G., Pellitteri-Rosa, D. (2018). Continuous and discrete quantity discrimination in tortoises, *Biology Letters*, in press.

2018

- (308) Frasnelli, E., Vallortigara, G. (2018). Individual-level and population-level lateralization: Two sides of the same coin. *Symmetry*, 10, 739.
- (307) Rosa-Salva, O., Fiser, J., Versace, E., Dolci, C., Chehaimi, S., Santolin, C., Vallortigara, G. (2018). Spontaneous learning of visual structures in domestic chicks. *Animals*, 8, 135; doi:10.3390/ani8080135.
- (306) Schnell, A.K., Bellanger, C., Vallortigara, G., Jozet-Alves, C. (2018). Visual asymmetries in cuttlefish during brightness matching for camouflage. *Current Biology*, 28: 925-926.
- (305) Versace, E., Martinho-Truswel, A., Kacelnik, A., Vallortigara, G. (2018). Priors in animal and artificial intelligence: Where does learning begin? *Trends in Cognitive Sciences*, 22: 963-965.
- (304) De Tommaso, M., Kaplan, G., Chiandetti, C., Vallortigara, G. (2018). Naïve 3-day-old domestic chicks (*Gallus gallus*) are attracted to discrete acoustic patterns characterizing natural vocalizations. *Journal of Comparative Psychology*,
- (303) Stancher, G., Sovrano, V.A., Vallortigara, G. (2018). Motor asymmetries in fishes, amphibians and reptiles, in 'Cerebral Lateralization and Cognition: Evolutionary and Developmental Investigations of Behavioral Biases'. *Progress in Brain Research*, Vol. 238, pp. 35-56.
- (302) Chiandetti, C., Vallortigara, G. (2018). Chicken – Cognition in the Poultry Yard. In *Field and Laboratory Methods in Animal Cognition. A Comparative Guide*. (N. Bueno-Guerra, F. Amici, Eds.), pp. 97-106, Cambridge University Press, Cambridge, U.K. DOI: 10.1017/9781108333191
- (301) Sgadò, P., Rosa-Salva, O., Versace, E., Vallortigara, G. (2018). Embryonic exposure to valproic acid disrupts social predispositions of newly-hatched chicks. *Scientific Reports*, 8:5919 | DOI:10.1038/s41598-018-24202-8
- (300) Bertamini, M., Guest, M., Vallortigara, G. Rugani, R., Regolin, L. (2018). The effect of clustering on perceived quantity in humans (*Homo sapiens*) and in chicks (*Gallus gallus*). *Journal of Comparative Psychology*, 132: 280-293.
- (299) Vallortigara, G., Versace, E. (2018). Filial Imprinting. In: Vonk J., Shackelford T. (eds) *Encyclopedia of Animal Cognition and Behavior*. Springer, Cham. DOI: https://doi.org/10.1007/978-3-319-47829-6_1989-1
- (298) Vallortigara, G. (2018). Comparative cognition of number and space: The case of geometry and of the mental number line. *Philosophical Transactions of the Royal Society B*, DOI: 10.1098/rstb.2015.0615.
- (297) Butterworth, B., Gallistel, C.R., Vallortigara, G. (2018). Introduction to the theme issue on the origins of numerical abilities. *Philosophical Transactions of the Royal Society, B* 373: 201605020160507
<http://dx.doi.org/10.1098/rstb.2016.0507>

(296) Rosa-Salva, O., Hernik, M., Broseghini, A., Vallortigara, G. (2018). Visually-naïve chicks prefer agents that move as if constrained by a bilateral body-plan. *Cognition*, 173: 106-114.

2017

(295) Vallortigara G. (2017). Sentience does not require "higher" cognition. Commentary on Marino on *Thinking Chickens*. *Animal Sentience*, 2017.030 (6).

(294) Mayer, U., Bhushan, R., Vallortigara, G., Lee, S.A. (2017). Representation of environmental shape in the hippocampus of domestic chicks (*Gallus gallus*). *Brain Structure and Function*, in press.

(293) Andrione, M., Timberlake, B.F., Vallortigara, G., Antolini, R., Haase, A. (2017). Morpho-functional experience-dependent plasticity in the honeybee brain. *Learning & Memory*, in press.

(292) Frasnelli, E., Vallortigara, G. (2017). Distribution of antennal olfactory and non-olfactory sensilla in different species of bees. *Symmetry*, 9(8), 135; doi:10.3390/sym9080135

(291) Rugani, R., Vallortigara, G., Priftis, K., Regolin, L. (2017). Experimental evidence from new-born chicks enriches our knowledge on human spatial-numerical associations. *Cognitive Science*, 41: 2275–2279. DOI: 10.1111/cogs.12523

(290) Vallortigara, G., Chiandetti, C. (2017). Object and space in an avian brain. In *"Avian Cognition"* (C. ten Cate, S. D. Healy, eds.), pp. 141-162, Cambridge University Press. N.Y.

(289) Vallortigara, G. (2017). An animal's sense of number. In *"The nature and Development of Mathematics. Cross Disciplinary Perspective on Cognition, Learning and Culture"* (Adams, J.W., Barmby P., Mesoudi, A., eds.), pp. 43-65, Routledge, New York.

(288) Chiandetti, C., Lemaire, B.S., Versace, E., Vallortigara, G. (2017). Early- and late-light embryonic stimulation modulates similarly chicks' ability to filter out distractors. *Symmetry*, 9, 84.

(287) Lorenzi, E., Mayer, U., Rosa-Salva, O., Vallortigara, G. (2017). Dynamic features of animate motion activate septal and preoptic areas in visually naïve chicks (*Gallus gallus*). *Neuroscience*, 354: 54-68.

(286) Lee, S.A., Tucci, V., Vallortigara, G. (2017). Spatial impairment and memory in genetic disorders: Insights from mouse models. *Brain Sciences*, 7, 17; doi:10.3390/brainsci7020017

(285) Versace, E., Spierings, M.J., Caffini, M., ten Cate, C., Vallortigara, G. (2017). Spontaneous generalization of abstract multimodal patterns in young domestic chicks. *Animal Cognition*, 20: 521-529. doi: 10.1007/s10071-017-1079-5.

(284) Versace, E., Fracasso, I., Baldan, G., Dalle Zotte, A., Vallortigara, G. (2017). Newborn chicks show inherited variability in early social predispositions for hen-like stimuli. *Scientific Reports*, 7, 40296; doi: 10.1038/srep40296.

(283) Mayer, U., Rosa-Salva, O., Morbioli, F., Vallortigara, G. (2017). The motion of a living conspecific activates septal and preoptic areas in naive domestic chicks (*Gallus gallus*). *European Journal of Neuroscience*, 45: 423–432. doi:10.1111/ejn.13484

(282) Vallortigara, G., Versace, E. (2017). Laterality at the Neural, Cognitive, and Behavioral Levels. In "APA Handbook of Comparative Psychology: Vol. 1. Basic Concepts, Methods, Neural Substrate, and Behavior", J. Call (Editor-in-Chief), pp. 557-577, American Psychological Association, Washington DC.

(281) Vallortigara G, Rosa Salva O (2017). Toolkits for cognition: From core-knowledge to genes. In Tucci, V. (Ed.) *Neurophenome: Cutting-edge Approaches and Technologies in Neurobehavioral Genetics*, 229-245, New York, Wiley-Blackwell. ISBN: 978-1-118-54071-8

280) Di Giorgio, E., Loveland, J.L., Mayer, U., Rosa-Salva, O., Versace, E., Vallortigara, G. (2017). Filial responses as predisposed and learned preferences: Early attachment in chicks and babies. *Behavioural Brain Research*, 325, 90-104.

(279) Mayer U, Rosa-Salva O, Vallortigara G. (2017). First exposure to an alive conspecific activates septal and amygdaloid nuclei in visually-naïve domestic chicks (*Gallus gallus*). *Behav Brain Res*. 317: 71-81. doi: 10.1016/j.bbr.2016.09.031.

2016

(278) Versace E, Schill J, Nencini AM, Vallortigara G (2016) Naïve Chicks Prefer Hollow Objects. *PLoS ONE* 11(11): e0166425. doi:10.1371/journal.pone.0166425

(277) Santolin, C., Rosa-Salva, O., Vallortigara, G., Regolin, L. (2016). Unsupervised statistical learning in newly-hatched chicks. *Current Biology*, 26: 1218-1220.

(276) Androne, M., Vallortigara, G., Antolini, R., Haase, A. (2016). Neonicotinoid-induced impairment of odour coding in the honeybee. *Scientific Reports*, 6, 38110; doi: 10.1038/srep38110.

- (275)** Rosa-Salva, O., Grassi, M., Lorenzi, E., Regolin, L., Vallortigara, G. (2016). Spontaneous preference for visual cues of animacy in naïve domestic chicks: the case of speed changes. *Cognition*, Dec;157:49-60. doi: 10.1016/j.cognition.2016.08.014. Epub 2016 Sep 2.
- (274)** Santolin, C., Rosa-Salva, O., Regolin, L., Vallortigara, G. (2016). Generalization of visual regularities in newly-hatched chicks (*Gallus gallus*). *Animal Cognition*, Sep;19(5):1007-17. doi: 10.1007/s10071-016-1005-2. Epub 2016 Jun 10.
- (273)** Rugani, R., McCrink, K., de Hevia, M-D., Vallortigara, G., Regolin, L. (2016). Ratio abstraction over discrete magnitudes by newly hatched domestic chicks (*Gallus gallus*). *Scientific Reports*, 6, 30114; doi: 10.1038/srep30114
- (272)** Mayer, U., Rosa-Salva, O., Lorenzi, E., Vallortigara, G. (2016). Social predisposition dependent neuronal activity in the intermediate medial mesopallium of domestic chicks (*Gallus gallus domesticus*). *Behavioural Brain Research*, 310: 93-102.
- (271)** Spiezio, C., Regaiolli, B., Vallortigara, G. (2016). Motor and postural asymmetries in marsupials: Forelimb preferences in the red-necked wallaby (*Macropus rufogriseus*). *Behavioural Processes*, 128: 119–125.
- (270)** Di Giorgio, E., Frasnelli, E., Rosa Salva, O., Scattoni, M.L., Puopolo, M., Tosoni, D., Simion F., Vallortigara G. (2016). Difference in Visual Social Predispositions Between Newborns at Low- and High-risk for Autism. *Scientific Reports*, 6, 26395; doi: 10.1038/srep26395.
- (269)** Rugani, R., Vallortigara, G., Priftis, K., Regolin, L. (2016). Piece of Evidence. Commentary: Ancestral Mental Number Lines: What Is the Evidence? *Frontiers in Psychology*, 22 April 2016 <http://dx.doi.org/10.3389/fpsyg.2016.00553>
- (268)** Rugani, R., Vallortigara, G., Regolin, L. (2016). Mapping number to space in the two hemispheres of the avian brain. *Neurobiology of Learning and Memory*, 133: 13-18.
- (267)** Giroto, V., Fontanari, L. Gonzalez, M., Vallortigara, G., Blaye, A. (2016). Young children do not succeed in choice tasks that imply evaluating chances. *Cognition*, 152: 32-39.
- (266)** Paoli, M., Anesi, A., Antolini, R., Guella, G., Vallortigara, G., Haase, A. (2016). Differential odour coding of isotopomers in the honeybee brain. *Scientific Reports*, 21893; doi: 10.1038/srep21893.
- (265)** Di Giorgio, E., Lunghi, M., Simion, F., Vallortigara, G. (2016). Visual cues of motion that trigger animacy perception at birth: the case of self-propulsion. *Developmental Science*, online: 21 Feb. 2016 | DOI: 10.1111/desc.12394

(264) Mayer, U., Pecchia, T., Bingman, V., Vallortigara, G. (2016). Hippocampus and medial striatum dissociation during goal navigation by geometry or features in the domestic chick: An Immediate early gene study. *Hippocampus*, 26: 27–40.

2015

(263) Versace, E., Vallortigara, G. (2015). Origins of knowledge: Insights from precocial species. *Frontiers in Behavioral Neuroscience*, 9: 338. doi: 10.3389/fnbeh.2015.00338.

(262) Rogers, L.J.; Vallortigara, G. (2015). When and Why Did Brains Break Symmetry? *Symmetry*, 7: 2181-2194.

(261) Vallortigara, G. (2015). Handedness: What Kangaroos tell us about our lopsided brains. *Current Biology*, 25: R654–R676 (Dispatch).

(260) Lee, S.A., Ferrari, A., Vallortigara, G., Sovrano, V.A. (2015). Boundary primacy in spatial mapping: Evidence from zebrafish (*Danio rerio*). *Behavioural Processes*, 119: 116-122.

(259) Potrich, D., Sovrano, V.A., Stancher, G., Vallortigara, G. (2015). Quantity discrimination by zebrafish (*Danio rerio*). *Journal of Comparative Psychology*, 29: 388-393.

(258) Regaiolli, B., Spiezio, C., Vallortigara, G. (2015). Understanding primate lateralization: Handedness, target laterality and task complexity. *Laterality*, in press.

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Consapevole delle conseguenze civili e penali previste per coloro che rendono attestazioni false, ai sensi del DPR 445/2000 dichiaro che le notizie fornite nel presente documento rispondono a verità.

Autorizzo il trattamento dei miei dati personali, ai sensi del D.lgs. 196 del 30 giugno 2003.

