

music & the brain

From research to clinical and societal impact

PROGRAM



Monday 22/06/2025+B4:F28	Tuesday 23/06/2025	Wednesday 24/06/2025	Thursday 25/06/2025	Friday 26/06/2025
The big picture on music & neuroscience	Music cognition through developmental lenses	The predictive brain behind the musical experience	The intrinsically rewarding and social nature of music	And now, applications (clinical, educational)
	08:45 - 9:00: welcome	08:45 - 9:00: welcome	08:45 - 9:00: welcome	08:45 - 9:00: welcome
	9:00-10:45 Laura Cirelli Capturing Musical Development: From Living Rooms to Laboratories	9:00-10:45 Tomas Lenc Investigating how humans categorize rhythm: periodicity and beyond	9:00-10:45 Ernest Mas-Herrero From Prediction to Pleasure: The Neuroscience of Musical Reward	9:00-9:45 Alice Cancer Rhythmic Reading Training: a rhythm-based intervention for dyslexia
	10:45 - 11:15 Coffee break	10:45 - 11:15 Coffee break	10:45 - 11:15 Coffee break	9:45-10:30 Laura Fusar Poli Good vibes only: Exploring music-based interventions for mental health
	11:15-13 Roberta Bianco Rhythm and Melody in the Brain: Comparative and Developmental Perspectives	11:15-13 Tomas Matthews Learning to predict a good time: Theoretical and computational models for understanding our engagement with rhythmic music	11:15-13 Giacomo Novembre Challenges and innovations in the neuroscience of music	10:30 - 11:00 Coffee break
				11:00-11:45 Antono Pisani When synaptic plasticity goes away: the paradigm of musician's dystonia
				11:45-12:30 Elvira Brattico Benefits of music learning in educational and clinical settings
13:00-14:30 Welcome desk & registration	13:00-14:30 Lunch	13:00-14:30 Lunch	13:00-14:30 Lunch	12:30-13:00 Closing Remarks & Goodbye
14:00 - 14:30 Openings & presentation	14:00-15:45 <i>Beyond Human Cognition</i> Andrea Ravignani A cross-species dive into musicality	14:00-15:45 <i>The world of hyperscanning</i> Federico Curzel & Felix Bigand	14:00-15:45 <i>Open Science & Multilab</i> Massimo Grassi Everything is cool when you are part of a team - The Music Ensemble project	
14:30 - 15:30 Keynote talk Robert Zatorre				
15:30 - 16:30 Keynote talk Virginia Penhune	16:00 - 17:30 Open mic & discussion	16:00 - 17:30 Open mic & discussion	16:00 - 17:30 Open mic & discussion	
16:30 - 17:30: <i>science speed dating</i>				
17:30 - 20:00 Welcome cocktail	FreeStyle	FreeStyle	From 18:30 Social Event & Dinner	

frontal & interactive lessons on main music cognition topics
 "Where are we going" panels & discussions
 breaks and social moments

...AND SOME PAPERS!

We have asked our speakers to select one paper for the students that they believe **best represents their talk** (either from their own work or from another research group).

We thought they might be useful for getting into the mood of the school...

You can find the papers and their links below!

SURNAME	NAME	PAPER	LINK
Bianco	Roberta	Bianco, R., Tóth, B., Bigand, F., Nguyen, T., Sziller, I., Háden, G. P., ... & Novembre, G. (2026). Human newborns form musical predictions based on rhythmic but not melodic structure. <i>PLoS biology</i> , 24(2), e3003600.	https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3003600
Bigand	Félix	Gugnowska, K., Novembre, G., Kohler, N., Villringer, A., Keller, P. E., & Sammler, D. (2022). Endogenous sources of interbrain synchrony in duetting pianists. <i>Cerebral Cortex</i> , 32(18), 4110-4127.	https://academic.oup.com/cercor/article/32/18/4110/6507365
Brattico	Elvira	Lippolis, M., Müllensiefen, D., Frieler, K., Lanza, K., Vuust, P., Mazzon, L., & Brattico, E. (2025). The Power of Practice: A Longitudinal Study, Systematic Review and Meta-analysis on the Role of Intensity of Music Training for Enhancing Musical and Non-Musical Abilities. <i>PsyArxiv</i>	https://osf.io/preprints/psyarxiv/huwyx
Cancer	Alice	Cancer, A., Bonacina, S., Antonietti, A., Salandi, A., Molteni, M., & Lorusso, M. L. (2020). The effectiveness of interventions for developmental dyslexia: Rhythmic reading training compared with hemisphere-specific stimulation and action video games. <i>Frontiers in Psychology</i> , 11, 1158.	https://doi.org/10.3389/fpsyg.2020.01158
Cirelli	Laura	Kragness, H. E., Anderson, L., Chow, E., Schmuckler, M., & Cirelli, L. K. (2023). Musical groove shapes children's free dancing. <i>Developmental Science</i> , 26(1), e13249.	http://doi.org/10.1111/desc.13249
Curzel	Federico	Curzel, F., Tillmann, B., Fournel, A., Novembre, G., & Ferreri, L. (2026). Joint music listening enhances interpersonal affective and neural synchrony.	https://doi.org/10.1016/j.cortex.2026.02.012
Fusar Poli	Laura	Fusar-Poli, L., Politi, P. (2025). Music Therapy and Music-Based Intervention in Psychiatry. In: Raglio, A. (eds) <i>Music and Music Therapy Interventions in Clinical Practice</i> . Neurocultural Health and Wellbeing. Springer, Cham.	https://doi.org/10.1007/978-3-031-88578-5_13
Grassi	Massimo	Grassi, M., Talamini, F., Altoè, G., Brattico, E., Caclin, A., Carretti, B., ... & Zappa, A. (2025). Do musicians have better short-term memory than nonmusicians? A multilab study. <i>Advances in Methods and Practices in Psychological Science</i> , 8(4), 25152459251379432.	https://doi.org/10.1177/25152459251379432
Lenc	Tomas	Barbero, F. M., Lenc, T., Jacoby, N., Polak, R., Varlet, M., & Nozaradan, S. (2025). Revealing rhythm categorization in human brain activity. <i>Science advances</i> , 11(31), eadu9838.	https://www.science.org/doi/full/10.1126/sciadv.adu9838
Mas Herrero	Ernest	Mas-Herrero, E., Zatorre, R. J., & Marco-Pallarés, J. (2025). Understanding individual differences to specific rewards through music. <i>Trends in Cognitive Sciences</i> .	https://www.cell.com/trends/cognitive-sciences/abstract/S1364-6613(25)00178-0
Matthews	Tomas	Matthews, T. E., Stupacher, J., & Vuust, P. (2023). The pleasurable urge to move to music through the lens of learning progress. <i>Journal of Cognition</i> , 6(1), 55.	https://pmc.ncbi.nlm.nih.gov/articles/PMC10503533/
Novembre	Giacomo	Bigand, F., Bianco, R., Abalde, S. F., Nguyen, T., & Novembre, G. (2025). EEG of the dancing brain: decoding sensory, motor,	https://doi.org/10.1523/JNEUROSCI.2372-24.2025

		and social processes during dyadic dance. <i>Journal of Neuroscience</i> , 45(21).	
Penhune	Virginia	Penhune, V. B. (2021). Understanding sensitive period effects in musical training. In <i>Sensitive periods of brain development and preventive interventions</i> (pp. 167-188). Cham: Springer International Publishing.	https://www.researchgate.net/profile/Virginia-Penhune/publication/354170822_Understanding_Sensitive_Period_Effects_in_Musical_Training/links/61b91e3a1d88475981ee79bc/Understanding-Sensitive-Period-Effects-in-Musical-Training.pdf
Pisani	Antonio	Diagnosis and pathogenesis of dystonia: clinical heterogeneity, shared mechanisms, and neurodevelopmental origins	https://doi.org/10.1016/S1474-4422(26)00098-0
Ravnani	Andrea	Honing, H., Ten Cate, C., Peretz, I., & Trehub, S. E. (2015). Without it no music: Cognition, biology and evolution of musicality. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 370(1664).	https://doi.org/10.1098/rstb.2014.0088