

11th Annual



Program

Hyatt Regency
Sonoma Wine Country, Santa Rosa
September 6-9, 2023



The International Congress
for Integrative Developmental
Cognitive Neuroscience

Program At-A-Glance

11th Annual Flux Congress 2023 Program-at-a-Glance Hyatt Regency Sonoma Wine Country				
	Wednesday 6-Sep	Thursday 7-Sep	Friday 8-Sep	Saturday 9-Sep
8:30 AM				
8:45 AM				
9:00 AM	Pre-Conference Workshops	Presidential Welcome 8:45am - 9:15am		Arrival Coffee 8:45am - 9:15am
9:15 AM		Science Of Learning 9:15am - 10:40am		Flash Talks 9:15am - 10:00am
9:30 AM				
9:45 AM			Local Symposium: Vulnerability and Resilience 9:00am - 10:15am	
10:00 AM				
10:15 AM			Break	
10:30 AM				Diversity Symposium 10:00am - 11:00am
10:45 AM			Break	
11:00 AM			Young Investigator Award Talk 11:00am - 11:25am	
11:15 AM			Dissertation Award Talk	
11:30 AM			Young Investigator Award Talk 11:45am - 12:10pm	
11:45 AM				Poster Session #3 11:00am - 12:30pm
12:00 PM			Lunch (on your own) 12:10pm - 1:40pm	
12:15 PM				
12:30 PM				Lunch (on your own) 12:30pm - 2:00pm
12:45 PM				
1:00 PM			Oral Session 1 - Applications and challenges? 1:45pm - 3:00pm	
1:15 PM			Oral Session 2 - Emerge methods infancy 1:45pm - 3:00pm	
1:30 PM		Transition Break		
1:45 PM		Oral Session 3 - Social brain in situ 3:15pm - 4:30pm		
2:00 PM		Oral Session 4 - Role of puberty 3:15pm - 4:30pm		
2:15 PM			Peder Sather Foundation Symposium 2:00pm - 3:15pm	
2:30 PM			Transition Break	
2:45 PM				
3:00 PM			Oral Session 5 - Alt methods 2:45pm - 4:00pm	
3:15 PM			Oral Session 6 - Early life adversity 2:45pm - 4:00pm	
3:30 PM			Transition Break	
3:45 PM				
4:00 PM			Oral Session 7 - Lifespan 4:15pm - 5:30pm	
4:15 PM			Oral Session 8 - Bridge too far 4:15pm - 5:30pm	
4:30 PM				
4:45 PM		Poster Session #1 4:30pm - 6:00pm		
5:00 PM	Flux Trainee Workshop - Grant Writing 5:00pm - 5:50pm			
5:15 PM				
5:30 PM				
5:45 PM				
6:00 PM	Flux Trainee Workshop - Career Panel 6:00pm - 6:50pm		Poster Session #2 5:30pm - 7pm	
6:15 PM				
6:30 PM				
6:45 PM				
7:00 PM				
7:15 PM				
7:30 PM				
7:45 PM				
8:00 PM		Flux Fun Night 7:00pm - Late		
8:15 PM				
8:30 PM				
8:45 PM		Reception offsite followed by karaoke at The Dirty Karaoke Bar		
9:00 PM				
9:15 PM				
9:30 PM				
9:45 PM				
10:00 PM				

Program Contents

About the Flux Congress

The aim of the congress is to provide a forum for developmental cognitive neuroscientists to share their findings on the development of brain processes that support cognition and motivation from an integrative neuroscience perspective. Thus, it provides an opportunity for scientists in the field to expand their knowledge base, and also be better informed of translational approaches.

The Flux Society was launched in June 2014, and has seen growth in its membership each year. To learn more about the Flux Society, please visit www.fluxsociety.org.

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Flux Awards



Huttenlocher Lecturer Award

This award is presented to an outstanding researcher in the field of Developmental Cognitive Neuroscience.

2023 Awardee: **Beatriz Luna** | University of Pittsburgh

Beatriz Luna, PhD is the Distinguished Staunton Professor of Psychiatry and Pediatrics and Professor of Psychology at the University of Pittsburgh. She is the founder and Director of the Laboratory for Neurocognitive Development, the founder and acting past president of the Flux Society for Developmental Cognitive Neuroscience, and Editor and Chief of the journal *Developmental Cognitive Neuroscience*.

Dr. Luna investigates the neurobiological mechanisms that support the transition from adolescence to adulthood when lifetime trajectories are determined to inform basic processes of normative development and plasticity that can inform abnormal trajectories such as in mental illness. Her group uses multimodal neuroimaging including fMRI, DTI, MEG, 7T MRSI, PET, EEG, sEEG, and MEG. Her influential models of adolescent development illustrate a period of unique access to adult level cognition within heightened motivation propelling specialization. She is highly published and has received numerous awards including the Presidential Early Career Award in Science and Engineering, the Provost's Award for Excellence in Doctoral Mentoring, and Distinguished Professor of Psychiatry. Her research has been continuously supported by the National Institutes of Mental Health and has informed US Supreme Court briefs regarding extended sentencing in the juvenile justice system.



Young Investigator Award

Supported by the Kennedy Krieger Institute

The Young Investigator Award in Cognitive Neuroscience recognizes outstanding contributions by scientists early in their careers. Award recipients have been working in the area of cognitive neuroscience for no more than 10 years involved in active independent research.

2023 Awardee: **Lara Wierenga** | Universiteit Leiden

Lara Wierenga is assistant professor at the Developmental and Educational Psychology unit of the Institute of Psychology at Leiden University. She is also the author of *Atlas of our Brain*, a popular science book in which she uses infographics to make neuroscience accessible to a wide audience.





Flux Dissertation Award

Flux is pleased to announce the establishment of the Flux Student Dissertation Award, which recognizes an exceptional, rigorous, and meticulous dissertation by one of the Congress' trainee members.

2023 Awardee: **Catalina Camacho** | Washington University in St. Louis

Cat completed her PhD in Neuroscience at Washington University in St. Louis under the mentorship of Dr. Deanna Barch in 2022. Her dissertation characterized how the brain encodes complex emotion signals across development and in relation to anxiety. To accomplish this, Cat led the development of the EmoCodes video coding system, a freely available tool for annotating video stimuli. Cat previously completed her BA in Psychology at Stanford University in 2014 with Dr. Ian Gotlib. Cat is currently a postdoctoral scholar with Dr. Chad Sylvester at WashU studying how complex emotion processing develops across infancy and early childhood and in relation to early risk factors for anxiety. Her work has been funded by NSF and NIH.



Linda Spear Award

The Mid-Career Award in Developmental Cognitive Neuroscience is named in honor of Dr. Linda Spear, a pioneer in developmental neuroscience. This award recognizes outstanding contributions by scientists at the mid-level of their careers.

2023 Awardee: **Lucina Uddin** | University of California, Los Angeles

After receiving a Ph.D. in cognitive neuroscience from the Psychology Department at the University of California Los Angeles, Dr. Uddin completed a postdoctoral fellowship in the Child Study Center at New York University. For several years she worked as a faculty member in Psychiatry & Behavioral Science at Stanford University. She recently returned to UCLA where she currently directs the Brain Connectivity and Cognition Laboratory and the Center for Cognitive Neuroscience Analysis Core in the Semel Institute for Neuroscience and Human Behavior. Within a cognitive neuroscience framework, Dr. Uddin's research combines functional and structural neuroimaging to examine the organization of large-scale brain networks supporting the development of social cognition and executive function. Her current projects focus on understanding dynamic brain network interactions underlying cognitive inflexibility in neurodevelopmental conditions such as autism spectrum disorder. Dr. Uddin's work has been published in the Journal of Neuroscience, Cerebral Cortex, JAMA Psychiatry, Biological Psychiatry, PNAS, and Nature Reviews Neuroscience.

Welcome to the eleventh meeting of Flux

Dear Fluxers,

Welcome to our 11th meeting of Flux: The Society for Developmental Cognitive Neuroscience, in Santa Rosa, California!

To-date we have **560 registrants**. We also currently have just under 600 members committed to the Flux Society.

We are greatly indebted to our amazing 2023 Program Chair **Jessica Church** (University of Texas at Austin) and her program committee for creating a unique and outstanding scientific program. The program committee organized a total of **49 talks** including invited and selected Symposia, Award talks, **16 Flash talks**, as well as **380 Posters**. Flux's year-after-year success and increased attendance and interest has led to the first ever parallel sessions. We look forward to feedback from the members on this new approach to the meeting. The program committee reviewed a large number of excellent and extremely competitive symposium submissions for a precious few available slots. We encourage authors to build upon any unselected submissions, or to generate new ones, to help us plan for future meetings.

We are again delighted to highlight our pioneers in the field with the **Huttenlocher Award Lecture**. This year, we are thrilled to bestow the **2023 Huttenlocher Award** on **Beatriz Luna** (Professor in Psychiatry at the University of Pittsburgh) for her groundbreaking work in developmental cognitive neuroscience linking systems level investigations to mechanisms and molecular neuroscience, understanding the transition from adolescence to adult neurocognitive development, and for her tireless efforts in leading the first ever international Developmental Cognitive Neuroscience Society - Flux.

We also congratulate **Lucina Uddin** (University of California, Los Angeles) who has been awarded the **Linda Spear Mid-Career Award** for contributions leveraging structural and functional connectomics and the organization of large-scale brain networks to understand the underpinnings of typical and atypical development of cognition. The Mid-Career Award in Developmental Cognitive Neuroscience is named in honor of Dr. Linda Spear, a pioneer in developmental neuroscience, and recognizes outstanding contributions by scientists at the mid-level of their careers.

Lara Wierenga (Leiden University) is this year's **Young Investigator Awardee** and was selected from a highly competitive set of candidates for her outstanding work and talk titled "**Breaking boundaries: Beyond mean differences and beyond academia**". Dr. Silvers, last year's winner, will also be speaking as she was unable to join us in Paris in 2022. We thank the **Kennedy Krieger Institute** for their continued support of the YIA!

A huge congratulations to the 2023 Dissertation Award winner, **Catalina Camacho** (Washington University in St. Louis). Catalina will be presenting the talk titled "**Complex emotion processing across development and in relation to anxiety**".

Each year the **Jacobs Science of Learning Symposium (SOL)** highlights novel connections between Flux society research and the broader field of human learning. This year we feature a symposium on the neurocognitive building blocks of skill learning, particularly highlighting executive function. The speakers are **Nadine Gaab** (Harvard University), **Cassandra Eng** (Stanford University), **Eric Wilkey** (Vanderbilt University), and **Amy Margolis** (NYSPI, Columbia University). We continue to be grateful to the **Jacobs Foundation** for enabling this symposium and supporting such a great panel of speakers. We also thank **Yee Lee Shing** for organizing our JF grant proposal, and **Yee Lee, Tehila Nugiel, Jessica Church, and Andrew Lynn** for organizing this exciting symposium.

We thank **Meghan Forder** (University of California, Los Angeles) and **Ethan McCormick** (Leiden University) for organizing the pre-conference workshops "Framing the Developmental Neuroscience of Adolescence" and "Longitudinal Modeling parts 1 and 2".

A special thank you to the Flux Trainee Committee Co-Chairs, **Divyangana Rakesh** (Harvard University) and **Andrew Lynn** (Vanderbilt University) as well as the rest of their committee: Eliya Ben-Asher (University of Texas at Austin), Theresa Cheng (Massachusetts General Hospital), Felicia Hardi (University of Michigan), Niamh MacSweeney (University of Edinburgh), Matt Mattoni (Temple University), Nicolas Murgueitio (University of North Carolina at Chapel Hill), Tehila Nugiel (University of North Carolina at Chapel Hill), Michelle Shipkova (University of North Carolina at Chapel Hill), Phoebe Thomson (Child Mind Institute), and Lu (Lucy) Zhang (University of Melbourne) for organizing the two trainee panels –

Mentor/Mentee Match-up, Career Perspectives Panel, Grant Writing Workshop, and Student & Early Career Researchers Lunch onsite.

We are enormously grateful to **Silvia Bunge** (University of California, Berkeley) and **Simona Ghetti** (University of California, Davis) for helping to raise funds from their universities and from several non-profit organizations (see sponsor list below), as well as for organizing Flux Fun Night.

Flux Fun Night will take place on Thursday September 7th! For all those with a ticket, we can't wait to celebrate with you onsite for dinner and drinks at La Rosa Tequileria and Grill at 500 4th street. It's a great venue serving up modern Mexican cuisine. Whether or not you will be attending dinner, you are welcome – indeed encouraged – to participate in the time-honored Flux tradition of karaoke! We'll be heading over to The Dirty at/after 9pm located at 616 Mendocino Ave. From your host, "This location is the oldest bar in Santa Rosa. The owner reminds us that it's a dive bar, and so it's not necessarily the cleanest place... which we could have gathered from the name!" It was the first speakeasy in Santa Rosa and it was one of the first gay bars in Sonoma County. This location has a diverse history and great community." We can't wait!

We thank the Flux Diversity Working Group Co-Chairs **Stefanie Bodison** (University of Florida) Chair and **Jenn Pfeifer** (University of Oregon) and their committee members (Flux webpage) for all their work to develop the Flux Diversity Session onsite during the conference as well as the far reaching Affinity Groups. Learn more about how you can participate here - <https://fluxsociety.org/flux-diversity-working-group/>.

Flux is very thankful for the successes of our **Communications Committee** chaired by Tzipi Horowitz-Kraus, Technion-Israel Institute of Technology and Kennedy Krieger Institute in Maryland with Clare McCann – University of California, Los Angeles; Léa C. Michel – Radboud University Medical Centre; Christina Lutz – University of Zurich, Andrew Lynn – Vanderbilt University, Arielle Keller – University of Pennsylvania, and Matt Mattoni – Temple University for their work to establish better communication with our society and beyond to the wider community. They have taken Flux to the next level in social media (Facebook, Twitter, LinkedIn), established a new blog on the Flux web site, and the new Flux Podcast (Sensitive Periods: A Flux Society Podcast). We are amazed at what they've accomplished in such a short time! Thank you team for your work.

We are also thankful to our sponsors and exhibitors. The University of California, Davis with support from the Behavioral Health Center of Excellence, Center for Mind

and Brain, MIND Institute, and the Psychology Department as well as The University of California, Berkeley with support from the College of Letters & Sciences, the Helen Wills Neuroscience Institute, and the Psychology Department have been key sponsors of Flux 2023. We would like to thank Professors Ron Dahl and Christian Tamnes from the Peder Sather Foundation and University of California, Berkeley for supporting the conference and Professor Stephen Hinshaw from the Psychology Department at University of California, Berkeley for their support. We are also thankful for the continued generous support of the Young Investigator Award by the **Kennedy Krieger Institute**. Please make sure to visit the booth of our exhibitor and supporter, Turing Medical.

The **Business Meeting** for Flux Society member, will be happening post conference virtually – stay tuned for details. We will also have a virtual Flux Roundtable following the business mtg to discuss how big data consortium studies can inform and be informed by independent investigator studies. We are also continuing our exciting Public Outreach Events – please stay tuned for more details because we would like to know your thoughts and questions on this critical topic. Promote these events and encourage people to register to attend – more details at <https://fluxsociety.org/fluxoutreach/> as it becomes available.

We also want to give a special thank you to **Podium Conference Specialists** Marischal De Armond and Michelle Smith. We have known and grown with Podium Conferences since the beginning and very much appreciate their hard work and contributions to the Flux society. We are forever indebted to their vision and collaboration. Next year, because of Flux's growth and expansion we will be beginning a new chapter with a new management company, Parthenon Management Group. Parthenon comes highly recommended for growing societies like Flux, and stems from the successful work with ACNP and SOBP, amongst other societies.

A reminder of the bond that brings us together is that **"Flux" is not an acronym (not FLUX)** but rather a term used to highlight that, as developmental cognitive neuroscientists, we are distinct in our investigations of the dynamic nature of cognition through development as stated in the aim of the Flux society ***"To advance the understanding of human brain development by serving as a forum for professional and student scientists, physicians, and educators to: exchange information and educate the next generation of developmental cognitive neuroscience researchers; make widely available scientific research findings on brain development; encourage translational research to clinical populations; promote public information by***

discussing implications on the fields of education, health, juvenile law, parenting, and mental health, and encourage further progress in the field of developmental cognitive neuroscience." The Flux Society strives to support Flux meetings going forward, but also to expand our ability to provide venues for scientific discussion and translational application.

We want to remind you of our ever growing **job bank** where there are postings for every level of career development for those looking for a position and those looking to hire.

We are delighted to invite you to plan on attending **Flux 12, September 2024** in Baltimore, Maryland, which as always promises to be an outstanding meeting. Stay tuned for more information!

A warm thank you to the **members of the Flux society and conference participants** for their enthusiasm and making the time to attend the Flux conference! Welcome new Fluxers, and a special thank you to those who have been supporting Flux through its maturation, your contributions are noted and greatly appreciated!

We are looking forward to expanding our understanding of developmental cognitive neuroscience, interacting with attendees, and are confident that you will leave with greater understanding, new friends, and enhanced creativity in your approach.

Connect and Like us on Facebook, Twitter & LinkedIn. Please tweet throughout the meeting using #Flux2023.

Sincerely,

Damien Fair
President

Bea Luna
Past President

Eveline Crone
Vice-President

Deanna Barch
Executive Treasurer

Margaret Sheridan
Executive Board Secretary

Brad Schlaggar
Board Member

Nim Tottenham
Board Member

Lucina Uddin
Board Member

Jennifer Pfeifer
Board Member

Christian K. Tamnes
Board Member

Tzipi Horowitz-Kraus
Board Member

Nikolaus Steinbeis
Board Member



Flux Leadership

Board of Directors

Damien Fair President	University of Minnesota, USA
Eveline Crone President-Elect	Leiden University, NLD
Beatriz Luna Past-President	University of Pittsburgh, USA
Deanna Barch Treasurer	Washington University at St. Louis, USA
Margaret Sheridan Secretary	University of North Carolina at Chapel Hill, USA
Brad Schlaggar	Kennedy Krieger Institute, USA
Nim Tottenham	Columbia University, USA
Jennifer Pfeifer	University of Oregon, USA
Christian K. Tamnes	University of Oslo, NOR
Lucina Uddin	University of California, Los Angeles, USA
Tzipi Horowitz-Kraus	Technion, ISR
Nikolaus Steinbeis	University College London, GBR

Congress Scientific Program Committee

Jessica Church-Lang Chair	University of Texas at Austin
Margaret Sheridan Incoming Chair	University of Carolina at Chapel Hill
Juliet Davidow	Northeastern University
Anna van Duijvenvoorde	Leiden University
Deanna Greene	University of California, San Diego
Andrew Lynn	Vanderbilt University
Scott Marek	Washington University in St. Louis
Ethan McCormick	Radboud UMC
Kate Mills	University of Oregon
Tehila Nugiel	University of North Carolina at Chapel Hill
Tracy Riggins	University of Maryland
Yee Lee Shing	Goethe University Frankfurt
Jennifer Silvers	University of California, Los Angeles

Flux Congress Management

Podium Conference Specialists

Michelle Smith
Marischal De Armond
Tori Lunden



General Congress Information

Meeting Venue

Hyatt Regency Sonoma Wine Country Hotel
170 Railroad Street
Santa Rosa, CA 95401
United States of America

All congress sessions will take place at this location, and the Flux Fun Night will take place at an offsite venue.

Registration

Congress registration fees include access to all sessions including, speaker presentations, coffee breaks, and poster sessions.

Name Badges

Your name badge is your admission ticket to all conference sessions and coffee breaks. Please wear it at all times. At the end of the conference we ask that you recycle your name badge at one of the name badge recycling stations, or leave it at the Registration Desk.

Registration and Information Desk Hours

The Registration and Information Desk, located on the Mezzanine, will be open during the following dates and times:

- Wednesday, September 6 08:30 – 18:00
- Thursday, September 7 08:00 – 18:00
- Friday, September 8 08:30 – 19:00
- Saturday, September 9 08:30 – 17:00

If you need assistance during the meeting, please visit the Registration Desk.

Staff

Congress staff from Podium Conference Specialists can be identified by orange ribbons on their name badges. For immediate assistance, please visit us at the registration desk in the lobby.

Internet Services

Wireless Internet is available to delegates for no charge. Simply choose the Hyatt Meetings network, and enter the password **FLUX23**. Kindly note, the WiFi strength is ideal for checking emails and websites but is not strong enough for streaming videos or heavy social media use.

If you are active on social media, make sure to hashtag #FLUX2023 @Fluxsociety when referring to the meeting. We ask all Flux delegates to respect no live tweeting of presentations without prior approval from the speakers/ authors. We encourage social tweets about the conference and look forward to growing our online community.

Poster Information Set-Up / Removal

There are three Poster Sessions during the congress and posters have been allocated to one of the sessions based on poster themes. Poster presenters must set-up and remove their posters during the following times.

Poster Session 1 – Thursday, September 7

- Poster Set-up: Thursday, September 7, between 08:30 and 10:30
- Poster Hours: Thursday, September 7, 16:30 – 18:00
- Removal: Thursday, September 7, no later than 18:00

Poster Session 2 – Friday, September 8

- Poster Set-up: Friday, September 8, between 08:30 and 10:30
- Poster Hours: Friday, September 8, 17:30 – 19:00
- Removal: Friday, September 8, no later than 19:00

Poster Session 3 – Saturday, September 9

- Poster Set-up: Saturday, September 9, between 08:30 and 11:00
- Poster Hours: Saturday, September 9, 11:00 – 12:30
- Removal: Saturday, September 9, no later than 12:30

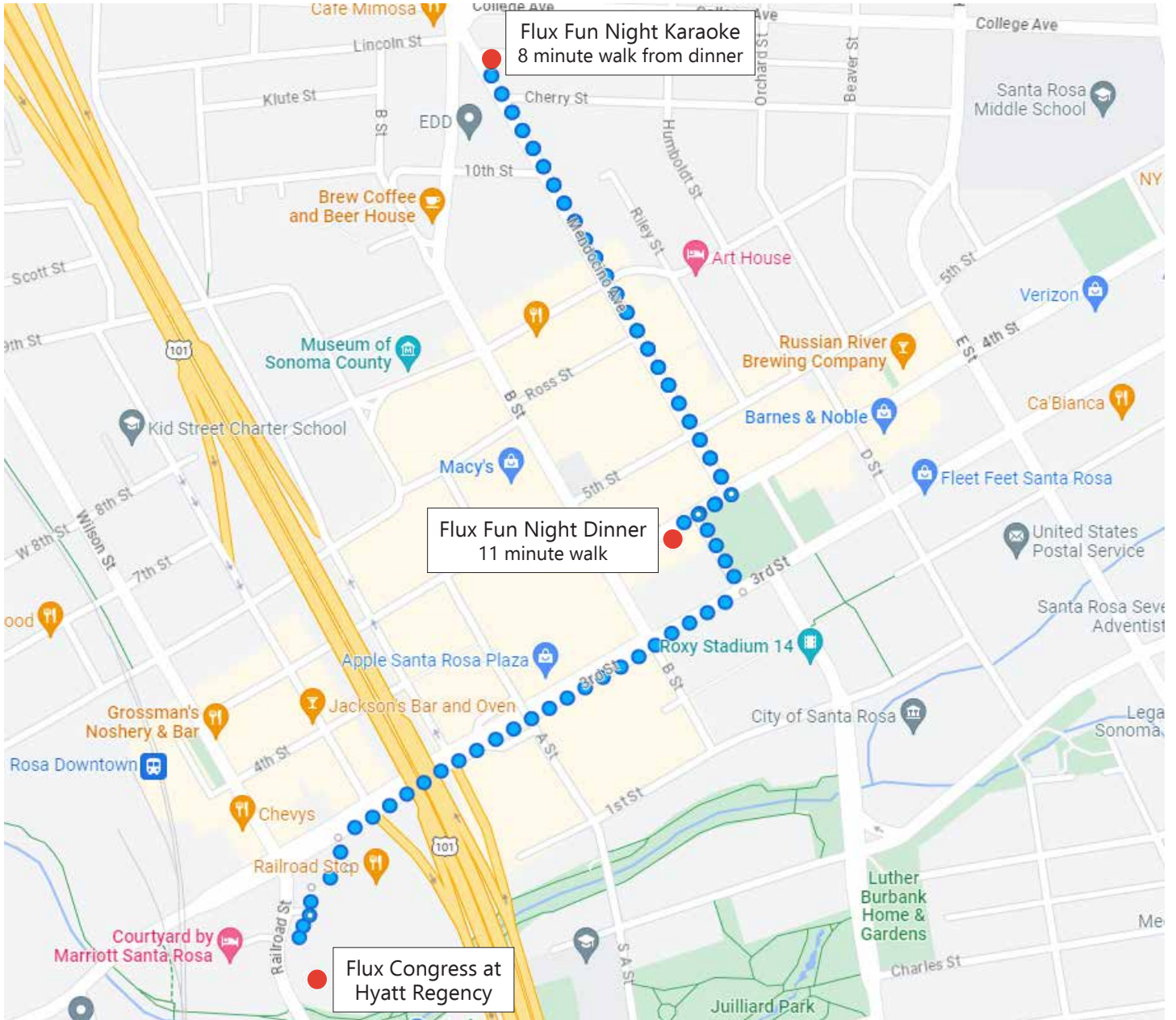
Flux Social Functions

Flux Fun Night

This year's Flux fun night dinner will take place at La Rosa Tequileria and Grill at 500 4th Street, a short walk from the hotel. This dinner requires pre-registration and will include a grazing dinner of tacos, Mexican style cuisine and fun!

Following dinner, make your way to a local karaoke bar, The Dirty at 616 Mendocino Avenue for more fun! Please note, the karaoke evening is first come, first served in the bar, beginning after 20:30.

Flux Fun Night 2023 Locations





Railroad Square Restaurants & Bars

Americana Classic Farm To Table

205 5th Street, Suite A, Santa Rosa
707-755-1548

Chevys Fresh Mex

24 4th Street, Santa Rosa
707-571-1085

Grossman's Noshery & Bar

308 1/2 Wilson Street, Santa Rosa
707-595-7707

Jackson's Bar & Oven

135 4th Street, Santa Rosa
707-545-6900

Khoom Lanna Thai Food

107 4th Street, Santa Rosa
707-545-8424

19TEN Bar & Provisions

115 4th Street, Santa Rosa
707-791-7494

La Gare French Restaurant

208 Wilson Street, Santa Rosa
707-528-4355

LoCoco's Cucina Rustica

117 4th Street, Santa Rosa
707-523-2227

Paradise Sushi & Grill

119 4th Street, Santa Rosa
707-525-1690

Breakfast & Lunch

A'Roma Roasters - Coffee, Tea & More

95 5th Street, Santa Rosa
707-576-7765

The Branch Line

10 4th Street, Santa Rosa
707-595-1941

*Plant-Based Eatery & Mercantile

Omelette Express

112 4th Street, Santa Rosa
707-525-1690

Nimble & Finns

123 4th Street, Santa Rosa
707-666-9590

Wine Tasting Room

4th Street Cellars

127 4th Street, Santa Rosa
707-806-2779





Downtown Restaurants & Bars

Ausiello's 5th Street Bar & Grill

609 5th Street
(707) 579-9408

Beer Baron Bar & Kitchen

614 4th Street
(707) 757-9294

Belly Left Coast Kitchen & Tap Room

523 4th Street
(707) 526-5787

Carmen's Bistro & Bar

619 4th Street
(707) 843-5186

Eddie's Kitchen

409 Mendocino Avenue
(707) 293-9906

El Coqui Puerto Rican

400 Mendocino Avenue
(707) 542-8868

El Fogon Taco Shop

623 4th Street
(707) 575-0574

Fu Zhou Super Buffet Chinese

450 Mendocino Avenue
(707) 523-7000

Golden Bun Vietnamese Sandwiches

490 Mendocino Avenue
(707) 890-5678

Haku Sushi

518 7th Street
(707) 541-6359

Han Bul Korean BBQ 522 7th Street

(510) 206-3947

Jojo Sushi Restaurant & Sushi Bar

645 4th Street
(707) 569-8588

Kafal Restaurant

535 Ross Street
(707) 595-3311

Kancha Champagne Bar & Tapas

643 4th Street
(707) 623-9793

La Doña Mexican Cuisine & Bar

458 B Street
(707) 978-2869

La Rosa Tequileria & Grille

500 4th Street
(707) 523-3663

Mi Pueblo Santa Rosa

703 4th Street
(707) 843-7804

Aroma de Café

620 5th Street
(707) 293-9246

Miso Good Ramen

507 4th Street
(707) 545-7545

Perch + Plow

96 Old Courthouse Square
(707) 541-6896



Sushi Rosa

515 4th Street
(707) 843-5132

Thai House 525

4th Street
(707) 526-3939

The New Sizzling Tandoor

409 Mendocino Avenue
(707) 579-5999

Ting Hau Restaurant

717 4th Street
(707) 545-5204

Tipsy Taco & Cantina

505 Mendocino Avenue
(707) 890-5581

Warike Restobar

527 4th Street
(707) 536-9201

Willibee's Wine & Spirits

700 3rd Street
(707) 978-3779

Breakfast & Lunch

4th Street Market &

300 Mendocino Avenue
(707) 573-9832

Grateful Bagel

631 4th Street
(707) 535-0570

Mac's Delicatessen

630 4th Street
(707) 545-3785

The Naked Pig

640 5th Street

Wine Tasting

Trecini Winery Tasting Room

684 7th Street
(707) 525-9400

Breweries & Beer

3 Disciples Brewing

501 Mendocino Avenue
(707) 978-2459

Civilization Brewing

104 Mendocino Avenue
(707) 523-3060

Flagship Taproom

446 B Street
(707) 541-6716

Russian River Brewing Co.

725 4th Street
(707) 545-2337

Shady Oak Barrel House

420 1st Street
(707) 575-7687

Coffee, Tea & Treats

Cafe Des Croissants

85 Santa Rosa Avenue
(707) 570-2078

Crooks Coffee

404 Mendocino Avenue
(707) 791-3365

Land + Water Coffee

621 4th Street
(707) 527-3731

Noble Folk Ice Cream & Pie Bar

539 4th Street
(707) 978-3392

Sift Dessert Bar

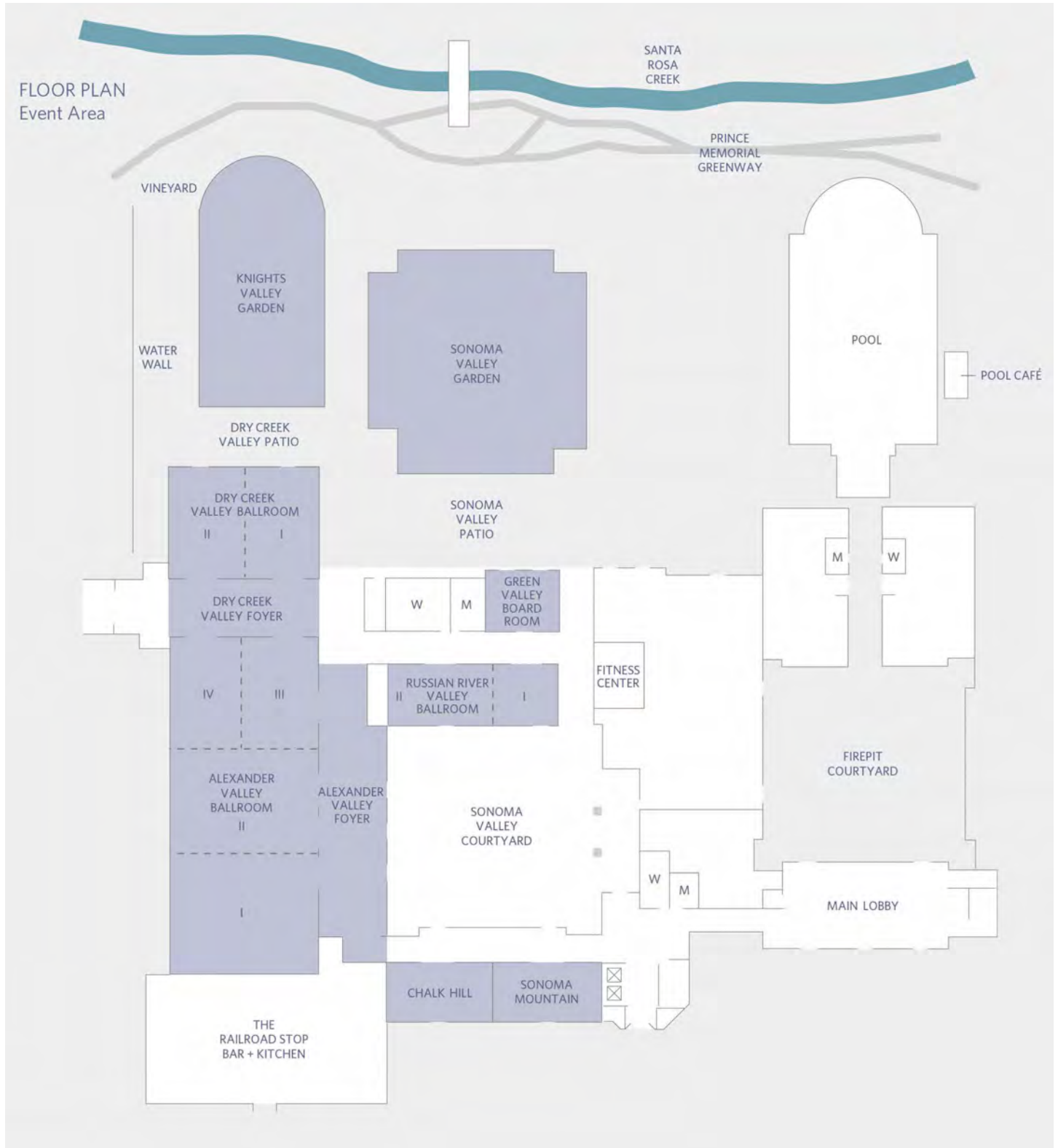
404 Mendocino Avenue, Suite A
(707) 703-4228

Teaside Bubble Tea

519 4th Street
(707) 541-6297



Conference Floor Plan



Flux Congress Program Schedule

All sessions will be held in the Alexander Valley Ballroom, Hyatt Regency Sonoma Wine Country

WEDNESDAY, SEPTEMBER 6, 2023

09:00 – 12:00

Alexander Valley
Ballroom I

Pre-Conference Workshop 1

Longitudinal Modelling Morning Session

Organizer: **Ethan McCormick**, *Leiden University*

13:00 – 17:00

Alexander Valley
Ballroom I

Pre-Conference Workshop 2

Longitudinal Modelling Afternoon Session

Organizer: **Ethan McCormick**, *Leiden University*

13:00 – 16:00

Alexander Valley
Ballroom II

Pre-Conference Workshop 3

Framing the Developmental Neuroscience of Adolescence

Organizer: **Meghan Forder**, *University of California, Los Angeles*

17:00 – 17:50

Alexander Valley
Ballroom II

Flux Trainee Workshop: Grant Writing

18:00 – 18:50

Alexander Valley
Ballroom II

Flux Trainee Workshop: Career Panel

THURSDAY, SEPTEMBER 7, 2023

08:45 – 09:15

Alexander Valley
Ballroom I & II

Presidential Welcome

09:15 – 10:40

Alexander Valley
Ballroom I & II

Science of Learning Symposium

Sponsored by Jacobs Foundation

Chair: **Tehila Nugiel**, *University of North Carolina at Chapel Hill*

Speakers: **Nadine Gaab**, *Harvard University*

The Typical and Atypical Reading Brain: How a Neurobiological Framework of Early Language and Reading Development Can Inform Educational Practice and Policy

Cassandra Eng, *Stanford School of Medicine*

Leveraging Educational Neuroscience to Optimize Active Gameplay Contexts that Promote Executive Function Skills and Brain Plasticity

Eric Wilkey, *Vanderbilt University*

The domain-specificity of domain-general: Attention, executive function, and mathematical skills

Amy Margolis, *Columbia University*

The Role of Environmental Chemicals and Social Stressors in the Etiology of Learning Difficulties



Flux Congress Program Schedule

10:40 – 11:00

Break

11:00 – 11:25

Alexander Valley
Ballroom I & II

Young Investigator Award Talk 2022

Sponsored by Kennedy Krieger

Chair: **Margaret Sheridan**, *University of North Carolina at Chapel Hill*

The role of experience in adolescent brain development

Jennifer Silvers, *University of California Los Angeles*



Kennedy Krieger Institute

11:25 – 11:45

Alexander Valley
Ballroom I & II

Dissertation Award Talk

Chair: **Deanna Barch**, *Washington University*

Complex emotion processing across development and in relation to anxiety

Catalina Camacho, *Washington University in St. Louis*

11:45 – 12:10

Alexander Valley
Ballroom I & II

Young Investigator Award Talk 2023

Sponsored by Kennedy Krieger

Chair: **Tzipi Horowitz-Kraus**, *Technion*

Breaking Boundaries: Beyond mean differences and beyond academia

Lara Wierenga, *University Leiden*



Kennedy Krieger Institute

12:10 – 13:40

Lunch (on own)

13:45 – 15:00

Alexander Valley
Ballroom I

Oral Session 1: Applications and challenges in using computational models to predict brain development and psychopathology in youth

Organizers: **Niousha Dehestani Kolagar**, *Deakin University*

Sarah Whittle, *The University of Melbourne*

Speakers: **Jessica Buthmann**, *Stanford University*

Longitudinal clustering of brain structure and clinical symptomatology in adolescence is predicted by sex, stress exposure, and parenting environment

Tiffany Ho, *University of California, Los Angeles*

Demographic, clinical, environmental, and neural predictors of depression symptoms in the ABCD study

Niousha Dehestani, *Deakin University*

Developmental brain changes during puberty and associations with mental health problems; Puberty age and brain age

Esten Høyland Leonardsen, *University of Oslo*

Title not provided

Alexander Valley
Ballroom II

Oral Session 2: Emerging methods for MRI in infants and young children

Organizer: **Áine Dineen**, *Trinity College Dublin*

Chair: **Rhodri Cusack**, *Trinity College Dublin*

Speakers: **Brittany Howell**, *Virginia Tech*

Acquiring connectome data longitudinally in non-sedated sleeping infants and toddlers

Áine Dineen, *Trinity College Dublin*

100 Babies: Insights from awake fMRI at 2-months

Cameron Ellis, *Stanford University*

How to read a baby's mind: A protocol for fMRI with awake, behaving infants

Melanie Ganz-Benjaminsen, *University of Copenhagen*

Clinical MRI without anaesthesia in children aged 4-10

Flux Congress Program Schedule

15:00 – 15:15

Transition

15:15 – 16:30

Alexander Valley
Ballroom I

Oral Session 3: The social brain in situ: Emerging uses of naturalistic conditions to study social development

Organizer and Chair: **Chiara Bulgarelli**, *Birkbeck College, University of London*

Speakers: **Sam Wass**, *University of East London*

Leaving the baby in the bathwater: Understanding real-world attention development using naturalistic dual EEG recordings of caregiver-child interactions

Chiara Bulgarelli, *Birkbeck College, University of London*

Investigating social preference of toddlers by using wearable fNIRS in an immersive virtual reality set-up

Tessa George, *Washington University School of Medicine in St. Louis*

Illuminating brain function underlying gross motor imitation with high-density diffuse optical tomography (HD-DOT)

Ahmad Samara, *University of British Columbia*

Gradients go to the movies: Macroscale cortical organization during naturalistic viewing in children and adolescents

Alexander Valley
Ballroom II

Oral Session 4: The role of puberty in brain development: A translational approach

Organizer & Chair: **Cecile Ladouceur**, *University of Pittsburgh*

Moderator: **Kristen Delevich**, *Washington State University*

Speakers: **Sandra Thijssen**, *Radboud University*

The role of puberty in the relations between family environment and the development of the amygdala-mPFC circuitry

Giorgia Picci, *Boys Town National Research Hospital*

Pubertal hormones modulate neural oscillatory activity: Emergent sex differences and developmental fine-tuning

Shawn Sorrells, *University of Pittsburgh*

Immature amygdala excitatory neurons migrate and mature during puberty in humans and mice

Mar Sanchez, *Emory University*

The role of puberty on brain development: A longitudinal study in male rhesus macaques

16:30 – 18:00

Poster Session 1

Alexander Valley
Ballroom III & IV
and Dry Creek
Ballroom

19:00 – Onwards

Flux Fun Night

Pre-registration is required to participate in the Flux dinner at La Rosa Tequileria.

First come, first served for the karaoke portion of the evening at The Dirty!

Flux Congress Program Schedule

FRIDAY, SEPTEMBER 8, 2023

09:00 – 10:15

Alexander Valley
Ballroom I & II

Local Symposium: Vulnerability and resilience in brain development

Moderators: **Silvia Bunge**, *University of California, Berkeley*

Simona Ghetti, *University of California, Davis*

Speakers: **Keanan Joyner**, *University of California, Berkeley*

Trial-level dynamics of event-related potentials reveal unique patterns of risk for externalizing and substance misuse

Camelia Hostinar, *University of California, Davis*

Stress phenotypes and risk for psychopathology

Monica Ellwood-Lowe, *University of California, Berkeley*

Risk, resilience, and adaptation among children in poverty in the ABCD sample: The role of brain network associations

Nicholas Christopher-Hayes, *University of California, Davis*

Neurocognitive risk and chronic disease: The case of childhood asthma

10:15 – 10:30

Break

10:30 – 11:15

Alexander Valley
Ballroom I & II

Flash Talks 1

Chair: **Ethan McCormick**, *Leiden University*

2-D-14 Microstructural differences in the brains of young children with attention-deficit/hyperactivity disorder compared to typically developing children: Evidence from restriction spectrum imaging

Anthony Dick¹, Mohammadreza Bayat¹, Melissa Hernandez¹, Madeline Curzon¹, Nathalia Garcia¹, Wilfredo Renderos¹, Donald Hagler², Anders Dale², Paulo Graziano¹

¹Florida International University, ²University of California, San Diego

2-D-15 Generalizable multivariate neuroanatomical correlates of psychiatric problems in preadolescence

Bing Xu¹, Henning Tiemeier², Ryan Muetzel¹

¹Erasmus Medical Center Rotterdam, ²Harvard T.H. Chan School of Public Health

2-E-33 Differences in intra- and interhemispheric white matter connectivity in children with down syndrome and autism

Dea Garic¹, Rebecca Grzadzinski¹, Khalid Al-Ali, Robert Mckinstry², Kelly Botteron³, Natasha Marrus², Stephen Dager⁴, Annette Estes⁵, Guido Gerig⁶, Heather Hazlett⁷, Martin Styner¹, Joseph Piven⁷, Robert Schultz⁸, Juhi Pandey⁹, Tanya St. John⁵, Mark Shen⁷

¹University of North Carolina at Chapel Hill, ²Washington University in St. Louis, ³Washington University, ⁴University of Washington, ⁵University of Washington, ⁶New York University, ⁷University of North Carolina, ⁸Children's Hospital of Philadelphia, ⁹University of Pennsylvania

2-F-41 Educational Environment is Related to White Matter Development

Ethan Roy¹, Amandine Van Rinsveld¹, Ariel Rokem², Jason Yeatman¹, Bruce Mccandliss¹, Leo Sugrue³, Andreas Rauschecker³, Pierre Nedelec³

¹Stanford University, ²University of Washington, ³University of California, San Francisco

2-G-44 Associations of Mother-Child Closeness, Adolescent Symptomatology and Structural Brain Networks

Sunghyun Hong¹, Felicia Hardi¹, Scott Tillem¹, Leigh Goetschius^{1,2}, Jeanne Brooks-Gunn, Vonnie Mclloyd¹, Nestor Lopez-Duran¹, Colter Mitchell¹, Luke Hyde¹, Christopher Monk¹

¹University of Michigan, ²The Hilltop Institute

Flux Congress Program Schedule

2-M-92 Reports of the death of brain-behavior associations have been greatly exaggerated
Carolina Makowski¹, Timothy Brown¹, Weiqi Zhao¹, Donald Hagler¹, Hugh Garavan², Tom Nichols³, Terry Jernigan¹, Anders Dale¹

¹University of California, San Diego, ²University of Vermont, ³University of Oxford

2-N-98 Development of Functional Systems In 0-2 year-olds

Jiaxin (Cindy) Tu¹, Michael Myers¹, Chad Sylvester², Evan Gordon¹, Timothy Laumann¹, Omid Kardan³, Eric Feczko⁴, Trevor Day⁴, Oscar Miranda-Dominguez⁴, Lucille Moore⁴, Damien Fair⁴, Monica Rosenberg⁵, Christopher Smyser¹, Jed Elison⁴, Adam Eggebrecht², Muriah Wheelock²

¹Washington University in St. Louis, ²Washington University, ³University of Michigan, ⁴University of Minnesota, ⁵University of Chicago

2-P-109 Characterizing striatal dopamine-related neurophysiology in rewarded response inhibition in youth at risk for problematic substance use

Ashley Parr¹, Finnegan Calabro¹, Will Foran¹, Douglas Fitzgerald¹, Susan Tapert², Kate Nooner³, David Goldston⁴, Michael Debellis⁴, Duncan Clark¹, Beatriz Luna¹

¹University of Pittsburgh, ²University of California, San Diego, ³University of North Carolina Wilmington, ⁴Duke University

11:15 – 11:45

Alexander Valley
Ballroom I & II

Linda Spear Award Talk

Network neuroscience and typical and atypical development

Lucina Uddin, *University of California Los Angeles*

11:45 – 13:15

Lunch (on own)

13:15 – 14:15

Alexander Valley
Ballroom I & II

Huttenlocher Lecture

Chair: Brendon Tervo-Clemmens, *University of Minnesota*

What we have learned about the brain mechanisms underlying specialization through adolescence to adult neurocognitive trajectories

Beatriz Luna, *University of Pittsburgh*

14:15 – 14:45

Break

14:45 – 16:00

Alexander Valley
Ballroom I

Oral Session 5: Thinking outside the box: Alternative methods in developmental cognitive neuroscience

Moderator: Deanna Greene, *University of California, San Diego*

Speakers: Damion Demeter, *University of California, San Diego*

What can Precision Functional Mapping tell us about the developing brain?

Anna Blasi Ribera, *University College London*

Imaging the developing brain with functional Near Infrared Spectroscopy (fNIRS)

Finnegan Calabro, *University of Pittsburgh*

Ultra high field MR Spectroscopy and EEG evidence of frontal neuroplasticity in adolescence

Valerie Sydnor, *University of Pennsylvania*

Charting neurodevelopment along the sensorimotor-association cortical axis with mechanistically-informed human neuroimaging

Flux Congress Program Schedule

Alexander Valley
Ballroom II

Oral Session 6: Mapping the impact of early life adversity on sensory processing through the sensitive periods of infancy, adolescence, and pregnancy

Organizer: Shulamite Green, University of California, Los Angeles

Discussant: Jennifer Silvers, University of California, Los Angeles

Speakers: Shulamite Green, University of California, Los Angeles
Neural mechanisms underlying sensory over-responsivity in youth adopted from foster care

Bridget Callaghan, University of California, Los Angeles
Alteration of maternal perinatal interoception after early childhood trauma exposure is linked to perinatal depression

Nadege Roche-Labarbe, University of Caen Normandie
Top-down regulation of somatosensory processing in the premature neonate brain as an early marker of neurodevelopmental susceptibility

Rebecca Schwarzlose, Washington University in St. Louis
Neonatal sensory responses and early-life sensory sensitivity in relation to prenatal maternal stress

16:00 – 16:15

Transition Break

16:15 – 17:30

Oral Session 7: Novel insights from lifespan development

Alexander Valley
Ballroom I

Moderator: Margaret Sheridan, University of North Carolina, Chapel Hill

Speakers: Ethan McCormick, Leiden University
A general approach for defining longitudinal models to test meaningful developmental hypotheses

Laurel Gabard-Durham, Northeastern University
Mechanisms of plasticity over development

Yee Lee Shing, Goethe University Frankfurt
Inferences with cross-sectional and longitudinal data

Ulman Lindenberger, Max Planck Institute for Human Development
Lifespan views on change

Alexander Valley
Ballroom II

Oral Session 8: Developmental cognitive neuroscience in real-world educational contexts: Opportunities and challenges for crossing the “Bridge too far”

Organizer: Rachel Romeo, University of Maryland

Chairs: Rachel Romeo, University of Maryland

Bruce McCandliss, Stanford University

Speakers: Jennie Grammer, University of California, Los Angeles
Examining children’s attention during online learning

Elizabeth Toomarian, Stanford University
Lessons learned from a research-practice partnership approach to educational neuroscience

Fang Wang, Stanford University
Lexical processes underpinning word recognition in early readers: Insights into naturalistic education by bringing SSVEP and EEG into schools

Flux Congress Program Schedule

17:30 – 19:00

Poster Session 2

Alexander Valley
Ballroom III & IV
and Dry Creek
Ballroom

SATURDAY, SEPTEMBER 9, 2023

08:45 – 09:15

Arrival coffee

09:15 – 10:00

Flash Talks 2

Alexander Valley
Ballroom I & II

Chair: **Andrew Lynn**, University of Louisville

3-C-14 Data-driven identification of neurobiological phenotypes during threat learning in youth exposed to childhood trauma and associations with psychopathology

Stephanie Decross¹, Margaret Sheridan², Nim Tottenham³, Katie McLaughlin¹

¹Harvard University, ²University of North Carolina at Chapel Hill, ³Columbia University

3-E-33 Differential developmental contributions of limbic and motor connectivity underlying fine motor function in preschool-age children with and without ADHD: a longitudinal study.

Daniel Simmonds¹, Mitchell Batschelett¹, Deana Crocetti¹, Stewart Mostofsky¹, Lisa Jacobson¹, Keri Rosch¹

¹Kennedy Krieger Institute

3-E-34 A shifting role of thalamocortical connectivity in the emergence of large-scale functional brain organization across early lifespan development

Shinwon Park¹, Koen Haak², Han Byul Cho³, Kyoungseob Byeon³, Bo-Yong Park⁴, Phoebe Thomson¹, Adriana Di Martino¹, Haitao Chen⁵, Wei Gao⁶, Ting Xu¹, Sofie Valk⁷, Michael Milham¹, Boris Bernhardt⁸, Seok Jun Hong³

¹Child Mind Institute, ²Radboud University Medical Center, ³Sungkyunkwan University, ⁴Inha University, ⁵University of California, Los Angeles, ⁶Cedars-Sinai Medical Center, ⁷Max Planck Institute for Human Cognitive and Brain Science, ⁸McGill University

3-E-43 Connectivity Between Striatum and Task Positive Networks is Modulated by Long-term Stimulant Exposure in Childhood ADHD, an ABCD study

Adam Kaminski¹, Hua Xie², Brylee Hawkins³, Alaina Pearce⁴, Xiaozhen You², Chandan Vaidya¹

¹Georgetown University, ²Children's Research Institute, Children's National Medical Center,

³Department of Psychology, Georgetown University, Washington, DC, ⁴Pennsylvania State University

3-I-80 Lateralization of activation in the superior temporal gyrus for speech processing in sleeping infants is predictive of their language skills in kindergarten: a task-based fMRI study.

Jin Wang¹, Ted Turesky², Megan Loh¹, Ja'kala Barber¹, Victoria Hue¹, Escalante S. Elizabeth², Adrian Medina¹, Nadine Gaab^{1,2}

¹Harvard University, ²Harvard Graduate School of Education

3-I-81 Longitudinal associations between language network characteristics in infant brain and school-age reading abilities are mediated by early-developing phonological skills

Xinyi Tang¹, Nadine Gaab², Xi Yu¹, Ted Turesky², Mingrui Xia¹, Escalante S. Elizabeth²

¹Beijing Normal University, ²Harvard Graduate School of Education

3-J-85 Neural synchrony during parent-child spatial problem-solving interaction: Role of parent verbal and gesture strategy

Ying Li¹, Ö. Ece Demir-Lira²

¹The University of Iowa, ²University of Iowa

Flux Congress Program Schedule

3-K-91 Early Life Stress Blunts the Neuroimmune Association of C-Reactive Protein and Nucleus Accumbens Activation During Adolescent Reward Processing

Justin Yuan¹, Saché Coury¹, Tiffany Ho², Ian Gotlib¹

¹Stanford University, ²University of California, Los Angeles

10:00 – 11:00

Alexander Valley
Ballroom I & II

Diversity symposium: Lessons learned and the road ahead: JEDI efforts in the ABCD study

Speakers: **Lucina Uddin**, *University of California, Los Angeles*

Stefanie Bodison, *University of Florida*

Carlos Cardenas-Iniguez, *University of Southern California*

11:00 – 12:30

Alexander Valley
Ballroom III & IV
and Dry Creek
Ballroom

Poster Session 3

12:30 – 14:00

Lunch (on own)

14:00 – 15:15

Alexander Valley
Ballroom I & II

Peder Sather Foundation Symposium: Early adolescence as a window of opportunity for behavioral and emotional health

Moderator: **Ron Dahl**, *University of California, Berkeley*

Speakers: **Cecile Ladouceur**, *University of Pittsburgh*

Influence of puberty on affective salience network function and risk of affective disorders in girls

Dana McMakin, *Florida International University*

Sleep, memory, and anxiety in early adolescence: Opportunities to improve trajectories of mental health

Wouter van den Bos, *University of Amsterdam*

Social learning in social (media) networks

Niamh MacSweeney, *University of Edinburgh*

Puberty and brain development in relation to depression

15:15 – 15:30

Transition break

15:30 – 16:30

Alexander Valley
Ballroom I & II

DCN Public Policy Roundtable

Moderator: **Juliet Davidow**, *Northeastern University*

Speakers: **Laurie Cutting**, *Vanderbilt University*

Adriana Galvan, *University of California, Los Angeles*

Philip Fisher, *Stanford University*

16:30 – 17:00

Closing ceremony

Poster Session 1

Thursday, September 7 08:45 – 18:00

Poster Session 2

Friday, September 8 09:00 – 19:00

Poster Session 3

Saturday, September 9 08:45 – 12:30

The poster numbers are divided first by session, then by theme, and finally with a unique number.

Themes

A Attention	K Mechanisms (hormones, neurotransmitters, physiology)
B Brain connectivity	L Memory
C Brain function	M Methods
D Brain structure	N Networks
E Clinical populations	O Other
F Education	P Rewards/Motivation
G Environment (Stress, SES)	Q Socioemotional processing
H Executive functioning	
I Language	
J Learning	

For a complete list of poster abstracts please visit www.fluxsociety.org

POSTER SESSION 1

Thursday, September 7, 2023

08:45 – 18:00

A – Attention

1-A-1 Chronic home radon exposure is associated with altered neural and behavioral indices of attention

Haley Pulliam¹, Christine Embury¹, Hannah Okelberry¹, Danielle Rice¹, Anna Coutant¹, Ryan Glesinger¹, Tony Wilson¹, Brittany Taylor¹

¹Boys Town National Research Hospital

1-A-2 Mechanisms of visual spatial attention in reading in children

Mahalakshmi Ramamurthy¹, Jason Yeatman¹, Grace Adebogun¹, Katelyn Osuna^{1,2}

¹Stanford University, ²School of Psychology, Stanford University

1-A-3 Visuo-spatial Attention Development is Modulated by Local Computations in the Dorsal Stream

Patricia Hoyos¹, Anna Lyn Williams¹, Edan Daniel Hertz¹, Sabine Kastner¹, Jesse Gomez¹

¹Princeton University

B – Brain connectivity

1-B-4 Impact of Perceived Hostility on Triple Network Model Connectivity in Children and Adolescents

Danielle Rice¹, Jake Son¹, Mikki Schantell¹, Giorgia Picci¹, Hannah Okelberry¹, Anna Coutant¹, Grace Ende¹, Yu-Ping Wang², Julia Stephen³, Vince Calhoun⁴, Gaelle Doucet¹, Brittany Taylor¹, Tony Wilson¹

¹Boys Town National Research Hospital, ²Tulane University, ³Mind Research Network, ⁴Tri-Institutional Center for Translational Research in Neuroimaging and Data Science (TReNDS)

1-B-5 A hierarchical comparison of structural connectomes in major depressive disorder versus controls in two large population samples

Gladi Thng¹, Xueyi Shen¹, Heather Whalley¹, Liana Romaniuk¹

¹University of Edinburgh

1-B-6 Influence of age on selective attention and multispectral brain connectivity

Grace Ende¹, Jake Son², Abraham Killanin³, Lucas Weyrich², Giorgia Picci², Hannah Okelberry², Danielle Rice², Anna Coutant², Yu-Ping Wang, Julia Stephen, Vince Calhoun, Tony Wilson²

¹BoysTown, ²Boys Town National Research Hospital,

³Institute for Human Neuroscience

1-B-7 Early adolescents with an anxiety disorder have reduced amygdala to nucleus accumbens structural connectivity

Alyssa Griffith¹, Josiah Leong¹, Ethan Ellis¹

¹University of Arkansas

1-B-8 Longitudinal assessment of brain functional networks across the birth transition: a pilot study

1-B-9 Evaluating resting-state fMRI Methods Using Simulated Timeseries Data

Max Kunz¹, Kristina Hufnagle¹, Eric Feczko¹, Damien Fair¹, Benjamin Kay², Olivia Doyle³, Michaela Cordova⁴

¹University of Minnesota, ²University of Washington St. Louis,

³Oregon Health & Science University, ⁴San Diego State University

1-B-10 Polyneuro risk scores reflect treatment effects in medication-naive children with ADHD

Nora Byington¹, Oscar Miranda-Dominguez¹, Gracie Grimsrud¹, Robert Hermsillo¹, Tehila Nugel², Eric Feczko¹, Steve Nelson¹, Damien Fair¹, Jessica Cohen²

¹University of Minnesota, ²University of North Carolina at Chapel Hill

Flux Congress Posters | Titles, Authors and Affiliations

1-B-11 Maternal blood pressure during pregnancy and offspring autonomic nervous system brain connectivity

Cristin Holland^{1,2}, Isabelle Mueller^{1,2}, Richard Sloan^{1,2}, Dustin Scheinost³, Marisa Spann^{1,2}

¹Columbia University, ²Columbia University Vagelos College of Physicians and Surgeons, ³Wayne State University

1-B-12 Impact of fetal inflammation on fetal functional connectivity

Iris Menu¹, Lanxin Ji¹, Amyn Majbri¹, Christopher Trentacosta², Adam Eggebrecht³, Muriah Wheelock³, Suzanne Jacques², Faisal Qureshi², Moriah Thomason⁴

¹NYU Langone Health, ²Wayne State University, ³Washington University, ⁴New York University

1-B-13 Timing-related effects of prenatal opioid exposure on neonatal functional connectivity

Janelle Liu¹, Karen Grewen², Wei Gao¹

¹Cedars-Sinai Medical Center, ²University of North Carolina at Chapel Hill

C – Brain function

1-C-15 Exploring Aperiodic Activity in the Bucharest Early Intervention Project.

Martin Antunez Garcia¹, Marco McSweeney², Selin Zeytinoglu¹, Charles H. Zeanah³, Charles Nelson⁴, Nathan Fox¹

¹University of Maryland, ²University of Maryland, College Park, ³Tulane University School of Medicine, ⁴Harvard Medical School

1-C-16 Evoked brain responses to repetition, deviance, and omission of tactile stimuli in a sequence in premature neonates

Anne-Lise Marais¹, Victoria Dumont^{1,2}, Marie Anquetil^{1,3}, Anne-Sophie Trentesaux⁴, Nadege Roche-Labarbe¹

¹University of Caen Normandy, ²INSERM / UNICAEN, ³Normandie Université, ⁴Caen University Hospital

1-C-17 Cortical maturation and functional selectivity of face- and body-processing regions in children and adolescents

Ozge Gezer¹, Isobel L Ward¹, Erika Raven², Christoph Teufel¹, Elisabeth Von Dem Hagen¹

¹Cardiff University, ²New York University School of Medicine

D – Brain structure

1-D-18 The structural development of discrete thalamic nuclei from late childhood to early adulthood

Caroline Ostrand¹, Paul Collins¹, Monica Luciana¹

¹University of Minnesota

1-D-19 BOBs (Baby Open Brains) Repository: An Open-Science Repository of Segmentations for Human Infants

Eric Feczko¹, Sally Stoyell¹, Lucille Moore¹, Timothy Hendrickson¹, Paul Reiners¹, Anders Perrone^{1,2}, Dimitrios Alexopoulos³, Omid Kardan⁴, Taylor Chamberlain⁵, Jed Elison¹, Damien Fair¹, Monica Rosenberg⁶, Martin Styner⁷, Christopher Smyser³, Trevor Day¹, Brad Bower⁸, Dhruvan Goradia⁸, Alice Graham², Gracie Grimsrud¹, Nora Byington¹, Sooyeon Sung⁹, Henrique Caldas⁶, Tabitha Martin¹, Anurima Mummaneni⁶, Alexandra Harper¹, Ekomobong Eyoh¹

¹University of Minnesota, ²Oregon Health & Science University, ³Washington University in St. Louis, ⁴University of Michigan, ⁵Columbia University, ⁶University of Chicago, ⁷University of North Carolina at Chapel Hill, ⁸PrimeNeuro, ⁹Institute of Child Development

1-D-20 Anterior pituitary volume mediates associations between pubertal hormones and changes in dysregulation symptoms in youth

Giorgia Picci¹, Nathan Petro², Chloe Casagrande², Lauren Ott², Nicholas Christopher-Hayes³, Hallie Johnson², Madelyn Willett², Hannah Okelberry¹, Yu-Ping Wang⁴, Julia Stephen⁵, Vince Calhoun⁶, Tony Wilson¹

¹Boys Town National Research Hospital, ²Institute for Human Neuroscience, Boys Town National Research Hospital, ³University of California Davis, ⁴Tulane University, ⁵Mind Research Network, ⁶Tri-Institutional Center for Translational Research in Neuroimaging and Data Science (TRENDS)

1-D-21 Hypothalamic volume and body mass index in the ABCD study

Jerod Rasmussen^{1,2}, Shan Luo³, Yun Wang⁴, Paul Thompson³

¹University of California, Irvine, ²University of California, Irvine, ³University of Southern California, ⁴Duke University

1-D-22 Replicable associations of brain morphology with anxiety and depression symptoms in adolescents from two large population-based samples

Lorenza Dall'aglio¹, Derya Nazir², Ryan Muetzel³, Henning Tiemeier⁴

¹Erasmus Medical Center, ²Department of Child and Adolescent Psychology and Psychiatry, Erasmus MC, University Medical Center, ³Erasmus Medical Center Rotterdam, ⁴Harvard T.H. Chan School of Public Health

1-D-23 Dynamic effects of sex on global brain volumes across the human lifespan

Margaret Gardner^{1,2}, Aaron Alexander-Bloch³, Russell Shinohara¹, Jenna Schabdach², Lena Dorfschmidt⁴, Richard Bethlehem^{4,5}, Jakob Seidlitz^{2,5}, Sheila Shanmugan^{1,6}

¹University of Pennsylvania, ²Lifespan Brain Institute (LiBI) of Penn Medicine and CHOP, University of Pennsylvania, ³Children's Hospital of Philadelphia, ⁴University of Cambridge, ⁵Lifespan Brain Chart Consortium, ⁶Perelman School of Medicine

1-D-26 Uncovering a sulcal link to reasoning performance in lateral parietal cortex

Yi-Heng Tsai¹, Willa Voorhies¹, Ethan Willbrand¹, Thomas Gagnant¹, Silvia Bunge¹, Kevin Weiner¹

¹University of California, Berkeley

1-D-27 Structural brain development of speech networks in young children at-risk for speech disorders

Marilyn Curtis¹, Dea Garic², Melissa Hernandez¹, Madeline Curzon¹, Paulo Graziano¹, Anthony Dick¹

¹Florida International University, ²University of North Carolina at Chapel Hill

1-D-28 Characterizing changes in brain structure from infancy to school age in moderate-to-late preterm and term-born children.

Courtney Gilchrist¹, Christopher Adamson¹, Deanne Thompson¹, Peter Anderson², Jeanie Cheong³

¹Murdoch Children's Research Institute, ²Monash University, ³The Royal Women's Hospital

1-D-29 Evaluating informant discrepancies in anxiety symptoms as predictors of amygdala volumes using a latent profile analysis approach: a pre-registered study

Heather Yarger¹, Paige Munshell¹, Davina Gyimah¹, Victoire Alleluia Shenge¹, Elizabeth Redcay¹

¹University of Maryland

1-D-30 Vertex and voxel-wise association between cortical morphology and attention in adolescents

Joseph Kennedy^{1,2}, Diana Smith², Terry Jernigan²

¹UC San Diego, ²University of California, San Diego

1-D-31 Relationships between emerging reading abilities and white matter features across childhood

Meaghan Perdue¹, Bryce Geeraert¹, Catherine Lebel¹, Deborah Dewey¹

¹University of Calgary

1-D-32 Investigation of the association between estradiol levels and brain structure and function in early adolescent females.

Muskan Khetan¹, Nandita Vijayakumar², Ye Tian¹, Sarah Whittle³

¹University of Melbourne, ²Deakin University, ³The University of Melbourne

1-D-34 Are Centile Scores of Structural Brain Phenotypes Associated with Internalizing Symptoms during Adolescence?

Ann-Marie Barrett¹, Richard Bethlehem², Kayla Green³, Mark Mulder³, Lia Ferschmann⁴, Lena Dorfschmidt², Jakob Seidlitz⁵, Jennifer Pfeifer¹, Christian Tamnes⁴, Kate Mills¹

¹University of Oregon, ²University of Cambridge, ³Erasmus University Rotterdam, ⁴University of Oslo, ⁵Lifespan Brain Institute (LiBI) of Penn Medicine and CHOP, University of Pennsylvania

E – Clinical populations

1-E-36 Neural response to reward moderates associations between victimization and suicidality in sexual minority adolescents

Carly Lenniger¹, Lily Jensen¹, Kristen Eckstrand¹, Erika Forbes¹

¹University of Pittsburgh

1-E-37 Oscillatory theta activity during a selective attention task scales with polygenic risk for Attention Deficit Hyperactivity Disorder (ADHD) in youth

Lauren Webert¹, Mikki Schantell¹, Amirsalar Mansouri², Hallie Johnson², Madelyn Willett², Hannah Okelberry¹, Megan E. Sandal², Giorgia Picci¹, Tony Wilson¹

¹Boys Town National Research Hospital, ²Institute for Human Neuroscience, Boys Town National Research Hospital

1-E-38 White Matter Microstructure Remodeling Across the Transition to Fatherhood

Sofia Cardenas¹, Jessica Wisnowski², Vidya Rajagopalan², Darby Saxbe¹

¹University of Southern California, ²Childrens Hospital Los Angeles

1-E-39 Examination of iron content in the striatum from functional MRI in young children with autism spectrum disorder

Bosi Chen¹, Sara Bock¹, Lindsay Olson², Adriana Rios¹, Annika Linke¹, Inna Fishman¹, Judy Mahmalji¹, Stephanie Peña¹

¹San Diego State University, ²Brain Development Imaging Laboratories

1-E-41 Testing the generalisability of transdiagnostic latent patterns in functional brain networks to a Norwegian sample of youth

Irene Voldsbekk¹, Rikka Kjelkenes¹, Andreas Dahl¹, Dag Alnæs¹, Lars T. Westlye¹

¹NORMENT, University of Oslo & Oslo University Hospital

F - Education

1-F-42 Rapid Online Assessment of Reading (ROAR): A platform for developmental cognitive neuroscience research at an unprecedented scale

Jason Yeatman¹, Wanjing Ma¹, Liesbeth Gijbels², Carrie Townley-Flores¹, Julian Siebert¹, Jasmine Tran¹, Tonya Murray¹, Mia Fuentes-Jimenez¹, Mahalakshmi Ramamurthy¹, Adam Richie-Halford¹

¹Stanford University, ²University of Washington

1-F-43 Premotor Cortex Activity During Spatial Cognition Partially Mediates the Relation between Socioeconomic Status and Academic Outcomes

Jazelle Pilato¹, Robert Cortes², Emily Grossnickle Peterson¹, David Uttal³, Bob Kolvoord⁴, Adam Green²

¹American University, ²Georgetown University,

³Northwestern University, ⁴James Madison University

Flux Congress Posters | Titles, Authors and Affiliations

G – Environment (Stress, SES)

1-G-44 Developing best practices for inclusion in pediatric fNIRS research: Equity for participants with afro-textured hair

Abria Simmons¹, Rachel Romeo¹, Gavkhar Abdurokhmonova², Ellie Taylor²

¹University of Maryland,² University of Maryland, College Park

1-G-45 Brain-Environmental interactions: a time sensitive matter

Azzurra Invernizzi¹, Stefano Renzetti¹, Elza Rechtman¹, Donatella Placidi¹, Megan Horton¹, Paul Curtin¹

¹Icahn School of Medicine at Mount Sinai

1-G-46 White matter structure and psychopathology in previously institutionalized adolescents

Dana Kanel¹, Nathan Fox², Daniel Pine³, Charles H. Zeanah⁴, Charles Nelson⁵, Margaret Sheridan⁶, Katie McLaughlin⁷

¹National Institute of Mental Health & University of Maryland,

²University of Maryland,³National Institute of Mental Health,

⁴Tulane University School of Medicine,⁵Harvard Medical School,

⁶University of North Carolina at Chapel Hill,

⁷Harvard University

1-G-47 Using TIDAL (Tool to Implement Developmental Analyses of Longitudinal data) to explore trajectories of adolescent psychiatric symptoms in the context of food insecurity and socioeconomic status

Eileen Xu¹, Amelia Edmondson-Stait¹, Heather Whalley¹, Alex Kwong¹

¹University of Edinburgh

1-G-48 Person-oriented approaches identify distinct longitudinal associations of childhood adversity with adolescent functional brain networks and mental health

Felicia Hardi¹, Christopher Monk¹, Adriene Beltz¹, Vonnie Mcloyd¹, Nestor Lopez-Duran¹, Colter Mitchell¹, Luke Hyde¹, Jeanne Brooks-Gunn²

¹University of Michigan, ²Columbia University

1-G-49 Effects of parental socioeconomic status on cortical sulcation in offsprings. An intergenerational study

Julia Mathan¹, Gabriela Rezende^{1,2}, Lorna Le Stanc¹, Mélanie Pinheiro¹, Iris Menu³, Nicolas Poiré¹, Catherine Oppenheim⁴, Olivier Houdé¹, Gregoire Borst¹, Arnaud Cachia^{1,5}

¹Université Paris Cité, ²Laboratoire de Psychologie du Développement et de l'Éducation de l'enfant (LaPsyDÉ) UMR8240, CNRS, ³NYU Langone Health, ⁴INSERM, IPNP, ⁵Université Paris Descartes

1-G-50 Alterations in fear learning as a mechanism linking childhood exposure to violence with PTSD symptoms: A longitudinal study

Laura Machlin¹, Katie McLaughlin¹, Margaret Sheridan², Lucy Lurie², Steven Kasperek¹, Stephanie Gyuri Kim³, Matthew Peverill⁴, John France⁵, Madeline Robertson², Tanja Jovanovic⁵, Liliana Lengua⁶

¹Harvard University, ²University of North Carolina at Chapel Hill, ³University of Illinois at Urbana-Champaign, ⁴University of Wisconsin, ⁵Wayne State University, ⁶University of Washington

1-G-51 A Bayesian approach to identifying links between adversity exposure and neural patterns of threat and safety learning

Lucinda Sisk¹, Taylor Keding¹, Sonia Ruiz¹, Paola Odriozola², Sahana Kribakaran¹, Emily Cohodes¹, Sarah Mccauley¹, Sadie Zacharek^{1,3}, H. R. Hodges¹, Jason Haberman¹, Jasmyne Pierre¹, Inti Brazil⁴, Arielle Baskin-Sommers¹, Dylan Gee¹

¹Wayne State University, ²University of California, Los Angeles, ³Massachusetts Institute of Technology, ⁴The Donders Institute

1-G-52 Causal effects of a parenting program on resting-state graph properties of high-risk adolescents: a randomized clinical trial

Marta Korom¹, Hung-Wei Bernie Chen¹, Nim Tottenham², Mary Dozier¹, Jeffrey Spielberg¹

¹University of Delaware,² Columbia University

1-G-54 Contributions of Socioeconomic Disadvantage to White Matter Development from Infancy to Early Childhood

Nourhan Elsayed¹, Deanna Barch²

¹Washington University in St. Louis, ²Washington University

1-G-55 Examining the role of environmental unpredictability and social support on autonomic regulation and organization

Sofiya Briguene¹, Meriah DeJoseph¹, Amelia Spaeth¹, Daniel Berry¹

¹University of Minnesota

1-G-56 Longitudinal association between neighborhood safety and adolescent health: The moderating role of affective neural sensitivity

Tianying Cai¹, Yang Qu¹, Beiming Yang¹, Zexi Zhou²

¹Northwestern University, ²The University of Texas at Austin

1-G-57 Family environment moderates the relationship between parent psychopathology and adolescent white matter volume: Evidence from the ABCD® Study

Zsofia Cohen¹, Florence Breslin¹, Erin Ratliff², Amanda Morris¹, Kara Kerr¹

¹Oklahoma State University, ²University of Maryland

1-G-59 Timing-dependent associations between harsh and warm parenting during childhood and adolescent functional brain network organization

Cleanthis Michael¹, Arianna Gard², Scott Tillem¹, Felicia Hardi¹, Nestor Lopez-Duran¹, Colter Mitchell¹, Christopher Monk¹, Luke Hyde¹

¹University of Michigan, ²University of Maryland, College Park

1-G-60 Do positive childhood experiences protect brain development? Evidence from the ABCD® Study

Jennifer Watrous¹, Kara Kerr¹, Florence Breslin¹, Julie Croff¹, Courtney Cooper^{1,2}, Amanda Morris¹, Jennifer Hays-Grudo¹

¹Oklahoma State University, ²Oklahoma State University - Stillwater

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1-G-61 Characterizing the association between maternal stress during pregnancy and brain function via polyneuro risk scores for general cognitive ability in newborns

Katharina Pittner¹, Fiona O' Donovan¹, Martin Bauer¹, Nora Moog¹, Pathik Wadhwa², Sonja Entringer¹, Thomas O'connor³, Lucille Moore⁴, Gracie Grimsrud⁴, Nora Byington⁴, Damien Fair⁴, Alice Graham⁵, Jerod Rasmussen², Oscar Miranda-Dominguez⁴, Claudia Buss¹
¹Charité - Universitätsmedizin Berlin, ²University of California, Irvine, ³University of Rochester Medical Center, ⁴University of Minnesota, ⁵Oregon Health & Science University

1-G-62 Alterations of brain microstructure and functional connectome development associated with exposure to various sources of air pollution during the transition to adolescence

Katherine Bottenhorn^{1,2}, Megan Herting¹
¹University of Southern California, ²Keck School of Medicine of USC

1-G-63 The impact of early life adversity on physiological response to acoustic cues

Siyan Nussbaum¹, Paul Savoca¹, Rory Simpson¹, Elena Chan¹, Bridget Callaghan¹
¹University of California, Los Angeles

1-G-64 Prenatal stress exposure, newborn BNST, and infant temperament at 6 months

Yanbin Niu¹, Sanjana Ravi¹, M. Catalina Camacho², Benjamin Conrad¹, Joshua Hageman, Jennifer Blackford³, Kathryn Humphreys¹
¹Vanderbilt University, ²Washington University in St. Louis, ³University of Nebraska Medical Center

H – Executive functioning

1-H-65 The maturational timing of executive function from adolescence to adulthood: Generalizability and reproducibility across datasets, measures, and levels of analysis

Brenden Tervo-Clemmens^{1,2}, Finnegan Calabro³, Ashley Parr³, Beatriz Luna³
¹University of Minnesota, ²Harvard Medical School, Massachusetts General Hospital, ³University of Pittsburgh

1-H-66 Variability in the engagement of recurring brain states increased with age during adolescence and predicted executive function task performance in over 2000 participants

Jean Ye¹, Link Tejavibulya¹, Wei Dai¹, Huili Sun¹, Dustin Scheinost¹
¹Wayne State University

1-H-67 Ignore the Tap: Neural Correlates of Children's Voluntary Tactile Attention

Kaitlyn Campbell¹, Katherine Eulau¹, Peter Marshall¹
¹Temple University

1-H-68 Random forest analysis identifies important clinical and imaging predictors of impaired neurocognitive development in children with congenital heart disease

Rafael Ceschin¹, Benjamin Meyers¹, Laura Cabral¹, Julia Wallace², Daryaneh Badaly³, Ashok Panigrahy¹
¹University of Pittsburgh, ²UPMC Children's Hospital of Pittsburgh, ³Child Mind Institute

1-H-69 Study of sleep and ADHD variables on inhibition performance in brain and behavior of youths

Tyler Larginho¹, Tehila Nugiel^{2,3}, Damion Demeter⁴, Alice Aizza⁵, Blaire Porter¹, Jessica Church⁶
¹University of Texas at Austin, ²Florida State University, ³The University of North Carolina at Chapel Hill, ⁴University of California, San Diego, ⁵Columbia University, ⁶The University of Texas at Austin

1-H-70 Inhibitory Control in First-Time Fathers: Neural Correlates and Associations With Postpartum Mental Health

Yael Waizman¹, Ellen Herschel¹, Anthony Vaccaro¹, Sofia Cardenas¹, Elizabeth Aviv¹, Jonas Kaplan¹, Darby Saxbe¹
¹University of Southern California

1-H-71 The impact of varying dimensions of adversity on the neurofunctional associations of working memory in early childhood

Haley Marie Laughlin¹, Johanna Bick¹, Xinge Li¹, Kelly Rose Barry¹, Mikayla Gilliam¹
¹University of Houston

I - Language

1-I-72 Phonological and semantic incongruity effects in typical hearing and cochlear implant-using children: electrophysiological evidence

Elizabeth Pierotti¹, Sharon Coffey-Corina¹, David Corina¹
¹University of California, Davis

1-I-73 Anatomical distinction and intervention-driven changes of frontal language regions in struggling readers

Hannah Stone¹, Maya Yablonski¹, Jamie Mitchell¹, Mia Fuentes-Jimenez¹, Jasmine Tran¹, Jason Yeatman¹
¹Stanford University

1-I-74 Associations among SES, home language input, and resting-state functional connectivity in children

Melissa Giebler¹, Katrina Simon¹, Melina Amarante², Emily Merz³, Xiaofu He⁴, Kimberly Noble¹
¹Teachers College, Columbia University, ²Teachers College, Colorado State University, ⁴Columbia University Medical Center

1-I-76 Exploring Mechanisms of Phonetic Category Learning Through Perceptual Attunement

Sarvenaz Oloomi¹, Janet Werker¹
¹University of British Columbia

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1-I-77 Task-elicited functional connectivity of the language network

Hannah Thomas¹, Caroline Larson¹, Jason Crutcher¹, Michael Stevens², Inge-Marie Eigsti¹

¹University of Connecticut, ²Olin Neuropsychiatry Research Center

J - Learning

1-J-78 Investigating the influence of language modality on visual statistical learning in deaf children

Jenna Distefano¹, Katharine Graf Estes¹, David Corina¹

¹University of California, Davis

1-J-79 The differences in performance, anxiety and EEG activity in children with and without autism during mathematics

Elizabeth Maquera^{1,2}, Analia Marzoratti², Emily Fuhrmann², Rose Nevill², Megan Liu², Tara Hofkens², Steven Boker², Kevin Pelphrey², Tanya Evans²

^{1,2}University of Virginia

1-J-80 Associative Learning and Adolescent vs. Adult dmPFC

Madeline Klinger¹, Linda Willbrecht¹

¹University of California, Berkeley

1-J-81 Stanford Mental Arithmetic Response Time Evaluation (SMARTE) in the ABCD Study.

Mathieu Guillaume¹, Ethan Roy¹, Amandine Van Rinsveld¹, Bruce Mccandliss¹

¹Stanford University

1-J-82 Capturing the causal impact of the words teachers teach: learning and retention dynamics in a naturalistic classroom training study

Radhika Gosavi¹, Elizabeth Toomarian¹, Suanna Moron¹, Lindsey Hasak¹, Ethan Roy¹, Bruce Mccandliss¹

¹Stanford University

1-J-83 Event-Related Potential Studies of Reading in Relation to Developmental Dyslexia: A Systematic Review

Silvia Clement-Lam¹, Oliver Lasnick¹, Ayan Mitra¹, Brianna Kinnie¹, Jie Luo¹, Cheryl Lyon¹, Devin Kearns¹, Fumiko Hoeft¹

¹University of Connecticut

K – Mechanisms (hormones, neurotransmitters, physiology)

1-K-84 Developmental changes in the neural oscillatory dynamics serving selective attention are closely associated with pubertal testosterone levels

Lucas Weyrich¹, Abraham Killanin²

¹Boys Town National Research Hospital, ²Institute for Human Neuroscience

1-K-85 Aperiodic EEG and⁷T MRSI evidence for maturation of E/I balance supporting the development of working memory through adolescence

Shane McKeon¹, Maria Perica¹, Beatriz Luna¹, Ashley Parr¹, Will Foran¹, Finnegan Calabro¹

¹University of Pittsburgh

1-K-86 Longitudinal Changes in Pubertal Development, Hormones, and Neural Reward Response in the HCP-D Study

Adam Omary¹, John Flournoy¹, Graham Baum¹, Mark Curtis², Deanna Barch³, Leah Somerville¹

¹Harvard University, ²Washington University in St. Louis, ³Washington University

L - Memory

1-L-87 Assessing the reactivation of motor learning-related patterns of activity in the developing hippocampus and putamen

Anke Van Roy¹, Bradley R. King¹, Genevieve Albouy¹

¹University of Utah

1-L-88 Differences in Concept Uses Associated with Early Life Adversity

Paul Savoca¹, Bridget Callaghan¹, Karen Quigley²

¹University of California, Los Angeles, ²Northeastern University

1-L-89 Home Sweet Home: Relations between episodic and semantic memory in childhood

Sabrina Karjack¹, Nora Newcombe², Chi Ngo³, Kara Storjohann²

¹University of California, Davis, ²Temple University, ³Max Planck Institute for Human Development

1-L-90 Attention to category versus item-specific information impacts neural engagement and subsequent memory quality in children and adults

Sagana Vijayarajah¹, Margaret Schlichting¹

¹University of Toronto

1-L-91 Changes in Episodic Memory Performance and Hippocampal Functional Connectivity as Predictors of Internalizing Symptom Trajectories in Youth

Jordan Foster¹, Lucinda Sisk¹, Taylor Keding¹, Dylan Gee¹

¹Wayne State University

1-L-92 Childhood maltreatment and memory bias for social and non-social events: exploring neural mechanisms that promote risk for mental health problems

Thais Costa Macedo De Arruda¹, Camille Johnston¹, David Smith¹, Johanna Jarcho¹, James B. Wyngaarden¹, Iliana Todorovski¹

¹Temple University

M - Methods

1-M-93 Neural Mechanisms of Reward Processing in Preadolescent Irritability: A Novel³D CNN Application on fMRI Data

Johanna Walker¹, Conner Swineford¹, Yukari Takarae², Lea Dougherty³, Jillian Wiggins¹

¹San Diego State University, ²University of California, Davis, ³University of Maryland, College Park

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1-M-94 Missing MRI data in the ABCD study: Associations with study variables and the impact of rs-fMRI Quality Control Stringency

Matthew Peverill¹, Justin Russell², Max A. Halvorson³, Kevin M. King³, Rasmus M. Birn⁴, Ryan Herringa¹
¹University of Wisconsin, ²University of Wisconsin-Madison, ³University of Washington, ⁴University of Wisconsin-Madison

1-M-95 Sleep disturbances are associated with disrupted functional connectivity in children.

Nilanjan Chakraborty¹, Muriah Wheelock¹, Ari Segel¹, Andy Eck¹, Donna Dierker¹
¹Washington University in St. Louis

1-M-96 “You have one chance to get it right”: Perspectives on biological research in black and latinx communities

Arianna Gard¹, Collin Mueller¹, Fanita Tyrell¹
¹University of Maryland, College Park

1-M-97 Using the “puberty-age-gap” to assess the impact of pubertal timing on emotion in the ABCD Study

Clare Mccann¹, Jennifer Silvers¹
¹University of California, Los Angeles

N - Networks

1-N-98 Developmental trajectories of EEG aperiodic and periodic power from² to⁴ months

Carol Wilkinson¹, Lisa Yankowitz², Charles Nelson³
¹Boston Children’s Hospital, ²Boston Children’s Hospital & Harvard Medical School, ³Harvard Medical School

1-N-99 Linking functional connectivity to symptoms of borderline personality disorder in youth

Golia Shafiei¹, Arielle Keller¹, Maxwell Bertolero, Sydney Covitz¹, Audrey Houghton², Kahini Mehta¹, Taylor Salo¹, Damien Fair², Ted Satterthwaite¹
¹University of Pennsylvania, ²University of Minnesota

1-N-100 Stability of metrics of functional brain organization in infants – a precision imaging case study

Julia Moser¹, Sanju Koirala¹, Thomas Madison¹, Robert Hermsillo¹, Lucille Moore¹, Alyssa Labonte², M. Catalina Camacho², Michael Myers², Chad Sylvester^{2,3}, Damien Fair¹
¹University of Minnesota, ²Washington University in St. Louis, ³Washington University

1-N-101 The convergence of brain network architectures of working memory and psychopathology in late childhood

Mackenzie Mitchell¹, Jessica Cohen¹
¹University of North Carolina at Chapel Hill

1-N-103 Adult functional network models impede reproducible outcome prediction in pediatric populations

Muriah Wheelock¹, Xinyang Feng², Adam Eggebrecht¹, Jed Elison³, Christopher Smyser², Monica Rosenberg⁴, Damien Fair³, Lucille Moore³, Oscar Miranda-Dominguez³, Eric Feczko³, Trevor Day³, Omid Kardan⁵, Jiaxin (Cindy) Tu², Babatunde Adeyemo², Ari Segel², Jiaqi Li²
¹Washington University, ²Washington University in St. Louis, ³University of Minnesota, ⁴University of Chicago, ⁵University of Michigan

1-N-104 Network analysis of limbic resting state connectivity in abstinent cannabis-using adolescents and young adults

Ryan Sullivan¹, Kyle Baacke¹, Chase Shankula¹, Elizabeth Stinson¹, Alexander Wallace², Krista Lisdahl¹
¹University of Wisconsin-Milwaukee, ²University of California, San Diego

1-N-105 The development of structure-function coupling in neonates: Associations with cognition

Ursula Tooley¹, Cynthia Rogers¹, Jeanette Kenley¹, Dimitrios Alexopoulos¹, Tara Smyser¹, Joan Luby¹, Deanna Barch², Christopher Smyser¹, Barbara Warner¹, Joshua Shimony¹, Jeffrey Neil¹
¹Washington University in St. Louis, ²Washington University

1-N-106 Examining individual variability in functional brain network topography over development

Sanju Koirala¹, Julia Moser¹, Robert Hermsillo¹, Lucille Moore¹, Thomas Madison¹, Oscar Miranda-Dominguez¹, Eric Feczko¹, Alyssa Labonte², M. Catalina Camacho², Michael Myers², Kimberly Weldon¹, Alice Graham³, Nico Dosenbach⁴, Steve Nelson¹, Theodore Satterthwaite⁵, Jed Elison¹, Chad Sylvester⁴, Damien Fair¹
¹University of Minnesota, ²Washington University in St. Louis, ³Oregon Health & Science University, ⁴Washington University, ⁵University of Pennsylvania

P – Rewards/Motivation

1-P-107 Examining the relationship between anhedonia and learning the value of mental effort in adolescents

Isabelle Jacques¹, Camille Phaneuf¹, Leah Somerville¹
¹Harvard University

1-P-108 Neurocognitive and computational correlates of action-control in children with attention-deficit/hyperactivity disorder

Amira Herstic¹, Joman Natsheh¹, Uriel Richman¹, Ashar Natsheh², Ekaterina Dobryakova^{3,4}, Michael Dacanay^{3,4}, Motee Ashhab², Mohammad Herzallah², John Deluca⁴
¹Children’s Specialized Hospital, ²Al-Quds University, ³Kessler Foundation, East Hanover, NJ, USA, ⁴Kessler Foundation

1-P-109 Early Life Deprivation Moderates the Relation Between Inflammation and Nucleus Accumbens Gray Matter Volume in Adolescents

Emma Jaeger¹, Justin Yuan¹, Ian Gotlib¹
¹Stanford University

1-P-110 Paternal involvement and children's reward processing in the monetary incentive delay task: the possible role of children's sleep health

Parinaz Babaeeghazvini¹, Claudia Lugo-Candelas^{1,2}
¹Columbia University Medical Center/New York State Psychiatric Institute, ²Columbia University

1-P-111 Youth Irritability and Reward-Related Brain Functioning in the ABCD Sample

Alyssa Parker¹, Lea Dougherty¹, Johanna Walker², Jillian Wiggins², Yukari Takarae³
¹University of Maryland, College Park, ²San Diego State University, ³University of California, Davis

1-P-112 Characterizing age-related change in learning the value of cognitive effort

Camille Phaneuf¹, Isabelle Jacques¹, Catherine Insel², Ross Otto³, Leah Somerville¹
¹Harvard University, ²Columbia University, ³McGill University

1-P-113 Measuring Cognitive and Motivational Processes: A Large-Scale Validation Study of Iowa Gambling Task Computational Parameters

Felix Pichardo¹, Meriah DeJoseph¹, Daniel Berry¹, Monica Luciana¹, Kathleen Thomas¹, Stephen Malone², Syla Wilson¹
¹University of Minnesota, ²Minnesota Center for Twin and Family Research

1-P-114 Exploring the functional network connectivity during reward anticipation across early adolescence

Subhasri Viswanathan¹, Patricia Conrod², Jeremy Watts², Roxane Assaf¹
¹Université de Montréal, ²CHU Ste-Justine, Université de Montreal

Q – Socioemotional processing

1-Q-115 Dissecting neural correlates of affective and cognitive empathy in preschoolers: an fNIRS study

Chiara Bulgarelli¹, Paola Pinti², Emily Jones²
¹Birkbeck College, ²Birkbeck, University of London

1-Q-116 The EmpaToM-Y-Eng: validation of an functional magnetic resonance imaging measure of social processing in adolescents

Kate Bray¹, Sarah Whittle², Vicki Anderson¹
¹University of Melbourne, ²The University of Melbourne

1-Q-117 Relationships between math-related attitudes and performance among children and neural and epigenetic markers of their social processing capacity

Analia Marzoratti¹, Megan Liu¹, Elizabeth Maquera², Emily Fuhrmann¹, Tara Hofkens¹, Steven Boker¹, Kevin Pelphrey¹, Jessica Connelly¹, Rose Nevill¹, Tanya Evans¹
¹University of Virginia

1-Q-118 Examining associations between suicidal ideation and cognitive reappraisal among adolescent females

Esmeralda Navarro¹, Sophia Martin¹, Paul D. Hastings², Matthew K. Nock³, George Slavich⁴, Karen D. Rudolph⁵, Mitchell J. Prinstein¹, Margaret Sheridan¹, Adam Miller¹
¹University of North Carolina at Chapel Hill, ²University of California, Davis, ³Harvard University, ⁴University of California, Los Angeles, ⁵University of Illinois at Urbana-Champaign

1-Q-119 Auditory distraction by vocal anger in children and adolescents with inattention and hyperactivity

Georgia Chronaki¹, John Marsh²
¹University of Central Lancashire, ²Reader, University of Central Lancashire

1-Q-120 Using OPM-MEG technology to determine emotional face responses in very young children with and without autism

Julie Sato¹, Kristina Safar¹, Marlee Vandewouw², Abbie Solish², Jessica Brian², Evdokia Anagnostou², Margot Taylor^{3,4}
¹Hospital for Sick Children, ²Holland Bloorview Kids Rehabilitation Hospital, ³University of Toronto, ⁴The Hospital for Sick Children

1-Q-121 Investigating the Relationship Between Facial Expressions, Emotion Regulation, and ADHD Symptoms during Positive Emotional Situations in Early Childhood

Shriya Agrawal, Katie Gonzalez¹, Adam Grabell¹
¹University of Massachusetts, Amherst

1-Q-122 Brain state characteristics during movie-watching are related to generalized anxiety symptoms in children

M. Catalina Camacho¹, Rebecca Schwarzlose¹, Michael Perino², Alyssa Labonte¹, Jennifer Harper¹, Sanju Koirala³, Deanna Barch², Chad Sylvester²
¹Washington University in St. Louis, ²Washington University, ³University of Minnesota

1-Q-123 Neural responses and socio-emotional learning during naturalistic social stimuli

Maayan Ziv¹, Cassidy McDermott¹, Anne Park¹, Allyson Mackey¹
¹University of Pennsylvania

1-Q-124 Empathy in Adolescence: An fMRI Investigation Using Implicit Empathic Stimuli

Maira Karan¹, Lee Lazar¹, Carrienne Leschak¹, Naomi Eisenberger¹, Adriana Galvan¹, Andrew Fuligni¹
¹University of California, Los Angeles

1-Q-125 Understanding the Development of Self-Processing and Depression in Adolescence: Is Brain Function Where It Starts?

Victoria Guazzelli Williamson¹, Samantha Chavez¹, Jennifer Pfeifer¹
¹University of Oregon

1-Q-126 Associations Between Emotion Neural Response and Behavioral Outcomes in Toddlers Born Preterm

Xinge Li¹, Johanna Bick¹, Andrea Ortiz-Jimenez¹, Anna Galvan, Megan Giles², Dana Demaster², Susan Landry³

¹University of Houston,² University of Texas Health Science Center at Houston,³ University of Texas Health Science Center - Houston

1-Q-127 Exploring age related differences in predicting and accommodating risk preferences of peers

Yelina Yiyi Chen¹, Gail Rosenbaum^{2,3}, Tianxiang Li¹, John Flournoy¹, Laura Cegarra¹, Arpi Youssoufian¹, Melanie Gradfreilich¹, Laurel Kordyban¹, Erik Kastman¹, Patrick Mair¹, Leah Somerville¹

¹Harvard University, ²Geisinger Health, ³New York University

1-Q-128 Do Neural Representations of Parents and Peers Shape Adolescent Social Decision-Making?

Joao Guassi Moreira¹, Carolyn Parkinson¹

¹University of California, Los Angeles

1-Q-129 Neonatal Neural Organization and The Development of Internalizing Problems as a Function of Maternal Factors in Children Born Very Premature

Berenice Anaya¹, Caleb Gardner¹, Jeanette Kenley¹, Rachel Lean², Christopher Smyser¹, Cynthia Rogers¹

¹Washington University in St. Louis, ²Washington University

1-Q-130 Does prefrontal cortical thinning during adolescence mediate the relationship between childhood adversity and emotion regulation?

Courtney Cooper¹, Florence Breslin¹, Zsofia Cohen¹, Gabriella I. Atencio¹, Jennifer Watrous¹, Amanda Morris¹, Kara Kerr¹

¹Oklahoma State University

1-Q-131 Preregistration: Amygdala Reactivity as a Mechanism Linking Structural Stigma with Emotion Dysregulation in Youth

Rachel Martino¹, Katie McLaughlin¹, Mark Hatzenbuehler¹

¹Harvard University

1-Q-132 Impact of early adversity on adolescent neural processes and reactive aggression in the Social Network of Aggression Task

Sarah Lempres¹, Megan Davis², Amy Carolus², Sophia Martin², Margaret Redic², Kimberly Carpenter¹, William Copeland³, Helen Egger⁴, Michelle Achterberg⁵, Margaret Sheridan²

¹Duke University, ²University of North Carolina at Chapel Hill, ³University of Vermont, ⁴Little Otter Co., ⁵Erasmus University Rotterdam

1-Q-133 The role of pubertal development on the relationship between early life adversity and resting-state functional connectivity of the nucleus accumbens

Gabriella Atencio¹, Florence Breslin¹, Kara Kerr¹, Zsofia Cohen¹, Courtney Cooper¹

¹Oklahoma State University

POSTER SESSION 2

Friday, September 8, 2023

09:00 – 19:00

A - Attention

2-A-1 ADHD symptoms predict eyes-closed versus -open differences in spontaneous alpha activity in frontal cortices in older adolescent girls

Nathan Petro¹, Giorgia Picci¹, Ilenia Salsano², Maggie Remppe², Christine Embury¹, Christine Embury¹, Lauren Ott², Samantha Penhale², Yu-Ping Wang³, Julia Stephen⁴, Vince Calhoun⁵, Brittany Taylor¹, Tony Wilson

¹Boys Town National Research Hospital, ²Institute for Human Neuroscience, Boys Town National Research Hospital, ³Tulane University, ⁴Mind Research Network, ⁵Tri-Institutional Center for Translational Research in Neuroimaging and Data Science (TReNDS)

2-A-2 Patterns of motor-locked neural oscillations reveal developmental shifts when subject to top-down attention inhibition

Oghenetjiri Smith¹, Haley Pulliam¹, Danielle Rice¹, Anna Coutant¹, Hannah Okelberry¹, Elizabeth Heinrichs-Graham¹, Tony Wilson¹, Brittany Taylor¹

¹Boys Town National Research Hospital

B – Brain connectivity

2-B-3 Growth in early infancy drives optimal brain functional connectivity which predicts cognitive flexibility in later childhood

Chiara Bulgarelli¹, Anna Blasi², Samantha McCann³, Bosiljka Milosavljevic⁴, Giulia Ghillia³, Ebrima Mybe^{5,6}, Ebou Touray^{5,6}, Tijan Fadera^{5,6}, Lena Acolatse⁷, Sophie Moore³, Sarah Lloyd-Fox⁴, Clare Elwell², Adam Eggebrecht^{8,9}

¹Birkbeck College, ²University College London, ³King's College London, ⁴University of Cambridge, ⁵The Gambia at the London School of Hygiene and Tropical Medicine, ⁶London School of Hygiene and Tropical Medicine, ⁷Ulster University, ⁸Washington University, ⁹Washington University in St. Louis

2-B-4 Precision Functional Mapping to identify stimulant treatment response in medication naive children with ADHD

Gracie Grimsrud¹, Robert Hermosillo¹, Jonathan Lehman¹, Oscar Miranda-Dominguez¹, Nora Byington¹, Tehila Nugiel^{2,3}, Mackenzie Mitchell⁴, Kimberly Weldon¹, Eric Feczko¹, Anita Randolph¹, Damien Fair¹, Jessica Cohen⁴

¹University of Minnesota, ²Florida State University, ³The University of North Carolina at Chapel Hill, ⁴University of North Carolina at Chapel Hill

2-B-5 Functional network organization is atypical in patients with congenital heart disease

Joy Roy¹, William Reynolds¹, Rafael Ceschin¹, Ashok Panigrahy²

¹University of Pittsburgh, ²UPMC Children's Hospital

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2-B-7 Functional connectivity patterns of the visual word form area are stable during learning

Maya Yablonski¹, Jamie Mitchell¹, Hannah Stone¹,
Mia Fuentes-Jimenez¹, Jasmine Tran¹, Jason Yeatman¹
¹Stanford University

2-B-9 Leveraging large-scale brain-wide association discovery in smaller samples: A polyneuro risk score approach to cognition in Kids2Health resting state data

Johannes Mohn¹, Nora Byington², Ferdinand Hoffmann¹,
Martin Bauer¹, Gracie Grimsrud², Felix Dammering¹, Lea Bentz¹,
Katharina Pittner¹, Fiona O' Donovan¹, Jerod Rasmussen^{3,4},
Damien Fair², Sibylle Winter¹, Sonja Entringer¹,
Oscar Miranda-Dominguez², Claudia Buss^{1,5}, Christine Heim¹
¹Charité - Universitätsmedizin Berlin, ²University of Minnesota,
³University of California, Irvine, ⁴University of California,
Irvine, ⁵Institut für Medizinische Psychologie

2-B-10 Associations between changes in the immune environment across pregnancy trimesters and the developing human functional connectome

Raimundo Rodriguez¹, Ezra Aydin², Manya Balachander²,
Thirsten Stockton², Catherine Monk², Bin Cheng³,
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University Irving Medical Center, ⁴University of Southern
California, ⁵Wayne State University, ⁶Columbia University
Medical Center

2-B-11 Investigation of Affective Circuitry in Peri-adolescent Pubertal Development and Anxiety

Stephen Suss¹, Adam Kimbler¹, Amanda Baker¹, Saima Akbar¹,
Dana McMakin¹, Aaron Mattfeld¹
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C – Brain function

2-C-12 Longitudinal associations among the predictability of maternal behavior and infant brain function

Denise Werchan¹, Amy Hume², Margaret Zhang²,
Annie Brandes-Aitken², Natalie Brito²
¹New York University School of Medicine, ²New York
University

2-C-13 Daily family assistance and behavioral and neural associations of giving to others

Jasmine Hernandez¹, Naomi Eisenberger¹, Adriana Galvan¹,
Andrew Fuligni¹
¹University of California, Los Angeles

D – Brain structure

2-D-14 Microstructural differences in the brains of young children with attention-deficit/hyperactivity disorder compared to typically developing children: Evidence from restriction spectrum imaging.

Anthony Dick¹, Mohammadreza Bayat¹, Melissa Hernandez¹,
Madeline Curzon¹, Nathalia Garcia¹, Wilfredo Renderos¹,
Donald Hagler², Anders Dale², Paulo Graziano¹
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San Diego

2-D-15 Generalizable multivariate neuroanatomical correlates of psychiatric problems in preadolescence

Bing Xu¹, Henning Tiemeier², Ryan Muetzel¹
¹Erasmus Medical Center Rotterdam, ²Harvard T.H. Chan
School of Public Health

2-D-16 Concurrent and Predictive Associations Between Amygdala Volume and Scores on Subdimensions of the Autism Observational Scale for Infants

Caitlin Sisk¹, Elayne Vollman², Casey Burrows¹, Martin Styner³,
Jed Elison¹, Kelly Botteron⁴, Annette Estes⁵, Stephen Dager⁶,
Guido Gerig⁷, Heather Hazlett⁸, Robert Schultz⁹, Mark Shen⁸,
Lonnie Zwaigenbaum¹⁰, Joseph Piven⁸
¹University of Minnesota, ²Lake Forest College, ³University of
North Carolina at Chapel Hill, ⁴Washington University,
⁵University of Washington, ⁶University of Washintgon,
⁷New York University, ⁸University of North Carolina,
⁹Children's Hospital of Philadelphia, ¹⁰University of Alberta

2-D-17 Weekday-to-Weekend Sleep Differences are Associated With Variations in Brain Morphology in School-aged Children

Elie Yutong Guo¹, Anna-Francesca Boatswain-Jacques¹,
Marie-Pier Côté¹, Miriam Beauchamp¹, Julie Carrier¹,
Véronique Daneault¹, Annie Bernier¹
¹University of Montreal

2-D-18 Effects of CPS involvement on white matter fiber density and morphology during middle childhood: A fixel-based analysis

Elisa Macera¹, Hung-Wei Bernie Chen¹, Melanie Matyi¹,
Marta Korom¹, Claire Dahl¹, Emilio Valadez², Nim Tottenham³,
Jeffrey Spielberg¹, Mary Dozier¹
¹University of Delaware, ²University of Maryland, College Park,
³Columbia University

2-D-21 Sex-based dissociations of brain and behavioral measures of cognitive, motor, and emotional control in relation to externalizing and internalizing psychopathology across development

Keri Rosch¹, Mitchell Batschelett¹, Micah Plotkin¹,
Deana Crocetti¹, Lisa Jacobson¹, Tzipi Horowitz-Kraus²,
Daniel Simmonds¹, Stewart Mostofsky¹
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Institute

2-D-22 Estimating BrainAGE with dynamic measures of structural brain development

Lucy Whitmore¹, Kate Mills¹
¹University of Oregon

2-D-23 Subcortical Volume Differences in Monolingual and Bilingual Adolescents

My Nguyen¹, Yinan Xu¹, Kelly Vaughn², Arturo Hernandez¹
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Center - Houston

2-D-24 Deep Learning and the Cortical Anatomy of Reading

Samuel Johnson¹, Ariel Rokem²
¹Stanford University, ²University of Washington

2-D-25 Changes in Brain Energy Metabolism Across Childhood and Adolescence: A Multi-Occasion 31P Magnetic Resonance Spectroscopy Study

Yana Fandakova¹, Naftali Raz², Ulman Lindenberger³, Jeffrey A. Stanley⁴

¹University of Trier, ²Stony Brook University, ³Max Planck Institute for Human Development, ⁴Department of Psychiatry and Behavioral Neurosciences, Wayne State University, Detroit, MI, USA

2-D-26 Longitudinal effects of prenatal alcohol exposure on visual structural neurodevelopment over infancy

Emma Margolis¹, Niall Bourke², Michal R. Zieff³, Thandeka Mazubane³, Bokang Methola³, Tembeka Mhlakwaphalwa³, Nwabisa Mlandu³, Reese Samuels³, Simone Williams³, Khula Study Team⁴, Daniel Alexander⁵, Derek Jones⁶, Steve Williams², Kirsten Donald³, Laurel Gabard-Durnam¹

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2-D-27 - Gray Matter Volume, Antisocial Behavior, and Callous-Unemotional Traits

Heidi Westerman¹, Luke Hyde¹, Scott Tillem¹, Melissa Peckins², Colter Mitchell¹, Nestor Lopez-Duran¹, Christopher Monk¹

¹University of Michigan, ²St John's University

2-D-29 - The role of stress on early thelarche & brain structure: Evidence from the ABCD® Study

Julie Croff¹, Kara Kerr¹, Gabriella I. Atencio¹, Erin Ratliff¹, Zsofia Cohen¹, Hannah Appleseth¹, Amy Mcgehee¹, Florence Breslin¹

¹Oklahoma State University

2-D-30 - Do subcortical volumes decline with age more precipitously in middle-aged and older adults with autism spectrum disorder

Michaela Cordova¹, Kathryn Porter², Ralph-Axel Müller¹, Gioia Tori², Annika Linke¹, Adam Schadler³, Kalekirstos Alemu⁴, Stephanie Pedrahita¹, Molly Wilkinson¹, Jiwan Kohli¹, Janice Hau¹, Inna Fishman¹, Ruth Carper¹

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2-D-31 Trajectories of subcortical volume development in the Baby Connectome Project

Sally Stoyell¹, Trevor Day¹, Maria Bagonis², Damien Fair¹, Eric Feczko¹, Jed Elison¹, Brad Bower², Addison Cavender¹, Dhruvan Goradia², Lucas Heisler-Roman², Elizabeth Kiffmeyer¹, Carina Lucena², Mollie Myricks², Hteemoo Saw¹, Brett Zimmermann¹

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2-D-32 Cortical thickness trajectories associated with changes in language skill

Trevor Day¹, Sally Stoyell¹, Jed Elison¹, Damien Fair¹, Eric Feczko¹

¹University of Minnesota

E – Clinical populations

2-E-33 Differences in intra- and interhemispheric white matter connectivity in children with down syndrome and autism

Dea Garic¹, Rebecca Grzadzinski¹, Khalid Al-Ali, Robert Mckinstry², Kelly Botteron³, Natasha Marrus², Stephen Dager⁴, Annette Estes⁵, Guido Gerig⁶, Heather Hazlett⁷, Martin Styner¹, Joseph Piven⁷, Robert Schultz⁸, Juhi Pandey⁹, Tanya St. John⁵, Mark Shen⁷

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2-E-34 Alterations in Visual Oscillatory Dynamics in Children with Mild-to-Severe Hearing Loss

Elizabeth Heinrichs-Graham¹, Jacob Eastman¹, Michaela Frenzel¹, Ryan McCreery¹

¹Boys Town National Research Hospital

2-E-35 Neural Mechanisms of Sensory Over-Responsivity Across Clinical Groups

Megan Banchik¹, Kaitlin Cummings¹, Audra Langley¹, Jill Waterman¹, Nim Tottenham², Mirella Dapretto¹, Susan Bookheimer¹, Shulamite Green¹

¹University of California, Los Angeles, ²Columbia University

2-E-36 Maturational trajectories of the acoustic radiations, and links with sensory sensitivities and sleep problems in young children with autism

Adriana Rios¹, Janice Hau², Bosi Chen¹, Lindsay Olson², Annika Linke¹, Inna Fishman¹

¹San Diego State University, ²Brain Development Imaging Laboratories

2-E-37 Relating Parental Buffering of their Child's Neural Reactivity to Threat to Family Accommodation of Anxiety

Elizabeth Kitt¹, Alexis Broussard¹, Sadie Zacharek², Cristina Nardini³, Grace Hommel⁴, Maya Barr¹, Gillian Weeks¹, Alison Magnotti¹, Paola Odriozola⁵, Carla Marin⁴, Wendy Silverman⁴, Eli Lebowitz⁴, Dylan Gee¹

¹Wayne State University, ²Massachusetts Institute of Technology, ³Fordham University, ⁴Yale University, ⁵University of California, Los Angeles

2-E-38 Comparing Brain Laterality in Children with Neurodevelopmental Disabilities: A Reproducible Study

Maryam Mahmoudi¹, Abhishek Mahesh², Trevor Day¹, Audrey Houghton¹, Anders Perrone³, Jacob Lundquist¹, Timothy Hendrickson¹, Jed Elison¹,

Oscar Miranda-Dominguez¹, Damien Fair¹, Eric Feczko¹

¹University of Minnesota, ²University of Minnesota Twin-Cities, ³Oregon Health & Science University

2-E-39 The impact of methylphenidate on the functional hubness of striatal regions in children with ADHD

Monica Lyons¹, Jessica Cohen¹, Margaret Sheridan¹

¹University of North Carolina at Chapel Hill

2-E-40 Developmental trajectories of fronto-amygdala and hippocampal-dorsal anterior cingulate cortex neural circuitry and associations with anxiety in early adolescence

Paola Odriozola¹, Amanda Baker^{1,2}, Katie Bessette¹, Claire Waller¹, Nancy Le¹, Lucina Uddin¹, Tara Peris¹, Adriana Galvan¹

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F - Education

2-F-41 Educational Environment is Related to White Matter Development

Ethan Roy¹, Amandine Van Rinsveld¹, Ariel Rokem², Jason Yeatman¹, Bruce Mccandliss¹, Leo Sugrue³, Andreas Rauschecker³, Pierre Nedelec³

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2-F-42 White Matter Plasticity in Response to Educational Intervention in Reading Disability

Steven Meisler¹, John Gabrieli², Joanna Christodoulou³

¹Harvard University / MIT, ²Massachusetts Institute of Technology, ³MGH Institute of Health Professions

G – Environment (Stress, SES)

2-G-43 'Namaskaar! Namaste! Konnichiwa!': What do we know about Multilingualism In Deaf & Hard-To-Hear Children And Their Language Development?

Nikita Ghodke¹, Aniruddha Walke²

¹Ashoka University, ²Deccan College Post Graduate and Research Institute

2-G-44 Associations of Mother-Child Closeness, Adolescent Symptomatology and Structural Brain Networks

Sunghyun Hong¹, Felicia Hardi¹, Scott Tillem¹, Leigh Goetschius^{1,2}, Jeanne Brooks-Gunn, Vonnie Mcloyd¹, Nestor Lopez-Duran¹, Colter Mitchell¹, Luke Hyde¹, Christopher Monk¹

¹University of Michigan, ²The Hilltop Institute

2-G-45 Examining the Relation of Depriving and Threatening Childhood Experiences to Mechanisms Underlying Reading Skill and Anxiety Symptoms in 7–12-year-old Children

Alisha Compton¹, Claire Tate¹, James Booth¹, Jiulin Dai¹, Neelima Wagley¹

¹Vanderbilt University

2-G-46 Associations among exposome factors, personalized functional brain network topography, and cognitive functioning in youth

Arielle Keller¹, Tyler Moore¹, Elina Visoki¹, Martins Gatavins¹, Yong Fan¹, Eric Feczko², Audrey Houghton², Hongming Li¹, Oscar Miranda-Dominguez², Adam Pines^{1,3}, Russell Shinohara¹, Damien Fair², Theodore Satterthwaite¹, Ran Barzilay⁴

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2-G-47 Exploring neural correlates of behavioral and academic resilience among children in poverty

Carolyn Irving¹, Monica Ellwood-Lowe^{1,2}, Silvia Bunge¹

¹University of California, Berkeley, ²University of Pennsylvania

2-G-48 Impact of childhood adversity on white matter development from late childhood to early adolescence

Elizabeth Stinson¹, Ryan Sullivan¹, Chase Shankula¹, Krista Lisdahl¹, Gabriella Navarro¹

¹University of Wisconsin-Milwaukee

2-G-49 Early life adversity, sleep disturbances, and depressive symptoms during adolescence: The role of the cingulum bundle

Jessica Uy¹, Tiffany Ho², Jessica Buthmann¹, Saché Coury¹, Ian Gotlib¹

¹Stanford University, ²University of California, Los Angeles

2-G-50 Integrating Dimensional Models of Early Adversity: Relative Contributions of Caregiver and Environmental Risks

Kelly Rose Barry¹, Johanna Bick¹, Haley Marie Laughlin¹, Livia Merrill¹

¹University of Houston

2-G-51 Early life adversity reveals adaptive use of absorption in music

Kelsie Lopez¹, Nick Kathios¹, Psyche Loui¹, Laurel Gabard-Durnam¹

¹Northeastern University

2-G-52 Adolescent Caregiving Quality and Neurodevelopmental Recovery Following Severe Early Childhood Psychosocial Deprivation

Lucy Lurie¹, Meredith Gruhn², Kathryn Garrisi², Katie McLaughlin³, Kathryn Humphreys⁴, Charles H. Zeanah⁵, Nathan Fox⁶, Charles Nelson⁷, Margaret Sheridan²

¹University of North Carolina, ²University of North Carolina at Chapel Hill, ³Harvard University, ⁴Vanderbilt University, ⁵Tulane University School of Medicine, ⁶University of Maryland, ⁷Harvard Medical School

2-G-53 Neural Correlates of Resilience to Trauma During Adolescence: A Multi-Modal Study

Lucy Zhang¹, Divyangana Rakesh², Sarah Whittle³, Vanessa Cropley³

¹University of Melbourne, ²Harvard University, ³The University of Melbourne

2-G-54 Threat experiences moderate the link between hippocampus volume and depression symptoms prospectively in adolescence

Max Herzberg¹, Meriah DeJoseph², Joan Luby¹, Deanna Barch³

¹Washington University in St. Louis, ²University of Minnesota, ³Washington University

2-G-55 Neighborhood air pollution is negatively associated with neurocognitive change in early adolescence

Omid Kardan¹, Chacriya Sereeyothin², Kathryn Schertz¹, Michael Angstadt¹, Alexander Weigard¹, Marc Berman², Monica Rosenberg³

¹University of Michigan, ²The University of Chicago, ³University of Chicago

2-G-56 Brain volumes at birth mediate the relationship between prenatal social disadvantage and socioemotional, but not other developmental abilities at age² years

Shelby Leverett¹, Rebecca Brady¹, Rachel Lean², Regina Triplett¹, Dimitrios Alexopoulos¹, Emily Gerstein³, Tara Smyser¹, Barbara Warner¹, Joan Luby², Christopher Smyser¹, Cynthia Rogers¹, Deanna Barch², Rebecca Tillman¹, Michayla Ruscitti¹

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2-G-57 The role of developmental timing of adverse childhood experiences in shaping brain structure: A systematic review

Stephanie Hartanto¹, Ebony Forlano², Catherine Orr², Sarah Whittle³

¹University of Melbourne, ²Swinburne University of Technology, ³The University of Melbourne

2-G-58 Early life stress alters the development of task-rest neural flexibility of the reward network and its association with depressive symptoms in adolescents

Yoonji Lee¹, Justin Yuan¹, Anderson Winkler², Katharina Kircanski³, Daniel Pine⁴, Ian Gotlib¹

¹Stanford University, ²The University of Texas Rio Grande Valley, ³NIH/NIMH, ⁴National Institute of Mental Health

2-G-59 Examining evidence for the intergenerational transmission of resilience: A3-cohort infant neuroimaging study (Pre-registration)

Cassandra Hendrix¹, Lanxin Ji², Moriah Thomason¹

¹New York University, ²NYU Langone Health

2-G-60 Associations between early life trauma and gray and white matter brain age during childhood and adolescence

Dani Beck¹, Lucy Whitmore², Niamh Macsweeney¹, Lars T. Westlye³, Kate Mills², Christian Tamnes¹

¹University of Oslo, ²University of Oregon, ³NORMENT, University of Oslo & Oslo University Hospital

2-G-61 Characterizing unique profiles and correlates of multi-domain resilience to neighborhood disadvantage in youth: A person-centered approach

Jessica Bezek¹, Gabriela Suarez¹, Heidi Westerman¹, Rachel Tomlinson¹, S. Alexandra Burt², Elizabeth Shewark², Alexandra Vazquez², Kelly Klump², Luke Hyde¹

¹University of Michigan, ²Michigan State University

2-G-62 Environmental impacts on adolescent excitatory and inhibitory processes in frontal cortex

Maria Perica¹, Finnegan Calabro¹, Beatriz Luna¹, Will Foran¹, Hoby Hetherington², Chan Hong-Moon¹

¹University of Pittsburgh, ²Resonance Research Incorporated

2-G-63 Associations between neighborhood socioeconomic status and infant brain activity

Melina Amarante¹, Katrina Simon², Aislinn Sandre², Sonya Troller-Renfree², Kimberly Noble²

¹Teachers College, ²Teachers College, Columbia University

2-G-64 Interference Processing following evidence of childhood maltreatment in ABCD

Suzanne Perkins¹, Melissa Jonson-Reid², Michael Angstadt¹, Deanna Barch³

¹University of Michigan, ²Washington University in St. Louis, ³Washington University

H – Executive functioning

2-H-65 Alpha and Theta Oscillations Support Verbal Working Memory Processing in Typically Developing Youth

Abraham Killanin¹, Thomas Ward¹, Anna Coutant², Danielle Rice², Yu-Ping Wang³, Vince Calhoun⁴, Julia Stephen⁵, Tony Wilson²

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2-H-66 Neurobiological differences in inhibitory control in preschool-aged typically-developing children and children with ADHD assessed by a continuous performance task.

Mohammadreza Bayat¹, Melissa Hernandez¹, Madeline Curzon¹, Paulo Graziano¹, Anthony Dick¹

¹Florida International University

2-H-67 School's Out for the Summer: Modeling Time-Of-Year Effects on Children's Cognition Using Cyclical Splines Across Large-Scale Datasets

Bart Larsen^{1,2}, Theodore Satterthwaite², Arielle Keller², Alisha Shetty², Ruben Gur², Raquel Gur², Monica Calkins², Tyler Moore²

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2-H-68 Affective-related impulsivity mediates relationship between internalizing symptoms and alcohol sipping initiation in youth

Chase Shankula¹, Ryan Sullivan¹, Elizabeth Stinson¹, Krista Lisdahl¹

¹University of Wisconsin-Milwaukee

2-H-69 Household cognitive enrichment is associated with visual working memory function in pre-schoolers

Christina Davidson¹, Line Caes², Yee Lee Shing³, Courtney Mckay², Eva Rafetseder^{2,3}, Sobana Wijekumar¹

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Flux Congress Posters | Titles, Authors and Affiliations

2-H-70 Development, Reward, and Motor Prepotency Effects on a Go-No-Go Task in HCP-D

John Flournoy¹, Graham Baum^{1,2}, Racheal Lama¹, Leah Somerville¹

¹Harvard University, ²Neumora

2-H-71 An examination of the longitudinal development and construct validity of Go/No-go task-related neural activation during successful inhibition across adolescence and early adulthood

Katie Paige¹, Mary Heitzeg², Lora Cope², Jillian Hardee², Craig Colder³, Mary Soules², Alexander Weigard²

¹University of New York, Buffalo, ²University of Michigan, ³University at Buffalo

2-H-72 Neurobiological correlates for reading and executive functions abilities in children with Rolandic Epilepsy

Tzipi Horowitz-Kraus¹, Raya Meri², Rola Farah², Mika Shapira³, Dror Kraus⁴

¹Technion and Kennedy Krieger Institute, ²Technion, ³Department of Radiology, Rambam Hospital Medical Center, Haifa, Israel, ⁴The Institute of Child Neurology, Schneider Children's Medical Center of Israel

2-H-73 Examining dimensional attention performance as a predictor of neural activity during an inhibitory control task in children

Caroline Wright¹, Aaron Buss¹, Hollis Ratliff²

¹University of Tennessee - Knoxville, ²University of Tennessee

2-H-74 The Coordination of Proactive and Reactive Control Processes Across Development

Rachel Foster¹, Aditi Hosangadi¹, Lindsay Bowman¹, Nicolas Chevalier², Yuko Munakata¹

¹University of California, Davis, ²University of Edinburgh

I - Language

2-I-75 Developmental trajectories of early word production and gestures through normative modeling

Aaron Glick¹, Jasmin Turner², Lana Hantzsch¹, Lauren Haisley¹, Lynn Paul², Jed Elison¹

¹University of Minnesota, ²California Institute of Technology

2-I-76 Functional connectivity during passage listening predicts later reading ability in middle childhood

Andrea Burgess¹, Laurie Cutting¹

¹Vanderbilt University

2-I-77 Children Know More Than You Think: An ERP Investigation of the Nature of Semantic Knowledge During Word Learning in Children

Ashlie Pankonin¹, Alyson Abel¹

¹San Diego State University

J - Learning

2-J-78 How adolescents generalize across rewarding experiences to learn and infer value

Catherine Insel¹, Natalie Biderman¹, Zarrar Shehzad¹, Daphna Shohamy¹

¹Columbia University

2-J-79 Intervention-driven changes in the Visual Word Form Area of struggling readers

Jamie Mitchell¹, Hannah Stone¹, Maya Yablonski¹, Jasmine Tran¹, Mia Fuentes-Jimenez¹, Jason Yeatman¹

¹Stanford University

2-J-80 The effects of novelty and uncertainty on exploratory behaviors following early life adversity

Natalie Saragosa-Harris¹, Jennifer Silvers¹, Kate Nussenbaum², Catherine Hartley²

¹University of California, Los Angeles, ²New York University

2-J-81 The Relationship between Autism Symptom Severity, Anxiety, and Stimming as a Coping Mechanism during a Socially-Mediated Math Activity

Rose Nevill¹, Elizabeth Maquera^{1,2}, Emily Fuhrmann¹, Analia Marzoratti¹, Megan Liu¹, Gus Sjobeck¹, Tara Hofkens¹, Steven Boker¹, Kevin Pelphrey¹, Tanya Evans¹

¹University of Virginia, ²

2-J-82 Interaction between childhood socioeconomic circumstances and brain development in elementary academic outcomes

Tin Nguyen¹, Stephanie Del Tufo², Bennett A. Landman¹, Gavin R. Price³, Laurie Cutting¹

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K – Mechanisms (hormones, neurotransmitters, physiology)

2-K-83 Sexually-Divergent Impact of Testosterone on Selective Attention in Youth

Jake Son¹, Lucas Weyrich¹, Abraham Killanin², Giorgia Picci¹, Hannah Okelberry¹, Danielle Rice¹, Anna Coutant¹, Tony Wilson¹

¹Boys Town National Research Hospital, ²Institute for Human Neuroscience

2-K-84 A multimodal investigation of sleep and anxiety in peri-pubertal adolescents

Amanda Baker¹, Christian Agudelo², Adam Kimbler¹, Nathan Sollenberger¹, Logan Cummings¹, Carlos Yeguez¹, Saima Akbar¹, Liga Eihentale¹, Stephen Suss¹, Maria Vanessa Rivera Núñez¹, Guadalupe Patriarca¹, Josefina Freitag¹, Andi Zhu¹, Jeremy Pettit¹, Aaron Mattfeld¹, Dana McMakin¹

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L - Memory

2-L-85 The development of functional memory networks connected to the hippocampus

Lena Skalaban¹, Steven Martinez¹, Vishnu Murty¹

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2-L-86 Different levels of videogaming in children are associated with different neurocognitive outcomes

Bader Chaarani¹, Alexandra Potter², Hugh Garavan²

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2-L-88 Exploring relations between child age, hippocampal structure and spatial reorientation performance

Nicholas Mattox¹, Hannah Bowley¹, Vanessa Vieites², Yinbo Wu¹, Yvonne Ralph³, Priscilla Lioi¹, Timothy Hayes¹, Aaron Mattfeld¹, Anthony Dick¹, Shannon Pruden¹

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2-L-89 Anxiety, Memory Bias, and Social Support during Adolescence

Camille Johnston¹, Iliana Todorovski¹, Thais Costa Macedo De Arruda¹, Megan E. Quarmley¹, Johanna Jarcho¹

¹Temple University

2-L-90 Multimodal Analysis of Neural Signals Related to Source Memory in Young Children

Yuqing Lei¹, Tracy Riggins², Fengji Geng

¹University of Maryland, College Park, ²University of Maryland

M - Methods

2-M-91- A New and Public Resource to Advance Understanding of and ADHD and ASD

Kristina Hufnagle¹, Nora Byington¹, Kristen Schediter², Julia Monk², Casey Burrows¹, Christine Conelea¹, Suma Jacob¹, Deanna Barch³, John Constantino, Joel Nigg⁴, Jed Elison¹, Nico Dosenbach³, Damien Fair¹

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2-M-92 Reports of the death of brain-behavior associations have been greatly exaggerated

Carolina Makowski¹, Timothy Brown¹, Weiqi Zhao¹, Donald Hagler¹, Hugh Garavan², Tom Nichols³, Terry Jernigan¹, Anders Dale¹

¹University of California, San Diego, ²University of Vermont, ³University of Oxford

2-M-93 Using Low-field MRI to Improve Accessibility of Neuroimaging Measures in Developmental Samples

Rebecca Hayes¹, Mary Corcoran¹, Emma Waite¹, Thomas Campbell Arnold², Joel Stein², Maria Jalbrzikowski³

¹Boston Children's Hospital, ²University of Pennsylvania, ³Boston Children's Hospital & Harvard Medical School

2-M-94 Reducing the Need for General Anesthesia in Children Undergoing Neuroimaging by Preparation and Motion Correction

Melanie Ganz-Benjaminsen¹, Thurid Waagstein Madsen², Kathrine Skak Madsen³, Kathrine Søndergaard Christensen², Alfred Peter Born⁴, Vibeke Andrée Larsen²

¹University of Copenhagen, ²Copenhagen University Hospital, Rigshospitalet, ³Copenhagen University Hospital Hvidovre, ⁴Juliane Maries Center, Copenhagen University Hospital, Rigshospitalet

2-M-95 Using Deep Learning Cortical Surface Reconstruction Methods on Infants: a Preliminary Study

Timothy Hendrickson¹, Eric Feczko¹, Lucille Moore¹, Martin Styner², Omid Kardan³, Taylor Chamberlain⁴, Brad Bower⁵, Sally Stoyell¹, Sooyeon Sung⁶, Monica Rosenberg⁷, Christopher Smyser⁸, Alice Graham⁹, Jed Elison¹, Damien Fair¹

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2-M-96 Updating the restriction spectrum imaging model for the ABCD study

Diliana Pecheva¹, Donald Hagler¹, Anders Dale¹

¹University of California, San Diego

2-M-97 Building a clinically feasible risk calculator for psychopathology in adolescence: a machine learning approach

Nana Okada¹, Divyangana Rakesh¹, John Flournoy¹, Henning Tiemeier², Katie McLaughlin¹

¹Harvard University, ²Harvard T.H. Chan School of Public Health

N - Networks

2-N-98 Development of Functional Systems In 0-2 year-olds

Jiaxin (Cindy) Tu¹, Michael Myers¹, Chad Sylvester², Evan Gordon¹, Timothy Laumann¹, Omid Kardan³, Eric Feczko⁴, Trevor Day⁴, Oscar Miranda-Dominguez⁴, Lucille Moore⁴, Damien Fair⁴, Monica Rosenberg⁵, Christopher Smyser¹, Jed Elison⁴, Adam Eggebrecht², Muriah Wheelock²

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2-N-99 Estimation of Brain Connectivity Networks and Covariate Effects in Pediatric Traumatic Brain Injury

Dana DeMaster¹, Yangfan Ren², Marina Vannucci², Linda Ewing-Cobbs³

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³The University of Texas Health Science Center at Houston

2-N-100 Resting State Fronto-Amygdala Network Density Associated with a Parent-Focused Intervention for Childhood Anxiety

Kelley Gunther¹, Daniel Petrie², Elizabeth Kitt¹, Alexis Broussard¹, Sadie Zacharek³, Cristina Nardini⁴, Grace Hommel⁵, Alyssa Martino⁵, Tess Anderson⁵, Hannah Spencer⁶, Paola Odriozola^{1,7}, Carla Marin⁵, Wendy Silverman⁵, Eli Lebowitz⁵, Dylan Gee¹

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2-N-101 Characterizing Default Mode Network Connectivity Profiles Among U.S. Adolescents and Associations Between Sleep Duration, Internalizing, and Externalizing Problems: Findings from ABCD Study

Linhao Zhang¹, Lawrence Sweet¹, Assaf Oshri²

¹University of Georgia, ²The University of Georgia

2-N-102 Functional network segregation and integration along the sensorimotor-association axis in adolescence

Martins Gatavins¹, Audrey Luo¹, Valerie Sydnor¹, Golia Shafiei¹, Dale Zhou¹, Raquel Gur¹, Ruben Gur¹, Allyson Mackey¹, Theodore Satterthwaite¹, Arielle Keller¹

¹University of Pennsylvania

2-N-103 Brain network organization underlying urgency in children with ADHD and effects of methylphenidate

Nicholas Fogleman¹, Teague Henry², Sikoya Ashburn³, Tehila Nugiel^{4,5}, Jessica Cohen¹

¹University of North Carolina at Chapel Hill, ²University of Virginia, ³University of North Carolina, ⁴Florida State University, ⁵The University of North Carolina at Chapel Hill

2-N-104 Gerrymandered brain networks in ADHD reveal atypical network topography is associated with disorder severity.

Robert Hermosillo¹, Ayat Arrale¹, Sanju Koirala¹, Eric Feczko¹, Eric Earl², Anders Perrone³, Oscar Miranda-Dominguez¹, Damien Fair¹

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2-N-105 Structural connectivity and working memory within cognitive networks in children with and without ADHD

Sikoya Ashburn¹, Jessica Cohen², Martin Styner²

¹University of North Carolina, ²University of North Carolina at Chapel Hill

2-N-106 The spatiotemporal dynamics of EEG microstate networks during three to six months of infancy

Priyanka Ghosh¹, Cara Bosco¹, Michal R. Zieff², Lauren Davel², Zamazimba Madi², Thandeka Mazubane², Bokang Methola², Tembeka Mhlakwaphalwa², Khula Study Team³, Kirsten Donald², Laurel Gabard-Durnam¹, Nwabisa Mlandu², Khanyisa Nkubungu², Reese Samuels², Simone Williams²

¹Northeastern University, ²University of Cape Town, ³Khula Study Team

2-N-107 The effects of methylphenidate on brain organization underlying attention in stimulant-naïve children with ADHD.

Tehila Nugiel^{1,2}, Margaret Sheridan³, Peter Mucha⁴, Jessica Cohen³

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P – Rewards/Motivation

2-P-108 Growing up fast and slow: wild mice present an opportunity to hold age constant and study adolescent brain and behavioral development on two different life history trajectories

Wan Chen Lin¹, Niloo Motahari¹, Gabriella Smith¹, Linda Wilbrecht¹

¹University of California, Berkeley

2-P-109 Characterizing striatal dopamine-related neurophysiology in rewarded response inhibition in youth at risk for problematic substance use

Ashley Parr¹, Finnegan Calabro¹, Will Foran¹, Douglas Fitzgerald¹, Susan Tapert², Kate Nooner³, David Goldston⁴, Michael Debellis⁴, Duncan Clark¹, Beatriz Luna¹

¹University of Pittsburgh, ²University of California, San Diego, ³University of North Carolina Wilmington, ⁴Duke University

2-P-110 Neural and Clinical Predictors of Adolescent Development of Pleasure Sensitivity and Cognitive Control

Matthew Mattoni¹, Holly Sullivan-Toole¹, Thomas Olino¹

¹Temple University

2-P-111 Sex differences in reward processing pathways between prenatal maternal mood and later depression risk: A latent profile approach

Shuping Lim¹, Samantha Yeo¹, Evelyn Chung Ning Law¹

¹National University of Singapore

2-P-112 Examination of Adolescent Person-Specific Neural Networks Implicated in Reward Processing and Internalizing Symptoms

Yue Zhang¹, Felicia Hardi¹, Vonnie Mcloyd¹, Nestor Lopez-Duran¹, Colter Mitchell¹, Luke Hyde¹, Adriene Beltz¹, Christopher Monk¹

¹University of Michigan

2-P-113 Ventral striatum reactivity to positive social stimuli mitigates the longitudinal effect of parental depression on youth's depression and risk taking

Zeyi Shi¹, Yang Qu¹, Beiming Yang¹, Zexi Zhou²

¹Northwestern University, ²The University of Texas at Austin

2-P-114 Sensitivity to reward as a buffer against negative mental health consequences of pandemic-related stress: a preregistered analysis in the Human Connectome Project in Development

Catherine Mikkelsen¹, Leah Somerville², Makeda Mayes³, Rachael Mccollum¹, Katie Mclaughlin², Maya Rosen¹

¹Smith College, ²Harvard University, ³University of Washington

2-P-115 - A multi-sample evaluation of the measurement structure and function of the modified monetary incentive delay task in adolescents.

Michael Demidenko¹, Russell Poldrack¹, Jeanette Mumford¹, Nilam Ram¹

¹Stanford University

Q – Socioemotional processing

2-Q-116 Identifying Functional Connectivity Mediators of the Age-Related Changes in Negative Affective Experience Across Adolescence

Katherine Grisanzio¹, John Flournoy¹, Patrick Mair¹, Leah Somerville¹

¹Harvard University

2-Q-117 Computational modeling of social feedback processing reveals differential impression updating across development

Alexandra Rodman¹, Hayley Dorfman¹, Leah Somerville¹

¹Harvard University

2-Q-118 Characterizing amygdala nuclei resting-state connectivity with cortex as a function of age in adolescence: a high-field longitudinal investigation

Amar Ojha¹, Maria Perica¹, Natalie Phang¹, Will Foran¹, Finnegan Calabro¹, Beatriz Luna¹

¹University of Pittsburgh

2-Q-119 Social touch during feeding predicts infants' BOLD response in immature neural pathways

Cabell Williams¹, Meghan Puglia¹, Kevin Pelphrey¹, James Morris¹

¹University of Virginia

2-Q-120 The influence of parental validation on anterior insular activity among adolescents during real-time fMRI dyadic neurofeedback

Hannah Caperton¹, Kara Kerr¹, Zsofia Cohen¹, Gabriella I. Atencio¹, Courtney Cooper^{1,2}, Erin Ratliff¹, Florence Breslin¹

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2-Q-121 A common neural response to experiencing and regulating infant and adult affect in postnatal mothers

Katherine Haigler¹, Heidemarie Laurent¹, Megan Finnegan^{2,3}

¹Pennsylvania State University, ²University of Illinois Urbana-Champaign, ³University of Illinois at Urbana-Champaign

2-Q-122 Adolescents' perceptions of parenting behaviors mediate the association between maternal childhood abuse and maltreatment and adolescent behavioral problems

Kendall Parks¹, Jessica Uy¹, Jessica Buthmann¹, Ian Gotlib¹

¹Stanford University

2-Q-123 Detecting the M170 face response using optically pumped magnetometers in young children and adults

Kristina Safar¹, Julie Sato¹, Marlee Vandewouw², Margot Taylor²

¹Hospital for Sick Children, ²University of Toronto

2-Q-124 Relationships between gut metabolites, socio-emotional brain processing, and behavior in youth with autism

Lisa Aziz-Zadeh¹, Mirella Dapretto², Emily Kilroy^{1,3}, Aditya Jayashankar¹, Sofronia Ringold¹, Christiana Butera¹, Jennifer Labus², Jennifer Labus², Arpana Gupta², Emeran Mayer¹

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2-Q-125 The moderating role of parental trauma history on the association between adolescent externalizing symptoms and emotion regulation-related amygdala activation

Nadia Bounoua¹, Leah Church¹, Melanie Matyi¹, Jeffrey Spielberg¹

¹University of Delaware

2-Q-126 Connectome-based modeling predicts childhood socio-emotional development

Samantha Brindley¹, Amalia Skyberg², Jessica Connelly¹, James Morris¹

¹University of Virginia, ²University of Oregon

2-Q-127 Exposure to threat adversity and amygdala-prefrontal connectivity during emotion regulation: Exploring the role of emotional clarity

Adrienne Bonar¹, Amy Carolus², Gabriella Alvarez², Adam Bryant Miller³, Madeline Robertson², Meredith Gruhn², Anais Rodriguez-Thompson², Sophia Martin², Kinjal Patel⁴, Matteo Giletta⁵, Paul D. Hastings⁶, Matthew K. Nock⁷, George Slavich⁸, Karen D. Rudolph⁹, Mitchell J. Prinstein², Kristen A. Lindquist², Margaret Sheridan²

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2-Q-128 Childhood violence exposure and neural mechanism of emotion generalization and differentiation

David Weissman¹, Stephanie Decross¹, Steven Kasperek¹, Katie McLaughlin¹, Shafi Rubbani²

¹Harvard University, ²Massachusetts General Hospital

2-Q-129 Examining the impact of early family adversity on neural mechanisms underlying emotion processing in first-time fathers

Genesis Flores¹, Darby Saxbe¹, Sarah Stoycos¹

¹University of Southern California

2-Q-130 The impact of early life adversity on neural reward processing in early childhood

Maria Granros¹, Katie Burkhouse²

¹University of Illinois at Chicago, ²Nationwide Children's Hospital, Ohio State University

2-Q-131 Neural Correlates of Emotion Reactivity and Regulation in Excitability and Irritability: Implications in ADHD

Sam Norwitz¹, Nourhan Elsayed¹, Susan Perلمان¹, Joan Luby², Deanna Barch², Alecia Vogel²

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2-Q-132 The impact of prenatal drug exposure on neural correlates subserving the processing of negative emotional stimuli

Zehua Cui¹, Alyssa Parker¹, Tracy Riggins²

¹University of Maryland, College Park, ²University of Maryland

POSTER SESSION 3

Saturday, September 9, 2023

08:45 – 12:30

A - Attention

3-A-1 Neural Signature of Social Encoding

Lauren Smith¹, Lindsey Powell¹

¹University of California, San Diego

3-A-2 The development of joint attention during parent-infant book-reading: a dual head-mounted eye-tracking study

Julia Farrell¹, Jamie Newland¹, Alexia Brown¹, Valeria Burgos-Villanueva¹, Andreas Keil¹, Lisa Scott¹

¹University of Florida

B – Brain connectivity

3-B-3 The lion sleeps tonight, but do you? The moderating effect of sleep on the link between functional connectivity and youth behavioral problems

Brooke Friedman¹, Assaf Oshri^{2,3}, Linhao Zhang³

¹University of Notre Dame, ²The University of Georgia,

³University of Georgia

3-B-4 Relations between stress and obsessive-compulsive symptoms vary as a function of somatomotor-putamen resting state connectivity during adolescence

Daniel Petrie¹, Charles Geier^{2,3}

¹The Pennsylvania State University, ²University of Georgia,

³Pennsylvania State University

3-B-5 Does maximising connectome-based identifiability improve connectome-based phenotype prediction in developing youths?

Jivesh Ramdun¹, Clare Kelly¹, Robert Whelan¹, Tamara Vanderwal², Yihe Weng¹

¹Trinity College Dublin, ²University of British Columbia

3-B-6 Youth ADHD and dysregulation as predictors of default- and frontoparietal network-amygdala connectivity: An ABCD study

Kathleen Feeney¹, Rosario Pintos Lobo¹, Julio Peraza¹, Timothy Hayes¹, Raul Gonzalez¹, Angie Laird¹, Erica Musser¹

¹Florida International University

3-B-7 Functional Connectivity Changes of Default Network Subcomponents following the COVID-19 Pandemic Stressor Associated with Depressive Symptoms in Youth

Katie Bessette¹, Paola Odriozola¹, Amanda Baker², Claire Waller¹, Nancy Le¹, Lucina Uddin¹, Adriana Galvan¹, Tara Peris¹

¹University of California, Los Angeles, ²Florida International University

3-B-8 The development of rich-club organization in neurodevelopmental disorders: an MEG study

Marlee Vandewouw¹, Jennifer Crosbie¹, Russell Schachar¹, Stelios Georgiades², Robert Nicolson³, Elizabeth Kelley⁴, Muhammad Ayub⁴, Jessica Jones⁴, Paul Arnold⁵, Azadeh Kushki¹, Jason Lerch⁶, Margot Taylor¹, Evdokia Anagnostou⁷

¹University of Toronto, ²McMaster University,

³Western University, ⁴Queen's University, ⁵University of

Calgary, ⁶University of Oxford, ⁷Holland Bloorview Kids

Rehabilitation Hospital

3-B-9 Structural connectome gradients and cognition relationships in early childhood

Yoonmi Hong¹, Martin Styner¹, John Gilmore², Emil Cornea¹, Mark Foster¹

¹University of North Carolina at Chapel Hill, ²University of North Carolina

3-B-10 Functional connectivity of the speech network in relation to word reading skill development among school-age children

Alexandra Kapadia¹, Juliana Ronderos¹, Jennifer Zuk¹, Ferenc Honbolygó², Jason Bohland³

¹Boston University, ²ELKH Research Centre for Natural

Sciences, ³University of Pittsburgh

3-B-11 A longitudinal study of structural connectome uniqueness and its association with mental health in adolescence

Amanda Boyes¹, Daniel Hermens¹

¹University of the Sunshine Coast

C – Brain function

3-C-12 Neurological perturbations and language impairments in very preterm infants

Paige Nelson¹, Allison Momany¹, Stephanie Lee¹, Ö. Ece Demir-Lira¹

¹University of Iowa

3-C-14 Data-driven identification of neurobiological phenotypes during threat learning in youth exposed to childhood trauma and associations with psychopathology

Stephanie Decross¹, Margaret Sheridan², Nim Tottenham³, Katie McLaughlin¹

¹Harvard University, ²University of North Carolina at Chapel Hill, ³Columbia University

3-C-15 Mother-child Relationship Quality and Conflict throughout Adolescence Predicts Neural Response to Peer Influence in Young Adulthood

Joseph Venticinque¹, Sarah Mcmillan¹, Amanda Guyer¹

¹University of California, Davis

3-C-17 Characterizing the effect of hearing loss on auditory entrainment in children

Zhiying Shen¹, Elizabeth Heinrichs-Graham¹, Wai Hon Lee¹, Ryan McCreery¹

¹Boys Town National Research Hospital

3-C-18 The role of parent-child interactions around number play in children's numerical processing skills

Ö. Ece Demir-Lira¹, Paige Nelson¹, Haley Laughlin¹, Ying Li¹
¹University of Iowa

D – Brain structure

3-D-19 Sleep onset latency is associated with smaller hippocampal volume in the Adolescent Brain Cognitive Development (ABCD)SM Study

Erin Ratliff^{1,2}, Florence Breslin², Julie Croff², Zsofia Cohen², Kara Kerr²

¹University of Maryland,² Oklahoma State University

3-D-20 The Genetic and Environmental Factors Influencing Cortical and Subcortical Structure in Youth Exposed to Neighborhood Disadvantage

Gabriela Suarez¹, Alexandra Vazquez², S. Alexandra Burt², Kelly Klump², Luke Hyde¹

¹University of Michigan,² Michigan State University

3-D-21 Effects of an Early Parenting Intervention on Stop Signal Reaction Time through White Matter Integrity in Middle Childhood: A Randomized Clinical Trial among CPS-Involved Children

Hung-Wei Bernie Chen¹, Mary Dozier¹, Marta Korom¹, Elisa Macera¹, Nim Tottenham², Melanie Matyi¹, Emilio Valadez³, Jeffrey Spielberg¹, Claire Dahl¹, Robert Simons¹, Erin Palmwood⁴, Alison Goldstein⁵

¹University of Delaware,²Columbia University,³University of Maryland, College Park,⁴University of Mary Washington,⁵University of California, Irvine

3-D-22 Neuroendocrine Functioning and Adolescent White Matter Organization

Jose Guzman¹, Felicia Hardi¹, Colter Mitchell¹, Christopher Monk¹, Nestor Lopez-Duran¹, Luke Hyde¹

¹University of Michigan

3-D-23 Cortical thickness in bilingual children from the ABCD study: Differences between home-learners and school-learners

Kelly Vaughn¹, My Nguyen², Juliana Ronderos³, Arturo Hernandez²

¹University of Texas Health Science Center - Houston,
²University of Houston,³Boston University

3-D-24 Varied patterns of cortical expansion between very preterm infants and full term infants from birth to 9/10 years of age

Lisa Gorham¹, Aidan Latham¹, Dimitrios Alexopoulos¹, Jeanette Kenley¹, Tara Smyser¹, Cynthia Rogers¹, Christopher Smyser¹, Kara Garcia²

¹Washington University in St. Louis,²Indiana University School of Medicine

3-D-25 Trajectories of gray matter volume development in toddlers and young children with prenatal alcohol exposure

Madison Long¹, Preeti Kar¹, Nils Forkert¹, Bennett A. Landman², Bennett A. Landman², Yuankai Huo², Catherine Lebel¹

¹University of Calgary,² Vanderbilt University

3-D-26 Amongst initially healthy weight youth, smaller increases in subcortical volumes predict greater gains in BMI from 9-12-years-old: findings from the Adolescent Brain Cognitive Development Study

Shana Adise¹, Jonatan Ottino-Gonzalez¹, Eric Kan¹, Panteha Hayati Rezvan¹, Kerri Boutelle², Joshua Millstein¹, Kyung Rhee², Michael Goran¹, Elizabeth Sowell³

¹Children's Hospital of Los Angeles,²University of California, San Diego,³CHLA/USC

3-D-27 Neurobiological changes across pregnancy

Yanbin Niu¹, Benjamin Conrad¹, M. Catalina Camacho², Sanjana Ravi¹, Hannah Piersiak¹, Ellen Clayton, Sarah Osmundson, Seth Smith, Autumn Kujawa¹, Kathryn Humphreys¹

¹Vanderbilt University,²Washington University in St. Louis

3-D-28 Comparing structural and functional maturity in middle childhood

Cassidy McDermott¹, Morgan Botdorf¹, Maayan Ziv¹, Austin Boroshok¹, Anne Park¹, Dilara Berkay¹, Adrianna Jenkins¹, Allyson Mackey¹

¹University of Pennsylvania

3-D-29 Social wariness trajectories across early childhood and their relation to brain morphometry

Isabella Schneider¹, Dana Kanel, Anderson Winkler², Daniel Pine³, Nathan Fox⁴, Courtney Filippi⁵

¹University of Maryland, College Park,²The University of Texas Rio Grande Valley,³National Institute of Mental Health,⁴University of Maryland,⁵ NYU Langone

3-D-30 Identifying developmental mismatches in the child and adolescent brain: a multimodal study

Jamie Roeske¹, Xiangyu Long¹, Meaghan Perdue¹, Madison Long¹, Bryce Geeraert¹, Catherine Lebel¹

¹University of Calgary

3-D-32 Does Adolescent Brain Structure Mediate the Association between Maternal and Paternal Parenting Behaviors and Adolescent Internalizing Symptoms

Sarah Manuele¹, Sarah Whittle¹, Marie Yap²

¹The University of Melbourne,²Monash University

E – Clinical populations

3-E-33 Differential developmental contributions of limbic and motor connectivity underlying fine motor function in preschool-age children with and without ADHD: a longitudinal study.

Daniel Simmonds¹, Mitchell Batschelett¹, Deana Crocetti¹, Stewart Mostofsky¹, Lisa Jacobson¹, Keri Rosch¹

¹Kennedy Krieger Institute

3-E-34 A shifting role of thalamocortical connectivity in the emergence of large-scale functional brain organization across early lifespan development

Shinwon Park¹, Koen Haak², Han Byul Cho³,
Kyoungseob Byeon³, Bo-Yong Park⁴, Phoebe Thomson¹,
Adriana Di Martino¹, Haitao Chen⁵, Wei Gao⁶, Ting Xu¹,
Sofie Valk⁷, Michael Milham¹, Boris Bernhardt⁸,
Seok Jun Hong³

¹Child Mind Institute, ²Radboud University Medical Center,
³Sungkyunkwan University, ⁴Inha University, ⁵University of
California, Los Angeles, ⁶Cedars-Sinai Medical Center,
⁷Max Planck Institute for Human Cognitive and Brain Science,
⁸McGill University

3-E-35 A dimensional investigation of response time variability in children with and without ADHD

Arianna Cascone¹, Rachel Tomlinson², Kelly Klump³,
S. Alexandra Burt³, Luke Hyde², Jessica Cohen¹

¹University of North Carolina at Chapel Hill, ²University of
Michigan, ³Michigan State University

3-E-36 Prediction & Sensory Processing in Autism Spectrum Disorder: an fMRI Study

Bar Yosef¹, Shulamite Green¹, Susan Bookheimer¹,
Mirella Dapretto¹, Valerie Burgess¹, Megan Banchik¹,
Gendaar Consortium

¹University of California, Los Angeles

3-E-37 Neural correlates of smartphone-based communication in adolescents with and without depression

Elizabeth McNeilly¹, Saché Coury², Giana Teresi³, Zia Bajwa⁴,
Lauren Kahn¹, Ryann Crowley¹, Nicholas Allen¹, Tiffany Ho²

¹University of Oregon, ²University of California, Los Angeles,
³University of Pittsburgh, ⁴University of California, Berkeley

3-E-38 Stability of the intrinsic brain architecture across sleep and wakefulness in children with autism

Phoebe Thomson¹, Ting Xu¹, Seok-Jun Hong², Shinwon Park¹,
Francisco Castellanos^{3,4}, Michael Milham¹,
Adriana Di Martino¹

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³NYU Langone Health, ⁴NYU Langone

3-E-39 Identifying latent neuroanatomical factors associated with severe temper outbursts in children with ADHD: A Bayesian modeling approach

Shinwon Park^{1,2}, Amy Roy³, Margaret Benda⁴,
Adriana Di Martino¹, Michael Milham¹, Seok Jun Hong²

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University, ⁴Department of Psychology, Fordham University,
Bronx, NY, USA,

3-E-40 The effects of prematurity on patterns of cortical maturation in toddlers indicated by resting EEG

Anna Galvan¹, Johanna Bick¹, Andrea Ortiz-Jimenez¹,
Xinge Li¹, Megan Giles², Dana Demaster², Susan Landry³

¹University of Houston, ²University of Texas Health Science
Center at Houston, ³University of Texas Health Science
Center - Houston

3-E-41 Differences in Brain Age in Adults with ASD as a Step Towards Understanding Atypical Brain Maturation Across the Lifespan

Gabriel Garcia¹, Annika Linke¹, Jiwan Kohli¹, Ian Martindale¹,
Ian Shryock¹, Molly Wilkinson¹, Michaela Cordova¹,
Janice Hau², Kalekirstos Alemu¹, Gioia Tori³,
Stephanie Pedrahita¹, Ralph-Axel Müller¹, Ruth Carper¹

¹San Diego State University, ²Brain Development Imaging
Laboratories, ³Brain Development Imaging Labs, SDSU

3-E-42 Testing the generalisability of transdiagnostic latent patterns in functional brain networks to a Norwegian sample of youth

Irene Voldsbekk¹, Rikka Kjelkenes¹, Andreas Dahl¹,
Lars T. Westlye¹, Dag Alnæs¹

¹NORMENT, University of Oslo & Oslo University Hospital

1-E-43 Connectivity Between Striatum and Task Positive Networks is Modulated by Long-term Stimulant Exposure in Childhood ADHD, an ABCD study

Adam Kaminski¹, Hua Xie², Brylee Hawkins³, Alaina Pearce⁴,
Xiaozhen You², Chandan Vaidya¹

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Children's National Medical Center, ³Department of
Psychology, Georgetown University, Washington, DC,,
⁴Pennsylvania State University

F - Education

3-F-44 Positive parenting buffers the negative impact of weaker inhibitory control network connectivity on adolescents' school performance

Beiming Yang¹, Ya-Yun Chen², Zexi Zhou³, Tianying Cai¹,
Varun Devakonda¹, Tae-Ho Lee², Yang Qu¹

¹Northwestern University, ²Virginia Tech, ³The University of
Texas at Austin

3-F-45 Exploring Differences Between Movement and Math Performance in Timed and Untimed Math Tasks and its Relationship with Anxiety

Emily Fuhrmann¹, Rose Nevill¹, Elizabeth Maquera^{1,2},
Analia Marzoratti¹, Megan Liu¹, Gus Sjobeck¹, Tara Hofkens¹,
Steven Boker¹, Kevin Pelphrey¹, Tanya Evans¹

¹University of Virginia, ²

3-F-46 Exploring the relationship between Latinx American youth's familism values and school disengagement: Identifying potential neural moderators

Varun Devakonda¹, Yang Qu¹, Beiming Yang¹, Zexi Zhou²

¹Northwestern University, ²The University of Texas at Austin

3-F-47 Functional Connectivity Profiles in 1st Graders Identified for Math Support in the Classroom

Isabella Starling Alves¹, Lina Shanley², Madison Cook²,
Marcia Moore², Jolinda Smith², Fred Sabb², Ben Clarke²,
Eric Wilkey¹

¹Vanderbilt University, ²University of Oregon

Flux Congress Posters | Titles, Authors and Affiliations

G – Environment (Stress, SES)

3-G-48 The role of early social adversity on neural function during emotional (or threat-related) interference: implications for depression and suicidality

Melanie Grad-Freilich¹, Jennifer Silk¹, Rasim Diler¹, Cecile Ladouceur¹

¹University of Pittsburgh

3-G-49 Dimensions of early-life adversity co-occurrence and associations with cortico-limbic functional connectivity in the ABCD Study

Alexis Briant^{1,2}, Anna Vannucci³, Hajer Nakua⁴, Jenny Harris⁵, Drew Ward², Nim Tottenham³, Dylan Gee²

¹University of Vermont, ²Wayne State University, ³Columbia University, ⁴University of Toronto, ⁵University of Exeter

3-G-50 Differentiating the influence of socioeconomic status and negative life events on the functional brain development in children and adolescents.

Brianna Hughes¹, Bobby Stojanoski¹

¹Ontario Tech University

3-G-51 Is breastfeeding associated with individual differences in resting brain activity of one-month old infants?

Chanel Ramirez¹, Aislinn Sandre¹, Sonya Troller-Renfree¹, Kimberly Noble¹

¹Teachers College, Columbia University

3-G-52 Childhood socioeconomic status and the pace of structural neurodevelopment: Accelerated, delayed, or simply different?

Divyangana Rakesh¹, Sarah Whittle², Margaret Sheridan³, Katie McLaughlin¹

¹Harvard University, ²The University of Melbourne, ³University of North Carolina at Chapel Hill

3-G-54 Co-creating programmatic developmental neuroscience research with communities under study

Kalina Michalska¹, Jordan Mullins¹

¹University of California, Riverside

3-G-55 Infant White Matter Cingulum Microstructure Moderates the Association of Maternal Anxiety Symptoms with Infant Behavioral Outcomes

Lauren Costello^{1,2}, Jessica Buthmann², Ian Gotlib², Emily Dennis³, Lauren Borchers², Julian Joachimsthaler²

¹New York University, ²Stanford University, ³University of Utah

3-G-56 Longitudinal effects of early life stress on pubertal development in the ABCD study

Madison Fung¹, Kathleen Thomas¹

¹University of Minnesota

3-G-57 Neural correlates of attachment learning: The role of caregiving instability.

Nicolas Murgueitio¹, Margaret Sheridan¹, Kathryn Garrisi¹, Maresa Tate¹, Celina Meyer², Summer Motton¹, Helen Milojevich¹, Amanda Mitchell¹, Regina Sullivan³, Katie McLaughlin⁴, Tracy Dennis⁵, Sarah Myruski⁶

¹University of North Carolina at Chapel Hill, ²Virginia Tech, ³NYU School of Medicine, ⁴Harvard University, ⁵Hunter College, City University of New York, ⁶Pennsylvania State University, University Park

3-G-58 Prenatal economic strain and neonate subcortical volumes: The mediating role of prenatal maternal psychological symptoms.

Natalie Suchy¹, Nicolas Murgueitio¹, Xiaoxu Rong², Rebecca Stephens¹, Cathi B. Propper¹, Sarah Short²

¹University of North Carolina at Chapel Hill, ²University of Wisconsin-Madison

3-G-59 The combined role of maternal childhood maltreatment and maternal depression during pregnancy for newborn global white matter microstructure

Nora Moog¹, Khalid Al-Ali, Jerod Rasmussen², Martin Styner³, Hyagriv Simhan⁴, Pathik Wadhwa², Richard Miller, Emily Barrett, Sonja Entringer¹, Thomas O'connor⁵, Claudia Buss¹

¹Charité - Universitätsmedizin Berlin, ²University of California, Irvine, ³University of North Carolina at Chapel Hill, ⁴University of Pittsburgh, ⁵University of Rochester Medical Center

3-G-60 Corticolimbic Neural Underpinnings of Neighborhood Environment Unpredictability in Relation to Adolescent Behavioral Motivation

Sihong Liu¹, Philip Fisher¹

¹Stanford University

3-G-61 Parent emotion socialization is associated with neural correlates of implicit emotion regulation in early adolescents

Sylvia Lin^{1,2}, Sarah Whittle², Elena Pozzi³, Christiane Kehoe²

¹University of Melbourne, ²The University of Melbourne, ³Melbourne Neuropsychiatry Centre, Department of Psychiatry, The University of Melbourne & Melbourne

3-G-62 Effects of sleep & stress on early childhood structural brain development & self-regulation

Ellie Taylor¹, Alexa Mcdorman¹, Gavkhar Abdurokhmonova¹, Rachel Romeo²

¹University of Maryland, College Park, ²University of Maryland

3-G-63 The association of maternal cortisol concentration during pregnancy and offspring white matter microstructure in one-month old neonates

Fiona O' Donovan¹, Martin Bauer¹, Katharina Pittner², Nora Moog¹, Jerod Rasmussen³, Alice Graham⁴, Damien Fair⁵, Christine Heim¹, Sonja Entringer¹, Pathik Wadhwa³, Hyagriv Simhan⁶, Thomas O'connor⁷, Martin Styner⁸, Claudia Buss⁹

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3-G-64 Gut Microbiome: Associations with Caregiving Adversity and Alexithymia in a Peri-Adolescent Sample

Francesca Querdasi¹, Naomi Gancz¹, Kristen Chu¹, Emily Towner², Bridget Callaghan¹

¹University of California, Los Angeles, ²University of Cambridge

3-G-65 The role of socioeconomic status in shaping associations between sensory association cortex and prefrontal structure and implications for executive function

Maya Rosen¹, Divyangana Rakesh², Rachel Romeo³

¹Smith College, ²Harvard University, ³University of Maryland

3-G-66 Gut microbiome dysregulation as a mechanism of reward circuitry differences in youth exposed to early adversity

Naomi Gancz¹, Jennifer Silvers¹, Tricia Choy², Michelle VanTieghem³, Nim Tottenham³, Bridget Callaghan¹

¹University of California, Los Angeles, ²University of California, Riverside, ³Columbia University

3-G-67 Resting state neural activity in the first year of life and associations with household chaos

Sarah McCormick¹, Cara Bosco¹, Michal R. Zieff², Lauren Davel², Zamazimba Madi², Thandeka Mazubane², Bokang Methola², Tembeka Mhlakwaphalwa², Nwabisa Mlandu², Khanyisa Nkubungu², Reese Samuels², Simone Williams², Khula Study Team³, Kirsten Donald², Laurel Gabard-Durnam¹

¹Northeastern University, ²University of Cape Town, ³Khula Study Team

3-G-68 Identifying Prenatal Psychological Influences on Infant Neural Signatures

Tara Rutter¹, Kelly Molloy¹, Madelyn Heise², Joel Nigg¹, Sarah Karalunas², Elinor Sullivan¹, Hanna Gustafsson¹

¹Oregon Health & Science University, ²Purdue University

H – Executive functioning

3-H-69 The relationship between irritability and neural circuitry related to emotion regulation in adolescents

Anna Stumps¹, Leah Church¹, Melanie Matyi¹, Nadia Bounoua¹, Lea Dougherty², Jeffrey Spielberg¹

¹University of Delaware, ²University of Maryland, College Park

3-H-70 The unity and diversity of brain connectivity underlying executive function tasks

Blaire Porter¹, Tehila Nugiel^{2,3}, Damion Demeter^{1,4}, Eliya Ben-Asher¹, Jessica Church⁵

¹University of Texas at Austin, ²Florida State University, ³The University of North Carolina at Chapel Hill, ⁴University of California, San Diego, ⁵The University of Texas at Austin

3-H-71 Integrating multimodal neuroimaging measures of error monitoring to predict future anxiety among behaviorally inhibited adolescents

Emilio Valadez¹, Stefania Conte², John Richards³, Lucrezia Liuzzi⁴, Marco McSweeney¹, Enda Tan¹, George Buzzell⁵, Anderson Winkler⁶, Elise Cardinale⁷, Lauren White⁸, Daniel Pine⁴, Nathan Fox⁹

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3-H-72 Edge-centric control theory applied to neonatal structural connectivity in term and preterm neonates predicts cognitive and social outcomes at 18-months

Huili Sun¹, Dustin Scheinost¹

¹Wayne State University

3-H-73 - Trajectories of Early Postnatal Cortical Thickness Development and Associations with Executive Function in Late-Childhood

Megan Davis¹, Mackenzie Woodburn¹, Tehila Nugiel^{2,3}, Divyangana Rakesh⁴, Maresa Tate³, Jessica Cohen¹, Margaret Sheridan¹, Weili Lin¹, William Asciutto¹

¹University of North Carolina at Chapel Hill, ²Florida State University, ³The University of North Carolina at Chapel Hill, ⁴Harvard University

3-H-74 Social media exposure and distress among adolescents is associated with altered neural oscillatory dynamics serving emotion dysregulation and executive dysfunction

Mikki Schantell¹, Sarah Dietz², Anna Marquard², Danielle Rice¹, Nathan Petro², Lauren Webert¹, Cooper Livermore², Giorgia Picci¹, Tony Wilson¹

¹Boys Town National Research Hospital, ²Institute for Human Neuroscience, Boys Town National Research Hospital

3-H-75 The first year of formal schooling improves working memory and academic abilities

Sobana Wijekumar¹, Christina Davidson¹, Courtney Mckay², Eva Rafetseder², Yee Lee Shing³

¹University of Nottingham, ²University of Stirling, ³Goethe University Frankfurt

3-H-76 Does Bilingual Exposure Protect against SES Disparities in Selective Auditory Attention? A fMRI Study in Young Children

Gavkhar Abdurokhmonova¹, Ellie Taylor¹, Junaid Merchant², Rachel Romeo²

¹University of Maryland, College Park, ²University of Maryland

3-H-77 Social learning across adolescence: A Bayesian neurocognitive perspective

Lieke Hofmans¹, Wouter van den Bos¹

¹University of Amsterdam

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3-H-78 Relating socio-structural environment factors to adolescent inhibitory control neurodevelopment

Wesley Meredith¹, Jennifer Silvers¹

¹University of California, Los Angeles

I - Language

3-I-79 Bilingual and monolingual differences in basal ganglia reinforcement learning

Yinan Xu¹, Arturo Hernandez¹

¹University of Houston

3-I-80 Lateralization of activation in the superior temporal gyrus for speech processing in sleeping infants is predictive of their language skills in kindergarten: a task-based fMRI study.

Jin Wang¹, Ted Turesky², Megan Loh¹, Ja'kala Barber¹, Victoria Hue¹, Escalante S. Elizabeth², Adrian Medina¹, Nadine Gaab^{1,2}

¹Harvard University, ²Harvard Graduate School of Education

3-I-81 Longitudinal associations between language network characteristics in infant brain and school-age reading abilities are mediated by early-developing phonological skills

Xinyi Tang¹, Nadine Gaab², Xi Yu¹, Ted Turesky², Mingrui Xia¹, Escalante S. Elizabeth²

¹Beijing Normal University, ²Harvard Graduate School of Education

3-I-82 Investigating the relationship between audiovisual integration and dyslexia with steady-state EEG

Lindsey Hasak¹, Jackson Rose¹, Caroline Walker¹, Radhika Gosavi¹, Bruce Mccandliss¹, Elizabeth Toomarian¹

¹Stanford University

3-I-83 Pre-school children engage language areas of the brain to form predictions during sentence processing

Mohammad Hossein Behboudi¹, Carlos Benítez-Barrera², Mandy Maguire³

¹The University of Texas at Dallas, ²University of Wisconsin-Madison, ³University of Texas at Dallas

3-I-84 Early brain connectivity patterns predict later language skills in preschoolers with autism spectrum disorder

Judy Mahmalji¹, Adriana Rios¹, Madison Salmina¹, Bosi Chen¹, Lindsay Olson², Annika Linke¹, Inna Fishman¹

¹San Diego State University, ²Brain Development Imaging Laboratories

J - Learning

3-J-85 Neural synchrony during parent-child spatial problem-solving interaction: Role of parent verbal and gesture strategy

Ying Li¹, Ö. Ece Demir-Lira²

¹The University of Iowa, ²University of Iowa

3-J-87 Convergent gain of function and cognitive inflexibility in mouse models of two autism risk genes

Juliana Chase¹, Wan Chen Lin¹, Tory Benson², Linda Willbrecht¹

¹University of California, Berkeley, ²Dartmouth University

3-J-88 - Investigating the neural analog-to-symbolic shift in⁵- to⁷-year-old children's numerical cognition

Lauren Aulet¹, Jessica Cantlon¹, Caroline Kaicher¹

¹Carnegie Mellon University

3-J-89 - Assessing white matter plasticity in a randomized controlled trial of reading training in preschoolers

Sendy Caffarra¹, Iliana Karipidis², John Kruper³, Emily Kubota⁴, Adam Richie-Halford^{3,4}, Megumi Takada⁴, Ariel Rokem³, Jason Yeatman⁴

¹University of Modena and Reggio Emilia and Stanford University, ²University of Zurich, ³University of Washington, ⁴Stanford University

K - Mechanisms (hormones, neurotransmitters, physiology)

3-K-90 Bidirectional associations between amygdala-striatal connectivity and oxytocin receptor gene DNA methylation in adolescent girls over time

Amalia Skyberg¹, Samantha Chavez¹, Jennifer Pfeifer¹

¹University of Oregon

3-K-91 Early Life Stress Blunts the Neuroimmune Association of C-Reactive Protein and Nucleus Accumbens Activation During Adolescent Reward Processing

Justin Yuan¹, Saché Coury¹, Tiffany Ho², Ian Gotlib¹

¹Stanford University, ²University of California, Los Angeles

3-K-92 Salivary DHEA moderates the regulation of amygdala reactivity to valenced stimuli in adolescents

Julia Merker¹, Leah Church¹, Nadia Bounoua¹, Melanie Matyi¹, Jeremy Rudoler, Jeffrey Spielberg¹

¹University of Delaware

3-K-93 Investigating Sleep as a Risk Mechanism for Anxiety in Adolescents with ACEs

Liga Eihentale¹, Amanda Baker¹, Andi Zhu¹, Josefina Freitag¹, Aaron Mattfeld¹, Dana McMakin¹

¹Florida International University

L - Memory

3-L-94 Intergenerational transmission of emotional memories from parent to adolescent child

Sagarika Devarayapuram Ramakrishnan¹, Alexandra Cohen¹

¹Emory University

3-L-95 Buffering the long-term effects of prenatal drug exposure: Early caregiving emotional environment is associated with memory performance and hippocampal volume in adolescents with a history of prenatal drug exposure

Brooke Kohn¹, Zehua Cui¹, Margo Candelaria², Tracy Riggins², Stacy Buckingham-Howes³, Maureen Black²

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3-L-96 Hippocampal Function and Memory in the Second Year of Life

Lindsey Mooney¹, Alireza Kazemi¹, Sabrina Karjack¹, Simona Ghetti¹

¹University of California, Davis

3-L-97 Exploring Memory Functioning in Children with Asthma: Insight from the ABCD Study

Nicholas Christopher-Hayes¹, Sarah Haynes², Nicholas Kenyon², Vidya Merchant¹, Julie Schweitzer², Simona Ghetti²

¹University of California Davis, ²University of California, Davis

3-L-98 Association between slow oscillation-spindle coupling and declarative memory in early childhood

Eunsol Noh¹, Sanna Lokhandwala¹, Tracy Riggins², Rebecca Spencer¹

¹University of Massachusetts, Amherst, ²University of Maryland

3-L-99 Investigating the local representation quality differences underlying pattern separation processes during a mnemonic discrimination fMRI task

Jade Dunstan¹, Jeremy Purcell¹, Daniel Callow¹, Tracy Riggins¹

¹University of Maryland

M - Methods

3-M-100 Leveraging Data Integration (Not Only Harmonization) in Developmental Cognitive Neuroscience

Kelsey Canada¹, Ana Daugherty¹, Noa Ofen¹

¹Wayne State University

3-M-101 CABINET: an application for containing and linking standardized modular neuroimaging pipelines

Audrey Houghton¹, Greg Conan², Eric Feczko¹, Timothy Hendrickson¹, Julia Moser¹, Dimitrios Alexopoulos³, Mathias Goncalves⁴, Sanju Koirala¹, Aidan Latham³, Erik Lee¹, Jacob Lundquist¹, Thomas Madison¹, Christopher J. Markiewicz⁴, Lucille Moore¹, Paul Reiners¹, Amanda Rueter¹, Damien Fair¹, Barry Tikalsky¹

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3-M-102 Characterization of the maturing metastable dynamics in the term neonatal brain at rest

Juliette Champaud¹, Mohammed Rupawala¹, Neelum Mistry¹, Tomoki Arichi¹, Lorenzo Fabrizi²

¹King's College London, ²University College London

3-M-103 Healthy Brain Network (HBN): A quality controlled and reproducible data repository enriched for clinical mental health measures

Abhishek Mahesh¹, Maryam Mahmoudi², Audrey Houghton², Barry Tikalsky¹, Anders Perrone^{1,3}, Jacob Lundquist^{1,2}, Timothy Hendrickson², Jed Elison², Oscar Miranda-Dominguez², Damien Fair², Eric Feczko²

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3-M-104 Reliability and spatial specificity of ALFF in neonates and adults

Alyssa Labonte¹, Julia Moser², Ursula Tooley¹, M. Catalina Camacho¹, Sanju Koirala², Ashley Nielsen¹, Michael Myers¹, Scott Marek¹, Damien Fair², Chad Sylvester³

¹Washington University in St. Louis, ²University of Minnesota, ³Washington University

3-M-106 A comparison of standard single echo MRI sequences and state-of-the-art multi echo MRI sequences for precision functional mapping in children

Abigail Baim¹, Damion Demeter^{1,2}, Matthew Feigels^{1,2}, Sana Ali^{1,2}, Emily Koithan¹, Deanna Greene¹

¹University of California, San Diego, ²University of California San Diego

N - Networks

3-N-106 Characterizing individualized TMS Efield spatial specificity in the adolescent brain

Cristian Morales-Carrasco¹, Oscar Miranda-Dominguez¹, Amal Adeen¹, Alana Lieske¹, Mia Kellman¹, Timothy Hendrickson¹, Robert Hermosillo¹, Christine Conelea¹, Steve Nelson¹, Damien Fair¹

¹University of Minnesota

3-N-107 Individual Differences in Delay Discounting are Associated with Dorsal Prefrontal Cortex Connectivity in Youth

Kahini Mehta¹, Adam Pines¹, Azeez Adebimpe¹, Joe Kable¹, Theodore Satterthwaite

¹University of Pennsylvania

3-N-108 Transdiagnostic polygenic risk, general psychopathology, and personalized functional brain networks in the Adolescent Brain Cognitive Development cohort

Kevin Sun^{1,2}, Arielle Keller¹, Ran Barzilay^{1,3}, Tyler Moore^{1,2}, Laura Almasy^{1,4}, Laura M. Schultz^{1,4}, Theodore Satterthwaite¹, Damien Fair⁵, Aaron Alexander-Bloch⁶

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3-N-109 Short-term trajectories of functional brain network integration in children during motor learning and working memory tasks

Mackenzie Woodburn¹, Jessica Cohen¹, Margaret Sheridan¹, Weili Lin¹

¹University of North Carolina at Chapel Hill

3-N-110 Ontogeny of the Ascending Arousal Networks

Roxane Licandro¹, Mark Olchanyi², Luiz F. Ferraz Da Silva³, Andre Van Der Kouwe², Camilo Jaimes⁴, Nathan Xi Ngo², William Kelley², Richard D. Goldstein⁴, Robin Haynes⁴, Brian L. Edlow², Hannah C. Kinney⁴, Lilla Zollei²

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3-N-111 Developmental associations between DNA methylation bioclocks and the white matter connectome in adolescence

Ryan Tung¹, Felicia Hardi¹, Luke Hyde¹, Christopher Monk¹, Leigh Goetschius¹, Colter Mitchell¹

¹University of Michigan

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3-N-112 Highly Reproducible Normative Representation of Functional Brain Network Organization in Childhood: An ABCD study

Sana Ali¹, Damion Demeter¹, Matthew Feigelis¹, Scott Marek², Evan Gordon², Deanna Greene¹

¹University of California, San Diego, ²Washington University in St. Louis

3-N-113 Examining individual variability in functional network topography over development

Sanju Koirala¹, Julia Moser¹, Robert Hermsillo¹, Lucille Moore¹, Thomas Madison¹, Oscar Miranda-Dominguez¹, Eric Feczko¹, Alyssa Labonte², M. Catalina Camacho², Michael Myers², Kimberly Weldon¹, Alice Graham³, Nico Dosenbach⁴, Steve Nelson¹, Theodore Satterthwaite⁵, Jed Elison¹, Chad Sylvester⁴, Damien Fair¹

¹University of Minnesota, ²Washington University in St. Louis, ³Oregon Health & Science University, Washington University, ⁵University of Pennsylvania

3-N-114 Individual-specific sensory brain networks in children are more similar than control and attention networks to canonical adult networks

Matthew Feigelis¹, Damion Demeter¹, Sana Ali¹, Deanna Greene¹

¹University of California, San Diego

O - Other

3-O-114 Developmental changes in the serial position function for different visual elements

Grace Adebogun¹, Jason Yeatman¹, Mahalakshmi Ramamurthy¹

¹Stanford University

P – Rewards/Motivation

3-P-115 Leveraging novel music to examine age-related reward responses across development

Nick Kathios¹, Kelsie Lopez¹, Juliet Davidow¹, Psyche Loui¹, Laurel Gabard-Durnam¹

¹Northeastern University

3-P-116 Early childhood reward-related neural reactivity concurrently and prospectively associates with depressive symptom severity

Nicolas Camacho¹, Michael Gaffrey¹

¹Duke University

3-P-117 Neural response to monetary incentives in acquired adolescent depression

Jeremy Hogeveen¹, Davin Quinn¹, Teagan Mullins¹, Ethan Campbell¹, Andrew Mayer², James Cavanagh¹

¹University of New Mexico, ²Mind Research Network

3-P-118 Exploring the relationship between intrinsic dopamine-related neurophysiology and risk-taking during pubertal development

Tehya Drummond¹, Arianna Cascone¹, Ashley Parr², Finnegan Calabro², Will Foran², Beatriz Luna², Jessica Cohen¹

¹University of North Carolina at Chapel Hill, ²University of Pittsburgh

3-P-119 Examining Associations between Neural Sensitivity to Social Feedback with Trait and State Loneliness in Adolescents

Victoire Alleluia Shenge¹, Junaid Merchant², Hua Xie³, Paige Munshell², Elizabeth Redcay²

¹University of Maryland, College Park, ²University of Maryland, ³Children's National Hospital

Q – Socioemotional processing

3-Q-120 Neural meaning making of early caregiving experiences: the developmental neurobiology of affective semantic memory

Anna Vannucci¹, Nim Tottenham¹, Camila Vicioso¹, Andrea Fields¹, Lior Abramson¹, Erica Niemiec¹, Daniela Juarez¹, Erin Joyce^{1,2}, Lisa Gibson¹

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3-Q-121 From Literal to Implicit: Neurocognitive Development of Communicative Reasoning during Adolescence

Cong Wang¹, Lusha Zhu¹, Menghan Cong¹, Qingtian Mi¹, Guihua Yu¹, Yanjie Su¹

¹Peking University

3-Q-122 Mindful attention can support emerging adults to reduce alcohol cravings in the moment and consumption in daily life

Danielle Cosme¹, Chelsea Helion², Yoona Kang¹, David Lydon-Staley¹, Bruce Doré³, Ovidia Stanoï⁴, Jeesung Ahn¹, Mia Jovanova¹, Amanda MCGowan⁵, Peter Mucha⁶, Danielle Bassett¹, Kevin Ochsner⁴, Emily Falk¹

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3-Q-123 Facial Masking, ADHD Symptoms, and Prefrontal Cortex Activation in Early Childhood

Katie Gonzalez¹, Juliet Barry¹, Lynnea Mayorga¹, Adam Grabel¹

¹University of Massachusetts, Amherst

3-Q-124 Examining the unique contribution of parental anxiety on adolescent neural responses during an emotion regulation task

Leah Church¹, Nadia Bounoua¹, Melanie Matyi¹, Julia Merker¹, Jeremy Rudoler, Jeffrey Spielberg¹

¹University of Delaware

3-Q-125 Distressing social media use is associated with developmental sex differences in hippocampal and amygdala subregions

Lucas Weyrich^{1,2}, Giorgia Picci¹

¹Boys Town National Research Hospital, ²Creighton University / Boys Town National Research Hospital

3-Q-127 Examining the link between neural mechanisms of emotion regulation and callous-unemotional behaviors in young children: An fMRI study

Paulo Graziano¹, Melissa Hernandez¹, Madeline Curzon¹, Mohammadreza Bayat¹, Anthony Dick¹

¹Florida International University

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3-Q-128 Maternal Depression Impacts Children's Responses to Mothers' Voices: An fNIRS Study

Xiaoxue Fu¹, Michele Morningstar², Whitney Mattson³, Laura Pirazzoli⁴, Xin Feng⁵, Eric Nelson⁶

¹University of South Carolina, ²Queen's University, ³Abigail Wexner Research Institute at Nationwide Children's Hospital, ⁴Boston Children's Hospital, ⁵The Ohio State University, ⁶Nationwide Children's Hospital

3-Q-129 Coordination of social attention, mentalizing language and mentalizing network connectivity during a naturalistic social interaction between emerging adulthood friends

Alicia Vallorani¹, Marisa Lytle², Morgan Gilmer², Melissa Bomberger², Michael Hallquist³, Koraly Pérez-Edgar²

¹University of Maryland, ²The Pennsylvania State University, ³University of North Carolina at Chapel Hill

3-Q-131 Neural and Behavioral Responses to Others' Struggles in 1-year-old Infants

Lindsey Powell¹, Meghan Pierce¹, Seaera Juarez¹, Nicolas Navarro¹, Charleen Necor¹, Khanh Nguyen¹, Cayla Regas¹, Yuxuan Yue¹

¹University of California, San Diego

3-Q-132 Relating emotional lability to brain activation differences in perception of emotional faces in preschool-aged children with familial risk for ADHD

Sadie Zacharek¹, Alexandra Decker¹, Hannah O'Connor², Daniel Walsh², Mai Uchida², John Gabrieli¹

¹Massachusetts Institute of Technology, ²Massachusetts General Hospital

3-Q-133 Understanding the development of self-processing and depression in adolescence: Is brain function where it starts?

Victoria Guazzelli Williamson¹, Samantha Chavez¹, Jennifer Pfeifer¹

¹University of Oregon



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