

Curriculum Vitae

(Uptdated on 05.07.2023)

Personal information

First name(s) / Surname(s) **Andrea Guzzetta**

Titles MD, PhD, Child Neurologist and Psychiatrist

Biosketch

Andrea Guzzetta is Full Professor at the University of Pisa, Italy. He is Head of the Unit of Child Neurorehabilitation and Director of the Department of Developmental Neuroscience at the Stella Maris Scientific Institute in Pisa. He is also head of the Stella Maris Infant Lab for Early-intervention (SMILE), since its birth in 2022. He is Senior Tutor of the General Movements Trust since 2009.

His main research has focused on cerebral palsy, starting from the effects of early brain damage on the development of cortical functions and the underlying neuroplastic mechanisms, with the final aim to improve early intervention paradigms and outcomes. In his still relatively short research career he has provided some significant contribution to a number of research questions in the area, thanks to his compound training experiences in some of the most productive centres in the field, including the Hammersmith Hospital and the Visual Development Unit in London (Great Britain), the Department of Child Neurology in Tuebingen (Germany) and the Queensland Cerebral Palsy and Rehabilitation Research Centre (QCPRRC), The University of Queensland, in Australia. Prof Guzzetta received the prestigious Heinz PrechtI Award for Developmental Neurology in 2012.

Work experience

Current

- Dates 02/05/2022 - Today
Position held **Full Professor**
@ University of Pisa – Department of Clinical and Experimental Medicine
- Dates 01/09/2022 – Today
Position held **Director of the Department of Developmental Neuroscience**
@ Stella Maris Scientific Institute, Pisa
- Dates 01/11/2021 – Today
Position held **Clinical Director of the Unit of Child Neuropsychiatry and Neurorehabilitation**
@ Stella Maris Scientific Institute, Pisa
- Dates 01/01/2011 - Today
Position held **Director of the Stella Maris Infant Lab for Early-intervention (SMILE)**
@ Stella Maris Scientific Institute, Pisa
- Dates 01/03/2009 - Today
Position held **Senior Tutor of the General Movements Assessment**
@ General Movements Trust

Past

- Dates 18/12/2016 – 01/05/2022
Position held Associate Professor of Child Neurology and Psychiatry
@ University of Pisa – Department of Clinical and Experimental Medicine
- Dates 01/01/2019 – 01/11/2021
Position held Director of the UOS Unità per le Disabilità Gravi dell'Età Evolutiva
@ Fondazione Stella Maris, Pisa, Italy
- Dates 18/12/2013 – 17/12/2016
Position held Assistant Professor of Child Neurology and Psychiatry
@ University of Pisa – Department of Clinical and Experimental Medicine
- Dates 01/07/2009 - 10/12/2010
Position held Senior Research Fellow
@ University of Queensland, Brisbane, Australia
- Dates 01/04/2007 - 30/06/2009
Position held Consultant neurologist at the NICU, Pisa University Hospital
Researcher at the MRI Lab
Researcher at the Neurology Section
@ Fondazione Stella Maris, Pisa, Italy

Education and training

- Dates 01/01/2001 - 31/12/2004
Title of qualification awarded **PhD in Basic and Developmental Neuroscience**
Principal subjects Development of the human nervous system after early brain damage: maturation and integration of motor and visuo-perceptual functions
Organisation University of Pisa
Level of international classification ISCED 6
- Dates 01/06/2004 - 28/02/2005
Type Research stage
Principal subjects Pediatric functional MRI
Organisation Dept. of Child Neurology, University Hospital of Tuebingen, Germany
Advisors: Prof. Ingeborg Krageloh-Mann; Prof. Martin Staudt
- Dates 01/01/1997 - 24/10/2001
Title of qualification awarded First Class Honours specialization in Child Neurology and Psychiatry
Principal subjects General Movements as a prognostic tool for the early assessment of congenital arterial stroke
Organisation University of Pisa
Level of international classification ISCED 6
- Dates 01/10/1999 - 30/05/2000
Type Research stage
Principal subjects Neonatal Neurology
Organisation Paediatrics Hammersmith Hospital Imperial College, London, UK
Advisors: Prof. Lilly Dubowitz; Prof. Eugenio Mercuri; Prof. Frances Cowan; Prof. Mary Rutherford

Dates 01/10/1999 - 28/02/2000
Type Research stage
Principal subjects Pediatric Neuro-ophthalmology
Organisation Visual Development Unit, London, Department of Psychology, University College, London, UK
Advisors: Prof. Janette Atkinson; Prof. Oliver Braddick

Dates 10/10/1989 - 10/04/1996
Title of qualification awarded First Class Honours degree in Medicine and Surgery
Thesis title Congenital hypothyroidism: correlation between hormonal indexes at birth and neurodevelopmental outcome
Organisation University of Rome "La Sapienza"
Level of international classification ISCED 5

International Awards

2012 Heinz Precht Award for Developmental Neurology

Main Funded Grants

Source **Fondation Paralyse Cerebral**
Grant Title **ENSEMBLE - European Newborn Study: Early Markers for a Better Life**
Starting year (duration in months) 2022 (60)
Amount funded (euro) 1.4M
Role Principal Investigator (N.B. The project has 3 PIs)

Source **EU, HORIZON 2020**
Grant Title **BORNTOGETTHERE-Implementazione della diagnosi e dell'intervento precoce nel neonato a rischio neurologico**
Starting year (duration in months) 2019 (48)
Amount funded (euro) 3.7M
Role Principal Investigator

Source **Fondation Paralyse Cerebral**
Grant Title **Functional, neuroplastic and biomechanical changes induced by early Hand and Arm Bimanual Intensive Therapy Including Lower Extremities (HABIT-ILE) in pre-school children with uni-and-bilateral cerebral palsy: a European project**
Starting year (duration in months) 2018 (48)
Amount funded (euro) 1.0M
Role Co-Investigator, Head of WP

Source **Cerebral Palsy Alliance (AUS)**
Grant Title **VISIBLE: Vision Intervention for Seeing Impaired Babies through Learning and Enrichment.**
Starting year (duration in months) 2018 (24)

Amount funded (euro) 0.2M
 Role Principal Investigator

Source **FAS Regione Toscana**
 Grant Title **IMAGACTMED – Universal Accessibiity Systems to the Health System: instruction to patients through 3D representations of the action.**

Starting year (duration in months) 2017 (24)

Amount funded (euro) 1.0M
 Role Co-Investigator, Head of WP

Source **Horizon2020: Marie Sklodowska-Curie Actions - Innovative Training Networks (MSCA-ITN)**
 Grant Title **Brainview - Integrated view on disruptions of early brain development**

Starting year (duration in months) 2014 (36)

Amount funded (euro) 3.8M
 Role Co-Tutor

Source **FONDAZIONE MARIANI (Italy)**
 Grant Title **R-15-96 - INEED (Italian Network for Early detection and Early intervention in Developmental disabilities): Alliance for best practice in early detection of cerebral palsy.**

Starting year (duration in months) 2014 (24)

Amount funded (euro) 38K
 Role Principal Investigator

Source **Fondation Jerome Lejeune**
 Grant Title Mapping cerebral circuits in Down syndrome

Starting year (duration in months) 2011 (30)

Amount funded (euro) 21k
 Role Co-investigator, Head of WP

Source **R-11-86_FONDAZIONE MARIANI (Italy)**
 Grant Title The effect of infant action observation training on the early development of hand reaching and grasping in healthy infants and in infants with asymmetrical brain damage.

Starting year (duration in months) 2011 (40)

Amount funded (euro) 150k
 Role Principal Investigator

Source **GR-2008-1143201 Ministero della Salute (Italy)**
 Grant Title Non-invasive tools for early detection of Autism Spectrum Disorders

Starting year (duration in months) 2011 (36)

Amount funded (euro) 1.06M
 Role Co-investigator, Head of WP

Source **DP110104292 Australia Research Council (Australia)**
 Grant Title Effect of Infant Hand Observation Training on the Early Development of Hand Reaching and Grasping in Healthy Infants and those with Early Brain Damage

Starting year (duration in months) 2011 (24)
Amount funded (euro) 280K
Role Co-investigator

NOTE He has participated to other 17 projects as **collaborator** for a total of about 3.35M

Track record in summary

Source **Google Scholar 05.07.2023**
Total publications 268
H index **55**
i10-index 134
Total citations 9307

10 Selected Scientific Publications

Novak I et al. **Early, accurate diagnosis and early intervention in cerebral palsy: advances in diagnosis and treatment.**

JAMA pediatrics 171 (9), 897-907

Einspieler C et al. **Cerebral Palsy: Early Markers of Clinical Phenotype and Functional Outcome.**

J Clin Med. 2019 Oct 4;8(10):1616. doi: 10.3390/jcm8101616.

Baranello G et al. **Visual Function Classification System for children with cerebral palsy: development and validation.**

Dev Med Child Neurol. 2020 Jan;62(1):104-110.

Pannek K et al. **Assessment of the structural brain network reveals altered connectivity in children with unilateral cerebral palsy due to periventricular white matter lesions.**

Neuroimage Clin. 2014 Jun 4;5:84-92.

Tinelli F et al. **Greater sparing of visual search abilities in children after congenital rather than acquired focal brain damage.**

Neurorehabil Neural Repair. 2011;25(8):721-8.

Guzzetta A et al. **Plasticity of the visual system after early brain damage.**

Dev Med Child Neurol. 2010;52(10):891-900

Guzzetta A et al. **Hand movements at 3 months predict later hemiplegia in term infants with neonatal cerebral infarction.**

Dev Med Child Neurol. 2010 Aug;52(8):767-72.

Guzzetta A et al. **Massage accelerates brain development and the maturation of visual function.**

J Neurosci. 2009 May 6;29(18):6042-51.

Morrone MC et al. **Inversion of perceived direction of motion caused by spatial undersampling in two children with periventricular leukomalacia.**

J Cogn Neurosci. 2008;20(6):1094-106.

Eyre JA et al. **Is hemiplegic cerebral palsy equivalent to amblyopia of the corticospinal system?**

Ann Neurol 2007;62(5):493-503.

International Conferences (>2010) (Invited Lectures only)

2022 Sykes Symposium - Early Detection and Treatment for Infant and Children With or At-High-Risk of CP
Los Angeles, California (USA) – 22-23 April 2022
 Lecture “Effects of early brain damage on the development of different functions and the underlying neuroplastic mechanisms, with the final aim to improve early intervention paradigms and outcomes”.

1st Joint Conference Ukrainian Academy of Childhood Disability and European Academy of Childhood Disability
Kiev, Ukraine – 16-18 September 2021
 Lecture “What is the best model of early intervention for infants at risk of developmental delay?”.

62nd ESPR Annual Meeting – 11th International Congress UENPS – 5th International Congress EFCNI
Athens, Greece (online) – 14-18 September 2021
 Lecture “Early intervention”.

Early detection and intervention in neurodevelopmental disorders. International Virtual Symposium.
Copenhagen, Denmark (online) – 7-9 June 2021
 Lecture “Magnetic resonance imaging and prediction of function in children with cerebral palsy”.

International AusCP-CTN Hot Topics
Brisbane, Australia (online) – 3-5 March 2021
 Lecture “Update on the VISIBLE study for Seeing-Impaired Infants”.

23rd Biennial Conference of the Israeli Association for Child Development and Rehabilitation
Jerusalem, Israel (online) – 2-3 March 2021
 Lecture “The marvelous 12 months: how the brain shapes itself for a life of relationships”.

32nd European Academy Of Childhood Disability Annual Meeting 2020
Poznan, Poland (online) – 25-28 November 2020
 Lecture “The marvelous 12 months: how the brain shapes itself for a life of relationships”.

Miedzynarodowa konferencja naukowa - Wczesne wspomaganie rozwoju dziecka
Lodz, Poland – 6-7 December 2019
 Lecture “How understanding adaptive early neuroplasticity can lead to better early intervention”.

I Congreso Internacional De Fisioterapia De Castilla – La Mancha
Toledo, Spain – 25-27 October 2019
 Lecture “Intervencion muy temprana en lactantes con dano cerebral: de la neurociencia a la evidencia clinica”.

Developmental changes in paediatric neurodisability: from concepts to diagnostics and therapy
Groeningen, The Netherlands – 20-22 June 2019
 Lecture “Plasticité cérébrale et pathologies neurologiques néonatales/Cerebral plasticity and neonatal neurologic diseases”.

47th Conference of SENP – Société Européenne de Neuropédiatrie
Paris, France – 22-23 March 2019
 Lecture “Cerebral visual impairment - consequences for navigation through daily life.”.

Kids Rehab Conference. Australasian CP Clinical Trials Network (CRE Topics).
Brisbane, Australia – 06-10 March 2019
 Lecture “Update of early detection of cerebral palsy and differential diagnosis with the general movement assessment.”

From Risk to Chance: Advances in Neonatal Neurodevelopment
Tel Aviv, Israel – 18-19 December 2018
 Lecture “Early neuroplasticity and Implications for Neurorehabilitation”
 Lecture “Activity and Interactivity: two sides of the same coin in very early intervention”

5th annual meeting of Lithuanian Academy of Childhood Disability
Kaunas, Lithuania – 30 November 2018
 Lecture “Cerebral visual impairment in children”

Hot Topics in Cerebral Palsy Research Forum
Sydney, Australia – 5 November 2018
 Lecture “The VISIBLE program: a new model of early intervention in infants with cerebral visual impairment”

Joint International Workshop UNDERSTANDING AND PROMOTING CHANGE FROM EARLY TO COMPLEX SKILLS IN TYPICAL AND ATYPICAL DEVELOPMENT: A CROSS-POPULATION APPROACH
Bologna, Italy – 10-11 October 2018
 Lecture “From early neuroplasticity to early intervention: The model of neonatal brain damage”

The 1st Congress of the Global Children Healthcare Network & Cerebral Palsy Alliance
Changsha City, China – 15 September 2018
 Lecture “Early detection of cerebral palsy”

Rehabilitation Symposium 2018
Zurich, Swiss – 13 September 2018
 Lecture “Brain Plasticity and opportunities for early assessment and intervention in infants with early brain injury”

Australasian Cerebral Palsy Clinical Trials Network (AusCP-CTN)
 Centre for Research Excellence (CRE) *Hot Topics* in Cerebral Palsy Research Forum
Brisbane, Australia – 9-10 November 2017
 Lecture n.1 “New opportunities for Early intervention in infants with early brain injury”
 Lecture n.2 “Early Intervention for infants with Cerebral Visual Impairment”
 Lecture n.3 “Early detection General Movements update”

International School of Neuroscience “sir John Eccles” – Workshop 2017
From activity to interactivity: harnessing early adaptive plasticity for intervention in atypical development
Erice, Sicily, Italy – 17 October 2017
 Lecture “Activity and interactivity in the early rehabilitation of newborns and infants with brain damage”

European Congress of Magnetic Resonance in Neuropediatrics 14th Meeting
Tübingen, Germany – 8-10 June 2017
 Lecture “Reorganization in the visual domain”

CPRN annual meeting 2017
Oslo, Norway – 7 June 2017
 Lecture “Early detection of cerebral palsy”

29th EACD Conference 2017
Amsterdam, The Netherlands - 17-20 May 2017
 Keynote “From activity to interactivity: finding the active ingredient of very early intervention”

Melbourne University, Pediatric Educational Seminar
Melbourne, Australia – 16 March 2017
 Lecture “Early detection and intervention for infants at high-risk of development impairments”

Belgian National Symposium of CP centres 2017
Bruxelles, Belgium – 27 January 2017
 Lecture “Neuroplasticity of the young brain: implications for early intervention”

21th Conference of the Association for Child Development and Rehabilitation
Jerusalem, Israel – 8-10 November 2016
 Lecture “Impairment of Visual Functions in Infants with Brain Damage: From Early Detection to Early Intervention”

International Summit - Early Intervention State of the Science
Stockholm, Sweden – 31 May 2016
 Lecture “State of the Science on Vision Interventions and Future Directions”

8th Biennial Conference of the Australasian Academy of Cerebral Palsy and Developmental Medicine
Adelaide, Australia – 30 March -2 April 2016
 Lecture “Behavioural assessment of visual functions in infants with brain lesions”

Early intervention: the power of parenting and practice - early intervention in the light of the ICF-CY
Groningen, the Netherlands - 7-9 April 2016
 Lecture “Brain mirror properties in infancy and implications for early neurorehabilitation”

Nationwide Children’s Hospital - Neonatal Grand Rounds Presentation
Columbus, Ohio, USA – 5 August 2015
 Lecture “Brain plasticity following congenital lesions: implications for early neurorehabilitation”

International Conference of the European Academy of Childhood Disability
Copenhagen, Denmark – 27-30 May 2015
 Lecture “Can we make use of critical periods for intervention in children with early brain damage?”

International Conference Non-Invasive tools for early detection of autism spectrum disorder
Rome, Italy – 16-17 October 2014
 Lecture “Infant motor behaviour and ASD”

International Early Detection and Early Neurorehabilitation in CP Summit.
Vienna, Austria – 1-2 July 2014
 Lecture “Vision in Cerebral Palsy”

Mastery of manual skills: recent insights into typical and atypical development of manual ability
Groeningen, The Netherlands – 15-17 May 2014
 Lecture “Intervention in children with unilateral spastic cerebral palsy: the effect of action-observation training.”

7th Biennial Conference of the Australasian Academy of Cerebral Palsy and Developmental Medicine
Cypress Lakes Resort, Hunter Valley - 11-14 March 2014
 Lecture “Early Intervention. Working with infants at risk of Cerebral Palsy and their parents”

4th International CerebralPalsy Conference
Pisa, Italy - 10-13 October 2012
 Lecture “Neural plasticity and early intervention in CP infants”

16th World Congress of the International Organization of Psychophysiology
Pisa, Italy – 13-17 September 2012
 Invited Lecture “Brain plasticity and early intervention in preterm infants”

6th Biennial Conference of the Australasian Academy of Childhood Disability
Brisbane, Australia – 30 May – 2 June 2012
 Lecture “Action Observation training: a new window on the brain for rehabilitation of early brain injury”

Mastery of manual skills: recent insights into typical and atypical development of manual ability
Groeningen, The Netherlands – 19-21 April 2012
 Lecture “Plasticity of the visual system after early brain damage”

18th Mediterranean Meeting of Child Neurology in conjunction with the 5th Fred J. Epstein International
 Symposium on New Horizons in Pediatric Neurology, Neurosurgery and Neurofibromatosis
Dead Sea, Israel – 18-22 March 2012
 Lecture “Neuroplasticity following perinatal brain damage: insights on very early intervention”

Journées d’étude annuelles du CDI
Paris, France – 12-13 December 2011
 Lecture “Plasticité cérébrale du système sensori-moteur après lésion cérébrale précoce : cas particulier des membres supérieurs”

Queensland Healthy Hearing Symposium 2010
SurfAir Marcoola Beach, Sunshine Coast QLD, Australia – 1-3 September 2010
 Lecture “Age-Related Plasticity in the auditory system”

5th Biennial Conference of the Australasian Academy of Cerebral Palsy & Developmental Medicine,
Christchurch, New Zealand – 3-6 March 2010
 Lecture “Visual function in children with brain damage and cerebral palsy what’s different about the young brain.”

Personal skills and competences

Mother tongue(s)	Italian	Understanding		Speaking				Writing	
		Listening	Reading	Spoken interaction	Spoken production				
Self-assessment									
<i>European level (*)</i>									
English	C2 Proficient user	C2 Proficient user	C2 Proficient user	C2 Proficient user	C2 Proficient user	C2 Proficient user	C2 Proficient user	C2 Proficient user	C2 Proficient user
French	B2 Independent user	B2 Independent user	A2 Basic user	A2 Basic user	A2 Basic user	A2 Basic user	A1 Basic user	A1 Basic user	A1 Basic user