

# Livio Provenzi

Researcher (PhD) – Psychologist and Psychotherapist



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## BRIEF BIO

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I received my Master's Degree in Clinical Psychology in 2008 and my Doctorate in Psychology in 2016 at the Catholic University, Milan. From 2008 to 2019 I carried out clinical and research activities at the 0-3 Center of the IRCCS E. Medea Scientific Institute in Bosisio Parini, Lecco (Italy). From November 2019 I am a researcher of the IRCCS Fondazione Mondino, Pavia (Italy). Since February 2022 I am Assistant Professor (RTDb) at the Department of the Nervous System and Behavior of the University of Pavia. In my research projects I integrate methodology of behavioral sciences, infant research, neuroendocrinology, epigenetics and neuroscience to understand how what happens between us - human relationships - helps to shape what happens inside us - the neurobiological connections that make us who we are. I am interested in studying the neuropsychobiological dimensions underlying the early human connections in conditions of typical and atypical development, such as preterm birth, sensory deficit, psychomotor retardation, environmental alterations. A specific attention to the first thousand days of life and to the role of early parent-child interaction further characterizes my line of research. I authored more than 100 papers published in international scientific journals. I am member of the international research group Separation and Closeness Experiences in the Neonatal Environment (SCENE), Editor in Chief for *Frontiers in Pediatric Psychology*, and member of the editorial board of *Infant Behavior and Development* and *Plos One*. I have published two books: *Developmental Human Behavioral Epigenetics* (Elsevier) in 2020, together with Rosario Montirosso, and *Developmental Psychobiology* (Carocci) in 2021.

**EDUCATION AND TITLES**

2016	<b>PhD in Psychology</b> UNIVERSITÀ CATTOLICA, MILANO, ITALY
2016	<b>Psychoanalytic training</b> SIPRE, MILANO, ITALY
2012	<b>Post-graduate specialty in collaborative assessment</b> THERAPEUTIC ASSESSMENT INSTITUTE, AUSTIN, TX, USA
2008	<b>Master in Psychology</b> UNIVERSITÀ CATTOLICA, MILANO, ITALY
2006	<b>Bachelor in Developmental Psychology</b> UNIVERSITÀ CATTOLICA, MILANO, ITALY

**RESEARCH EXPERIENCE**

2022 – today	<b>Assistant Professor, RTD-b (art. 24 c.3-b L. 240/10)</b> UNIVERSITY OF PAVIA, PAVIA, ITALY
2019 – today	<b>Senior researcher</b> IRCCS MONDINO FOUNDATION, PAVIA, ITALY
2016 – 2019	<b>Post-doc Research Fellow</b> SCIENTIFIC INSTITUTE IRCCS E. MEDEA, BOSISIO PARINI, ITALY
2010 – 2015	<b>Research Assistant / PhD</b> SCIENTIFIC INSTITUTE IRCCS E. MEDEA, BOSISIO PARINI, ITALY

**TEACHING EXPERIENCE**

2022 – today	<b>Biology and Human Development</b> PhD Cognitive Brain Sciences IUSS, PAVIA, ITALY
2021 – today	<b>General Psychology</b> BSc Developmental Psychomotor and Occupational Therapy UNIVERSITÀ DI PAVIA, PAVIA, ITALY
2021 – today	<b>Psychometrics</b> BSc Developmental Psychomotor and Occupational Therapy UNIVERSITÀ DI PAVIA, PAVIA, ITALY
2021 – today	<b>Research methodology</b> Post-graduate specialty in Developmental Neuropsychiatry UNIVERSITÀ DI PAVIA, PAVIA, ITALY
2020 – today	<b>Developmental Psychobiology</b> MSc Psychology, Neuroscience and Human Sciences UNIVERSITÀ DI PAVIA, PAVIA, ITALY
2020 – 2021	<b>Methodology of Parent-Infant Observation</b> BSc Psychology UNIVERSITÀ DI MILANO BICOCCA, MILANO, ITALY
2019 – 2020	<b>Socio-Emotional Developmental Psychology</b> MSc Developmental Psychology UNIVERSITÀ DI MILANO BICOCCA, MILANO, ITALY

Tutor/supervisor for dissertations and internships of more than 20 students and trainees in Psychology.

**CLINICAL EXPERIENCE**

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2018 – 2020	<b>Psychotherapy, private practice</b> MILANO, ITALY
2016 – 2019	<b>Psychotherapy</b> AGRES ONLUS, MASSINA DI CISLAGO, ITALY
2010 – 2015	<b>Autism therapist</b> AGRES ONLUS, MASSINA DI CISLAGO, ITALY

**PROFESSIONAL MEMBERSHIPS**

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2022 – today	<b>Neuropsychology of Interactions Network (NOI)</b> Research member
2019 – today	<b>Separation and Closeness Experiences in the Neonatal Environment (SCENE)</b> Member of the steering group
2019 – today	<b>Fathers in Neonatal Environment, Shaping Salubrious Experiences (FINESSE)</b> Research member
2018 – today	<b>International Society of Psychoneuroendocrinology (ISPNE)</b> Regular member
2018 – today	<b>International Society for Developmental Psychobiology (ISDP)</b> Regular member
2017 – today	<b>Society for Research in Child Development (SRCD)</b> Regular member
2017 – today	<b>International Congress of Infant Studies (ICIS)</b> Regular member
2016 – 2018	<b>Italian Society of Relational Psychoanalysis (SIPRe)</b> Associate member
2009 – today	<b>Italian Board of Licensed Psychologists, Lombardy section (OPL)</b> Regular member

**VISITING SCHOLARSHIPS**

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2019	<b>Columbia University, New York, USA</b> Contacts: Marta Welch, Bob Ludwig
2017	<b>University of Massachusetts, Boston, USA</b> Contact: Ed Tronick
2015	<b>University of British Columbia, Vancouver, Canada</b> Contact: Ruth Grunau, Tim Oberlander

**EXPERT ROLES IN THE SCIENTIFIC COMMUNITY**

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2021	<b>Israel Science Foundation</b>   Peer reviewer for research proposals
2021	<b>Department of Medicine, University of Porto, Portugal</b>   Member of the PhD committee (candidate: Carina Rodrigues)
2020	<b>National Research Fund, Luxembourg</b>   Peer reviewer for research proposals
2019	<b>National Science Center, Poland</b>   Peer reviewer for research proposals
2019	<b>Organization for Health Research and Development, Netherlands</b>   Peer reviewer for research proposals
2018	<b>Marie Skłodowska-Curie Individual Fellowships, European Commission</b>   Peer reviewer for research proposals

## FUNDING AND AWARDS

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2022	<b>Banco del Monte di Lombardia</b> 2-BRAINS project [28.594,00 Euros]
2021	<b>Roche "Per la ricerca"</b> MOM-COPE project [12 months; 50.000,00 Euros]
2021	<b>COVID-19, Tuscany region grant</b> SPACE-NET project [12 months; 30.000,00 Euros]
2021	<b>Acta Paediatrica Foundation</b> International Young Investigator Award
2019	<b>International Society for Developmental Psychobiology (ISDP)</b> Travel Award
2018	<b>Pediatric Research journal</b> Early Career Investigator
2018	<b>Journal of Contemporary Psychotherapy</b> Most Valuable Paper Award
2017	<b>Ricerca Finalizzata – Ministero della Salute, Italy</b> RF-2016-02361884 (co-PI) [36 months; 450.000,00 Euros]
2017	<b>Società Italiana di Medicina Perinatale</b> Giorgio Pardi Foundation Award
2016	<b>Hacking Health International</b> Best Innovative Project
2015	<b>Banco del Monte di Lombardia</b> Progetto Professionalità Ivano Becchi

## EDITORIAL ROLES

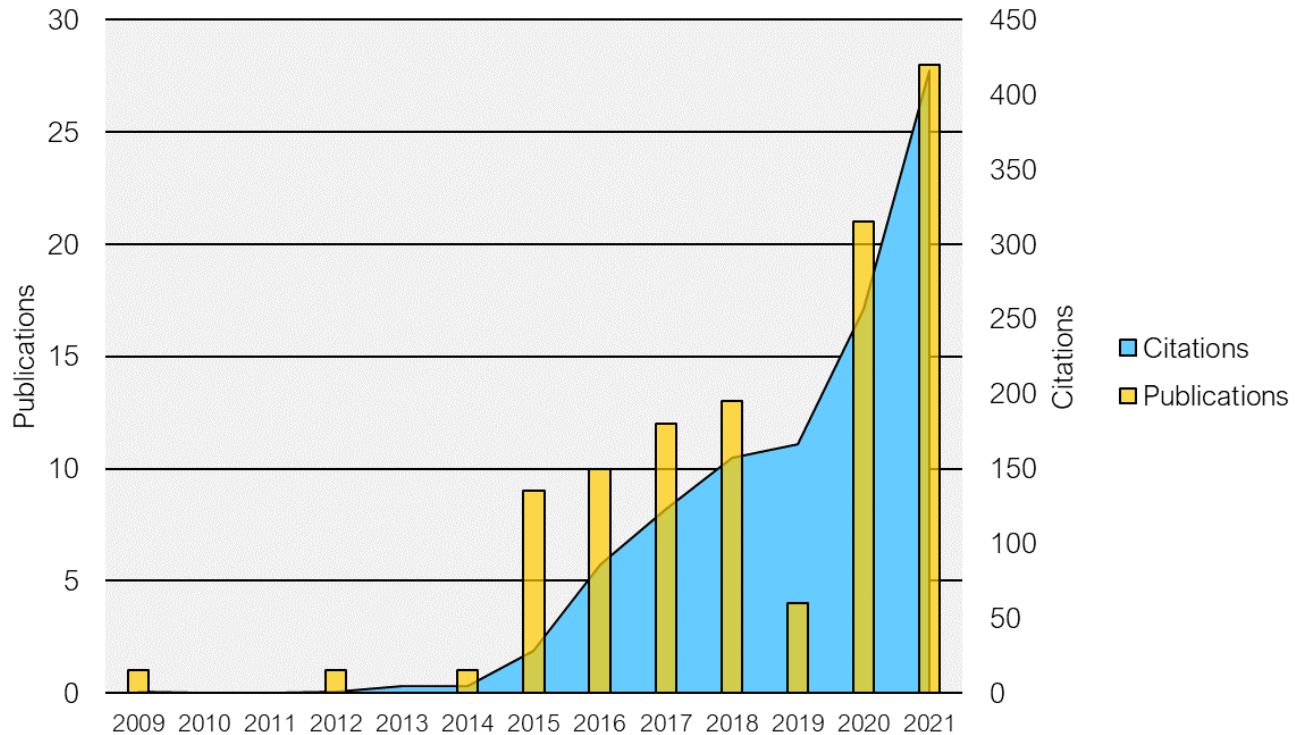
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2021 – today	<b>PLOS ONE</b> Academic Editor
2021 - today	<b>Frontiers in Pediatric Psychology</b> Editor in Chief
2018 – today	<b>Infant Behavior and Development</b> Member of the editorial board
2017 – 2021	<b>Frontiers in Developmental Psychology</b> <b>Frontiers in Quantitative Psychology and Measurement</b> Associate Editor

Further contributions on **publons**: <https://publons.com/author/1258787/livio-provenzi#profile>

## METRICS OF SCIENTIFIC PRODUCTION

104 papers, 1458 citations, 23 *h*-index, 278 co-authors



Source: Scopus, May 2022

## COMPLETE LIST OF PUBLICATIONS

### 2022 & in press

Capelli E, Grumi S, Fullone E, Rinaldi E, Provenzi L (2022) An update on social touch: How does humans' social nature emerge at the periphery of the body? Rorschachiana, *in press*.

Grumi S, Capelli E, Giacchero R, Anceresi G, Fullone E, Provenzi L (2022) Exclusive breastfeeding and maternal postnatal anxiety contributed to infants' temperament issues at 6 months of age. Acta Paediatrica, *in press*.

Grumi S, Pettenati G, Manfredini V, Provenzi L (2022) Flexibility and organization in parent-child interaction through the lens of the dynamic system approach: A systematic review of State Space Grid studies. Infant Behavior and Development, 67, 101722.

Grumi S, Provenzi L, Aramini V, Dargenio E, Gardani A, Naboni C, Vacchini V, Manfredini V, Pettenati G, Borgatti R (2022) The lockdown experience during the Covid-19 outbreak in parents of children with disabilities: Psychological response and tele-rehabilitation | L'esperienza del lockdown durante l'emergenza Covid-19 in genitori di bambini con disabilità Risposta psicologica e intervento di tele-riabilitazione. Psicologia Clinica dello Sviluppo, 26, 101-124.

Provenzi L, Grumi S (2022) The need to study developmental outcomes of children born during the COVID-19 pandemic. JAMA Pediatrics, 176(1), 103.

Provenzi L, Grumi S, Altieri L, Bensi G, Bertazzoli E, Biasucci G, Cavallini A, Decembrino L, Falcone R, Freddi A, Gardella B, Giacchero R, Giorda R, Grossi E, Guerini P, Magnani ML, Martelli P, Motta M, Nacinovich R, Pantaleo D, Pisoni C, Prefumo F,

Riva L, Scelsa B, Spartà MV, Spinillo A, Vergani P, Orcesi S, Borgatti R, MOM-COPE Study Group (2021) Prenatal maternal stress during the COVID-19 pandemic and infant regulatory capacity at 3 months: A longitudinal study. *Development and Psychopathology*, *in press*.

Provenzi L, Grumi S, Rodrigo MJ (2022) Editorial: Neural and epigenetic factors in parenting, individual differences and dyadic processes. *Brain Sciences*, 12, 478.

Romaniello R, Gagliardi C, Desalvo P, Provenzi L, Battini R, Bertini E, Bonati MT, Briguglio M, D'Arrigo S, Dotti MT, Giordano L, Macaluso C, Moroni I, Nuovo S, Santucci M, Signorini S, Stanzial F, Valente EM, Borgatti R (2021) Challenges and resources in adult life with Joubert Syndrome: Issues from an international classification of functioning (ICF) perspective. *Disability and Rehabilitation*, *in press*.

Varesio C, Zanaboni MP, Pasca L, Provenzi L, Ferraris C, Tagliabue A, Pezzotti E, Carpani A, Veggiotti P, De Giorgis V (2021) Novel insights into GLUT1 Deficiency Syndrome: Screening for emotional and behavioral problems in youths following ketogenic diet. *Minerva Pediatrics*, *in press*.

## 2021

Bader LR, Tan L, Gonzalez R, Saini EK, Bae Y, Provenzi L, Volling BL (2021) Adrenocortical interdependence in father-infant and mother-infant dyads: Attunement or something more? *Developmental Psychobiology*, 63, 1534-1548.

Barello S, Savarese M, Giusti L, Brambilla M, Scotto di Minico G, Provenzi L (2021) More than words: Methodological potentials of graphical elicitation with parents of preterm infants. *Minerva Pediatrics*, 73(4), 307-315.

Baschenis IMC, Farinotti L, Zavani E, Grumi S, Bernasconi P, Rosso E, Provenzi L, Borgatti R, Termine C, Chiappedi M (2021) Reading skills of children with dyslexia improved less than expected during the COVID-19 lockdown in Italy. *Children*, 8, 560.

Berretta E, Guida E, Forni D, Provenzi L (2021) Glucocorticoid receptor gene (NR3C1) methylation during the first 1000 days: Environmental exposures and developmental outcomes. *Neuroscience and Biobehavioral Reviews*, 125, 493-502.

Caporali C, Pisoni C, Naboni C, Provenzi L, Orcesi S (2021) Challenges and opportunities for early intervention and neurodevelopmental follow-up in preterm infants during COVID-19 pandemic. *Child Care Health and Development*, 47, 140-141.

Desmarais E, Brown K, Campbell K, French B, Putnam S, Casalin S, Linhares MBM, Lecannelier F, Wang Z, Raikonen K, Heinonen K, Tuovinen S, Montiroso R, Provenzi L, Park SY, Han SY, Lee EG, Huitron B, de Weerth C, Beijers R, Majdandzic M, Benga O, Slobodskaya H, Kozlova E, Gonzalez-Salinas C, Acar I, Ahmetoglu E, Gartstein M (2021) Links between television exposure and toddler dysregulation: Does culture matter? *Infant Behavior and Development*, 63, 101557.

Fumagalli M, Provenzi L, Sorrentino G, Ciceri F, Fontana C, Passera S, Moncecchi M, Plevani L, Laquintana D, Borgatti R, Mosca F, Montiroso R (2021) Self-report and biological indexes of work-related stress in neonatal healthcare professionals. A repeated-measures observational study. *Advances in Neonatal Care*, 21, E120-E128.

Grumi S, Borgatti R, Provenzi L (2021) Supporting Parenting at Home-Empowering Rehabilitation through Engagement (SPHERE): study protocol for a randomized control trial. *BMJ Open*, 11, e051817.

Grumi S, Cappagli G, Aprile G, Mascherpa E, Gori M, Provenzi L, Signorini S (2021) Togetherness, beyond the eyes: A systematic review on the interaction between visually impaired children and their parents. *Infant Behavior and Development*, 64, 101590.

Grumi S, Provenzi L, Accorsi P, Biasucci G, Cavallini A, Decembrino L, Falcone R, Fazzi EM, Gardella B, Giaccherio R, Guerini P, Grossi E, Magnani ML, Mariani EM, Nacinovich R, Pantaleo D, Pisoni C, Prefumo F, Sabatini C, Scelsa B, Spartà MV, Spinillo A, Giorda R, Orcesi S, Borgatti R (2021) Depression and anxiety in pregnant women during the COVID-19 outbreak in Italy: The role of emotional stress and social support. *Frontiers in Psychiatry*, 12, 1513.

Grumi S, Provenzi L, Gardani A, Aramini V, Dargenio E, Naboni C, Vacchini V, Borgatti R, EnFORCE Group (2021) Rehabilitation services lockdown during the COVID-19 emergency: the mental health response of caregivers of children with neurodevelopmental disabilities. *Disability and Rehabilitation*, 43, 27-32.

Grumi S, Saracino A, Volling B, Provenzi L (2021) A systematic review of human paternal oxytocin: Insights into the methodology and what we know so far. *Developmental Psychobiology*, 63, 1330-1344.

- Mensi MM, Orlandi M, Rogantini C, Provenzi L, Chiappedi M, Criscuolo M, Castiglioni MC, Zanna V, Borgatti R (2021) Assessing family functioning before and after an integrated multidisciplinary family treatment for adolescents with restrictive eating disorders. *Frontiers in Psychiatry*, 12, 653047.
- Mensi MM, Rogantini C, Provenzi L, Borgatti R (2021) Rating behavioral problems in adolescent eating disorders: Parent-child differences. *Psychiatry Research*, 298, 113836.
- Parravicini S, Provenzi L, Barello S, Nania T, Grumi S, Rinaldi E, Orcesi S, Borgatti R (2021) The experience of child neuropsychiatry residents who volunteered in Italian COVID-19-designated hospitals. *Academic Psychiatry*, 45, 587-592.
- Pisoni C, Provenzi L, Moncecchi M, Caporali C, Naboni C, Stronati M, Montiroso R, Borgatti R, Orcesi S (2021) Early parenting intervention promotes 24-month psychomotor development in preterm children. *Acta Paediatrica*, 110, 101-108.
- Provenzi L (2021) The burden of Europe's immigration crisis on mother-child healthcare services and opportunities for culturally sensitive family-centred care. *Acta Paediatrica*, 110, 19-21.
- Provenzi L, Borgatti R (2021) Potentials of telerehabilitation for families of children with special health care needs during the coronavirus disease 2019 emergency. *JAMA Pediatrics*, 175, 105.
- Provenzi L, Grumi S, Gardani A, Aramini V, Dargenio E, Naboni C, Vacchini V, Borgatti R, EnFORCE Group (2021) Italian parents welcomed a telehealth family-centred rehabilitation programme for children with disability during COVID-19 lockdown. *Acta Paediatrica*, 110, 194-196.
- Provenzi L, Grumi S, Rinaldi E, Giusti L (2021) The porridge-like framework: A multidimensional guidance to support parents of children with developmental disabilities. *Research in Developmental Disabilities*, 117, 104048.
- Provenzi L, Lindstedt J, De Coen K, Gasparini L, Peruzzo D, Grumi S, Arrigoni F, Ahlqvist-Bjorkroth S (2021) The paternal brain in action: A review of human fathers' fMRI brain responses to child-related stimuli. *Brain Sciences*, 11, 816.
- Provenzi L, Mambretti F, Villa M, Grumi S, Citterio A, Bertazzoli E, Biasucci G, Decembrino L, Falcone R, Gardella B, Longo R, Nacinovich R, Pisoni C, Prefumo F, Orcesi S, Scelsa B, Giorda R, Borgatti R, MOM-COPE Study Group (2021) Hidden pandemic: COVID-19-related stress, *SLC6A4* methylation, and infants' temperament at 3 months. *Scientific Reports*, 11, 15658.
- Rabie D, Provenzi L, Matta N, Montiroso R (2021) Stress and perceived support in mothers of infants admitted to the neonatal intensive care unit in Egypt. *A global*, 21, E101-E109.
- Rogantini C, Provenzi L, Mensi MM (2021) Prioritizing family-centered mental health care for pediatric patients with eating disorders. *JAMA Pediatrics*, 175, 324.
- Tronick E, Grumi S, Provenzi L (2021) The three-plague nature of COVID-19 pandemic: Implications for women and children and exposure to violence. *Pediatric Emergency Care*, 37, e89-e90.
- Zanaboni MP, Pasca L, Villa BV, Faggio A, Grumi S, Provenzi L, Varesio C, De Giorgis V (2021) Characterization of speech and language phenotype in GLUT1DS. *Children*, 8, 344.

## 2020

- Caporali C, Pisoni C, Gasparini L, Ballante E, Zecca M, Orcesi S, Provenzi L (2020) A global perspective on parental stress in the neonatal intensive care unit: a meta-analytic study. *Journal of Perinatology*, 40, 1739-1752.
- Cassiano R, Provenzi L, Linhares MB, Gasparino C, Montiroso R (2020) Does preterm birth affect child temperament? A meta-analytic study. *Infant Behavior and Development*, 58, 101417.
- Dallavalle G, Pezzotti E, Provenzi L, Toni F, Carpani A, Borgatti R (2020) Migraine Symptoms Improvement During the COVID-19 Lockdown in a Cohort of Children and Adolescents. *Frontiers in Neurology*, 11, 579047.
- Mensi MM, Rogantini C, Nacinovich R, Riva A, Provenzi L, Chiappedi M, Balottin U, Borgatti R (2020) Clinical features of adolescents diagnosed with eating disorders an at risk for psychosis. *European Psychiatry*, 63(1), e80.

Montirosso R, Rosa E, Giorda R, Fazzi E, Orcesi S, Cavallini A, Provenzi L, Early Intervention Study Group (2020) Early Parenting Intervention – Biobehavioral Outcomes in infants with neurodevelopmental Disabilities (EPI-BOND): Study protocol for an Italian multicenter randomized controlled trial. *BMJ Open*, 10, e035249.

Provenzi L, Barello S (2020) The Science of the Future: Establishing a Citizen-Scientist Collaborative Agenda after Covid-19. *Frontiers in Public Health*, 8, 282.

Provenzi L, Baroffio E, Ligabue S, Borgatti R (2020) The little professor and the virus. Scaffolding children’s meaning making during the COVID-19 emergency. *Frontiers in Psychiatry*, 11, 817.

Provenzi L, Brambilla M, Scotto di Minico G, Montirosso R, Borgatti R (2019) Maternal caregiving and DNA methylation in human infants and children: Systematic review. *Genes, Brain and Behavior*, 19(3), e12616.

Provenzi L, Fumagalli M, Scotto di Minico G, Giorda R, Morandi F, Sirgiovanni I, Schiavolin P, Mosca F, Borgatti R, Montirosso R (2020) Pain-related increase in serotonin transporter gene methylation associates with emotional regulation in 4.5-year-old preterm-born children. *Acta Paediatrica*, 109, 1166-1174.

Provenzi L, Giusti L, Caglia M, Rosa E, Mascheroni E, Montirosso R (2020) Evidence and open questions for the use of video-feedback interventions with parents of children with neurodevelopmental disabilities. *Frontiers in Psychology*, 11, 1374.

Provenzi L, Grumi S, Borgatti R (2020) Alone with the kids: Tele-medicine for children with special healthcare needs during COVID-19 emergency. *Frontiers in Psychology*, 11, 2193.

Provenzi L, Grumi S, Giorda R, Biasucci G, Bonini R, Cavallini A, Decembrino L, Drera B, Falcone R, Fazzi E, Gardella B, Giacchero R, Nacinovich R, Pisoni C, Prefumo F, Scelsa B, Spartà MV, Veggiotti P, Orcesi S, Borgatti R, MOM-COPE Group (2020) Measuring the outcomes of maternal COVID-19-related prenatal exposure (MOM-COPE): Study protocol for a multicentric longitudinal project. *BMJ Open*, 10, e044585.

Provenzi L, Montirosso R, Tronick E (2020) Editorial: Risk and Protective Factors Associated with Early Adversity and Development: Evidence from Human and Animal Research. *Frontiers in Psychology*, 10, 2906.

Provenzi L, Rosa E, Visintin E, Mascheroni E, Guida E, Cavallini A, Montirosso R (2020) Understanding the role and function of maternal touch in infants with neurodevelopmental disabilities. *Infant Behavior and Development*, 58, 101420.

Provenzi L, Tronick E (2020) The power of disconnection during the Covid-19 emergency: From isolation to reparation. *Psychological Trauma: Theory, Research, Practice, and Policy*, 12(S1), S252-S254.

Thomson G, Flacking R, George K, Feeley N, Haslund-thomsen H, De Coen K, Schmied V, Provenzi L, Rowe J (2020) Parents' experiences of emotional closeness to their infants in the neonatal unit: A meta-ethnography. *Early Human Development*, 149, 105155.

Varesio C, Provenzi L, Donetti Dantin S, Zanaboni MP, Pasca L, Veggiotti P, De Giorgis V (2020) Pathways to quality of life in adolescents with genetic generalized epilepsy: The role of seizure features and affective symptoms. *Epilepsy & Behavior*, 109, 107115.

## 2019

Cavallini A, Provenzi L, Scotto di Minico G, Sacchi D, Gavazzi L, Amorelli V, Borgatti R (2019) Functional Evaluation of Eating Difficulties Scale (FEEDS) to predict oral motor skills in infants with neurodevelopmental disorders: A longitudinal study. *Developmental Medicine & Child Neurology*, 61, 813-819.

Montirosso R, Piazza C, Giusti C, Provenzi L, Ferrari P, Reni G, Borgatti R (2019) Exploring the EEG mu rhythm associated with observation and execution of a goal-directed action in 14-month-old preterm infants. *Scientific Reports*, 9, 8975.

Provenzi L, Giorda R, Fumagalli M, Brambilla M, Mosca F, Borgatti R, Montirosso R (2019) Telomere length and salivary cortisol stress reactivity in very preterm infants. *Early Human Development*, 129, 1-4.

Provenzi L, Giusti L, Fumagalli M, Frigerio S, Morandi F, Borgatti R, Mosca F, Montirosso R (2019) The dual nature of hypothalamic-pituitary-adrenal axis regulation in dyads of very preterm infants and their mothers. *Psychoneuroendocrinology*, 100, 172-179.



## 2018

- Cassiano RGM, Provenzi L, Linhares MBM, Gasparido CM, Montirosso R (2018). Maternal sociodemographic factors differentially affect the risk of behavioral problems in Brazilian and Italian preterm toddlers. *Infant Behavior & Development*, 50, 165-173.
- Fumagalli M, Provenzi L, De Carli P, Dessimone F, Sirgiovanni I, Giorda R, Cinnante C, Squarcina L, Pozzoli U, Triulzi F, Brambilla P, Borgatti R, Mosca F, Montirosso R (2018). From early stress to 12-month development in very preterm infants: Preliminary findings on epigenetic mechanisms and brain growth. *PLoS One* 13(1), e0190602.
- Giusti L, Provenzi L, Montirosso R (2018) The face-to-face still-face (FFSF) paradigm in clinical settings: Socio-emotional regulation assessment and parenta support with infants with neurodevelopmental disabilities. *Frontiers in Psychology*, 9, 789.
- Longoni L, Provenzi L, Cavallini A, Sacchi D, Scotto di Minico G, Borgatti R (2018) Predictors and outcomes of the Neonatal Oral Motor Assessment Scale (NOMAS) performance: A systematic review. *European Journal of Pediatrics*, 177, 665-673.
- Provenzi L (2018) Early Career Investigator Highlight – June. *Pediatric Research*, 83, 1086.
- Provenzi L, Brambilla M, Borgatti R, Montirosso R (2018) Methodological challenges in developmental human behavioral epigenetics: Insights into study design. *Frontiers in Behavioral Neuroscience*, 12, 286.
- Provenzi L, Broso S, Montirosso R (2018). Do mothers sound good? A systematic review of the effects of maternal voice exposure on preterm infants' development. *Neuroscience & Biobehavioral Reviews*, 88, 42-50.
- Provenzi L, De Carli P, Fumagalli M, Giorda R, Casavant S, Beri S, Citterio A, Morandi F, Mosca F, Borgatti R, Montirosso R (2018) Very preterm birth is associated with PLAGL1 gene hypo-methylation at birth and discharge. *Epigenomics*, 10(8), 1121-1130.
- Provenzi L, Giorda R, Fumagalli M, Pozzoli U, Morandi F, Scotto di Minico G, Mosca F, Borgatti R, Montirosso R (2018). Pain exposure associates with telomere length erosion in very preterm infants. *Psychoneuroendocrinology*, 89, 113-119.
- Provenzi L, Guida E, Montirosso R (2018). Preterm Behavioral Epigenetics: A systematic review. *Neuroscience & Biobehavioral Reviews*, 84, 262-271.
- Provenzi L, Olson K, Giusti L, Montirosso R, DeSantis A, Tronick E (2018). NICU Network Neurobehavioral Scale: 1-month normative data and variation from birth to 1 month. *Pediatric Research*, 83, 1104-1109.
- Provenzi L, Scotto di Minico, G., Giusti L, Guida E, Müller, M (2018). Disentangling the dyadic dance: Theoretical, methodological and outcomes systematic review of mother-infant dyadic processes. *Frontiers in Psychology*, 9, 348.

## 2017

- Barello S, Graffigna G, Pitacco G, Mislej M, Cortale M, Provenzi L (2017). An educational intervention to train professional nurses in promoting patient engagement: A pilot feasibility study. *Frontiers in Psychology*, 7, 2020.
- Cavallini A, Provenzi L, Sacchi D, Longoni L, Borgatti R (2017). The Functional Evaluation of Eating Difficulties Scale (FEEDS): Study protocol and validation in infants with neurodevelopmental impairments and disabilities. *Frontiers in Pediatrics*, 5, 273.
- Giusti L, Provenzi L, Tavian D, Missaglia S, Butti N (2017). The BDNFval66met polymorphism and individual differences in temperament in 4-month-old infants: A pilot study. *Infant Behavior and Development*, 47, 22-26.
- Graffigna G, Barello S, Riva G, Savarese, M, Menichetti J, Castelnuovo G, Corbo M, Tzannis A, Aglione A et al (2017). Fertilizing a patient engagement ecosystem to innovate healthcare: toward the first Italian consensus conference on patient engagement. *Frontiers in Psychology*, 8(812).
- Provenzi L, Barello S, Saettini F, Scotto di Minico G, Borgatti R (2017). Paediatricians should encourage the parents of children with special healthcare needs to disclose their use of complementary and alternative medicine. *Acta Paediatrica*, 106(11), 1883-1884.
- Provenzi L, Borgatti R, Montirosso R (2017). Why are prospective longitudinal studies needed in preterm behavioral epigenetic research? *JAMA Pediatrics*, 171, 92.

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Provenzi L, Montirosso R (2015). "Epigenetics" in the neonatal intensive care unit: Conveying complexity in health care for preterm children. *JAMA Pediatrics*, 169, 617-618.

Provenzi L, Santoro E (2015). The lived experience of fathers of preterm infants in the Neonatal Intensive Care Unit: a systematic review of qualitative studies. *Journal of Clinical Nursing*, 24, 1784-1794.

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Montirosso R, Provenzi L, Calciolari G, Borgatti R, NEO-ACQUA Study Group (2012). Measuring maternal stress and perceived support in 25 Italian NICUs. *Acta Paediatrica*, 101, 136-142.

Montirosso R, Morandi F, D'Aloisio C, Berna A, Provenzi L, Borgatti R (2009). International classification of functioning, disability and health in children with congenital central hypoventilation syndrome. *Disability and Rehabilitation*, 31, S144-S152.

## BOOKS

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Provenzi L, Grumi S, Borgatti R (in progress) *Family-centered care in child disability: Theory, research, and practice*. Springer.

Provenzi L (2021) *Psicobiologia dello sviluppo: Principi, processi, applicazioni*. Carocci.

Provenzi L, Montirosso R (2020). *Developmental Human Behavioral Epigenetics: Principles, Methods, Evidence, and Future Directions*. Academic Press.

## CHAPTERS

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Provenzi L, Rinaldi E, Tronick E (2021). Le paradigme du "Visage impassible": Régulation du stress dans la dyade mère-bébé. In: Smith J (ed.) *Le grand livre des 1000 premiers jours de vie*. Dunod Editeur: Paris (FR).

Montirosso R, Provenzi L (2017). Implications of epigenetics in developmental care of preterm infants in the NICU: Preterm Behavioral Epigenetics. In: Filippa M, Kuhn P, Westrup B (eds.) *Early vocal contact and preterm infant brain development: Bridging the gaps between research and practice*, 295-310. Springer International Publishing: Cham (CH).

Provenzi L, Barelo S, Graffigna G (2016). Caregiver Engagement in the Neonatal Intensive Care Unit: Parental Needs, Engagement Milestones, and Action Priorities for Neonatal Healthcare of Preterm Infants. In: Graffigna G, Barelo S, Triberti S (eds.) *Patient Engagement: A consumer-centered model to innovate healthcare*, 94-107. De Gruyter Open: Warsaw (PL).

Provenzi L, Borgatti R, Montirosso R (2016). The light side of preterm behavioral epigenetics. An epigenetic perspective on caregiver engagement. In: Graffigna G (ed.) Patient engagement and participation for effective healthcare reform. IGI Global: Hershey, PA (USA).

Putnam SP, Gartstein MA, Montirosso R, Provenzi L, Wang Z (2018). Summary and future directions. In: Gartstein Ma, Putnam SP (eds.) Toddlers, Parents and Culture: Findings from the joint effort toddler temperament consortium. Routledge: London.

## EDITED SPECIAL ISSUES

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Montirosso R, Provenzi L, Tronick E (2018-2019) Risk and protective factors associated with early adversity and development: Evidence from human and animal research. *Frontiers in Behavioral Neuroscience*.

Provenzi L, Gori M, Signorini S, Maffongelli L (2020-2021) Understanding the socio-emotional and socio-cognitive developmental pathways in children with sensory impairment. *Frontiers in Psychology*.

Provenzi L, Grumi S (2020-2021) The early epigenetic determinants of social stress and emotion regulation in young infants and children. *International Journal of Environmental Research and Public Health*.

Rodrigo MJ, Provenzi L (2020-2021) neural and epigenetic factors in parenting: Individual differences and dyadic processes. *Brain Sciences*.

## CHAired SYMPOSIUMS

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Provenzi L, Barone L (2021) La genitorialità come fattore protettivo per lo sviluppo: Una prospettiva evolutiva dai primi mesi di vita all'adolescenza. XXXIII Congresso Nazionale AIP, Sezione Psicologia dello Sviluppo e dell'Educazione. Bari (Italy), September.

Provenzi L (2020) How adverse caregiving conditions affect offspring developmental trajectories: Evidence from longitudinal studies. International Society for Psychoneuroendocrinology (ISPNE) annual congress. Virtual, August.

Carter S, Provenzi L (2020) Fathers' neurobiology: Evidence from human studies and animal models research. International Society for Psychoneuroendocrinology (ISPNE) annual congress. Virtual, August.

Provenzi L, Cirulli F (2019) How early adversities get under the skin. A behavioral epigenetic perspective across human development. International Society for Psychoneuroendocrinology (ISPNE) annual congress. Milan (Italy), August.

Provenzi L, Fananas L (2019) Biomarkers of stress and care in the preterm infants. Evidence from animal models and human studies. International Society for Psychoneuroendocrinology (ISPNE) annual congress. Milan (Italy), August.

Provenzi L, Conradt E, Oberlander T (2018) How early experiences get under the skin: Epigenetic mechanisms linking adversity exposure, maternal care and infants' developmental outcomes. World Association of Infant Mental Health (WAIMH) biennial congress. Rome (Italy), August.

## KEYNOTES AND INVITED TALKS

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Provenzi L (2021) The hidden pandemic: Psychobiological footprints of prenatal COVID-related stress. COVGEN meeting. Chicago (USA), November.

Provenzi L (2021) Under the skin: Behavioral epigenetics and early stress in preterm infants. IX Update Course on Childhood Neurorehabilitation, Fondazione Mariani. Padova (Italy), November.

Provenzi L (2021) The hidden pandemic: Psychobiological footprints of pandemic-related stress in pediatric populations. IBRO Webinar: Neuroscience & COVID-19. Virtual, July.

Provenzi L (2021) Epigenetic fingerprints of separation and closeness: Insights for NICU care. 8<sup>th</sup> SCENE symposium. Tallinn (Estonia), May.

Provenzi L (2020) Life getting under the skin. Epigenetic mechanisms and developmental programming in preterm infants. 2020 Science and Soul Congress. Lisbon (Portugal), February.

Provenzi L (2020) Epigenetic fingerprints: Psychobiological insights into human emotional connections. Swiss Center for Affective Sciences. Geneva (CH), November.

Provenzi L (2019) Epigenetic regulation by early adverse experiences in the NICU: Biochemical pathways to preterm infants' outcomes. Conference: When sense makes sense. Glasgow (Scotland), May.

## OTHER SELECTED ORAL PRESENTATIONS

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Livio Provenzi, Fabiana Mambretti, Marco Villa, Serena Grumi, Andrea Citterio, Emanuela Bertazzoli, Giacomo Biasucci, Lidia Decembrino, Rossana Falcone, Barbara Gardella, Roberta Longo, Renata Nacinovich, Camilla Pisoni, Federico Prefumo, Simona Orcesi, Barbara Scelsa, Roberto Giorda, Renato Borgatti, MOM-COPE Study Group (2021) La pandemia nascosta: Impronte epigenetiche dello stress prenatale durante l'emergenza COVID-19. XXXIII Congresso Nazionale AIP, Sezione Psicologia dello Sviluppo e dell'Educazione. Bari (Italy), September.

Provenzi L (2019) Preterm Behavioral Epigenetics: DNA methylation and telomere length regulation as biomarkers of early adversities and developmental risk in very preterm infants. Poland, April 6<sup>th</sup>-9<sup>th</sup>. XXVII European Congress of Psychiatry (EPA).

Provenzi L (2019) Through the mirror: Supporting parenting through video-feedback in Italy. Hungary, November. 7<sup>th</sup> SCENE symposium.

Provenzi L (2017) Stress exposure associates with telomere length erosion in very preterm infants. Italy, October. From activity to interactivity.

Provenzi L (2017) Voices from the rollercoaster: Becoming mothers and fathers in the NICU. Belgium, September. 5<sup>th</sup> SCENE symposium.

Provenzi L (2017) Preterm Behavioral Epigenetics. Italy, January. XIX National Congress of the Italian Society of Perinatal Medicine.

Provenzi L (2016) How DNA methylation of stress-related genes contribute to the socio-emotional development of very preterm infants? Italy, September. Early Experience and Sensitive Periods in Development.

## POSTERS

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Livio Provenzi, Fabiana Mambretti, Marco Villa, Serena Grumi, Andrea Citterio, Emanuela Bertazzoli, Giacomo Biasucci, Lidia Decembrino, Rossana Falcone, Barbara Gardella, Roberta Longo, Renata Nacinovich, Camilla Pisoni, Federico Prefumo, Simona Orcesi, Barbara Scelsa, Roberto Giorda, Renato Borgatti, MOM-COPE Study Group (2021) The hidden pandemic: COVID-19-related stress, SLC6A4 methylation, and infants' temperament at 3 months. International Society for Psychoneuroendocrinology (ISPNE) annual congress. Virtual, September.

Eleonora Fullone, Livio Provenzi, Fabiana Mambretti, Marco Villa, Serena Grumi, Andrea Citterio, Emanuela Bertazzoli, Giacomo Biasucci, Lidia Decembrino, Rossana Falcone, Barbara Gardella, Roberta Longo, Renata Nacinovich, Camilla Pisoni, Federico Prefumo, Simona Orcesi, Barbara Scelsa, Roberto Giorda, Renato Borgatti, MOM-COPE Study Group (2021) The hidden pandemic: The hidden pandemic: COVID-19-related maternal prenatal stress may affect infants' SLC6A4 methylation at birth and temperament at 3 months. International Society of Developmental Psychobiology. Chicago (USA), November.

Provenzi L, Giorda R, Fumagalli M, Morandi F, Sotto di Minico G, Mosca F, Borgatti R, Montirosso R (2019) NICU-related stress exposure, telomere length erosion and HPA axis stress reactivity in very preterm infants. Baltimore MD, March 22<sup>nd</sup>. Society for Research in Child Development.

- Giusti L, Piazza C, Provenzi L, Ferrari P, Reni G, Borgatti R, Montirosso R (2017) Exploring the EEG mu Rhythm During an Imitation Task in 13-Month-old Preterm Infants. Austin TX, April, 6<sup>th</sup> – 8<sup>th</sup>. Society for Research in Child Development.
- Provenzi L, Giusti L, Ciceri F, Borgatti R, Montirosso R (2017) Salivary Cortisol Synchrony in Dyads of Full-Term and Very Preterm 3-Month-old Infants. Austin TX, April, 6<sup>th</sup> – 8<sup>th</sup>. Society for Research in Child Development.
- Provenzi L, Giorda R, Fumagalli M, Pozzoli U, Morandi F, Beri S, Sirgiovanni, Menozzi G, Borgatti R, Mosca F, Montirosso R (2016). SLC6A4 methylation and socio-emotional stress response to the Still-Face Paradigm in very preterm and full-term infants. New Orleans LA, May, 26<sup>th</sup> - 28<sup>th</sup>. International Conference on Infant Studies.
- Casini E, Provenzi L, Del Prete A, Zanini R, Borgatti R, Montirosso R (2015). Internalizing behaviors at 18 months in children born preterm associated with quality of developmental care in 22 Italian NICUs. Philadelphia PA, March, 19<sup>th</sup> – 21<sup>th</sup>. Society for Research in Child Development.
- Provenzi L, Casini E, Fumagalli M, Giorda R, Pozzoli U, Morandi F, Sirgiovanni I, Beri S, Menozzi G, Mosca F, Borgatti R, Montirosso R (2015). SLC6A4 methylation is associated with social stress reactivity in 3-month-old very preterm infants. Philadelphia PA, March, 19<sup>th</sup> – 21<sup>th</sup>. Society for Research in Child Development.
- Provenzi L, Coin R (2015). The rock and the lightning rod: MMPI-2 and Rorschach correlates of couple's unconscious functionality emerging through collaborative assessment. Austin TX, September, 11<sup>th</sup> – 13<sup>th</sup>. Inaugural International Collaborative/Therapeutic Assessment Conference.
- Provenzi L, Tronick E, Borgatti R, Morandi F, Reni G, Montirosso R (2014). Four-month-old infants' long-term memory for a stressful social event measured by respiratory sinus arrhythmia. Berlin, July, 3<sup>rd</sup> – 5<sup>th</sup>. XIX Biennial International Conference on Infant Studies.
- Montirosso R, Provenzi L, Taviani D, Ciceri F, Missaglia S, Tronick E, Morandi F, Borgatti R (2012). 5-HTTLPR polymorphism is associated to differences in behavioral response and HPA reactivity to a social stressor in 4-month-old infants. Minneapolis MN, June, 7<sup>th</sup> – 9<sup>th</sup>. XVIII Biennial International Conference on Infant Studies.