9th Annual

Program

flux
CONGRESS

The International Congress
for Integrative Developmental
Cognitive Neuroscience

Program At-A-Glance

*Subject to change

Los Angeles PDT	New York EDT	Paris CEDT	GMT	Pre Conf Workshops Friday, Sept. 17		Day 1 Saturday, Sept. 18			Day 2 Sunday, Sept. 19		Day 3 Monday, Sept. 20		Day 4 Tuesday, Sept. 21	
						Trainee day	Plenary Sessions	On-Demand	Plenary Sessions	On-Demand	Plenary Sessions	On-Demand	Plenary Sessions	On-Demand
6:00	9:00	15:00	13:00	**Computational Modelling in Development** with 5 breakout tutorials	**FIT'NG All Ages: Advantages and Challenges of Longitudinal Fetal, Infant, and Toddler Neuroimaging**		Opening Remarks	Poster Hall Past Sessions Recorded and on Demand	Flash Talks 1	Poster Hall Past Sessions Recorded and on Demand	Symposium #5 **LIVE**	Poster Hall Past Sessions Recorded and on Demand	Flash Talks 3	Poster Hall Past Sessions Recorded and on Demand
6:30	9:30	15:30	13:30				Symposium #1 **LIVE**		Poster Session 1 LIVE in Gather.town				Poster Session 3 LIVE in Gather.town	
7:00	10:00	16:00	14:00								Huttenlocher Lecture			
7:30	10:30	16:30	14:30				Young Investigator Award Talk **LIVE**		Diversity Symposium **LIVE**				**Science of Learning Symposium**	
8:00	11:00	17:00	15:00								*Break*			
8:30	11:30	17:30	15:30				Symposium #2 **LIVE**		*Break*		Flash Talks 2		*Break*	
9:00	12:00	18:00	16:00											
9:30	12:30	18:30	16:30						Symposium #3 **LIVE**		Poster Session 2 LIVE in Gather.town		Symposium #7 **LIVE**	
10:00	13:00	19:00	17:00				*Break*							
10:30	13:30	19:30	17:30				Trainee Dissertation Award Talk **LIVE**		*Break*				*Break*	
11:00	14:00	20:00	18:00			Career Perspectives Panel **LIVE**					Symposium #6 **LIVE**			
11:30	14:30	20:30	18:30						Symposium #4 **LIVE**				Symposium #8 **LIVE**	
12:00	15:00	21:00	19:00											
12:30	15:30	21:30	19:30						*Break*					
13:00	16:00	22:00	20:00			Connecting Science and Society Panel & Workshop **LIVE**					Diversity Affinity Groups		Closing Remarks	
13:30	16:30	22:30	20:30						Social Event					
14:00	17:00	23:00	21:00											
14:30	17:30	23:30	21:30											

Flux Congress Sponsors

Jacobs Foundation

Sponsor of Science of Learning Symposium

The Jacobs Foundation supports research and intervention projects leading to significant outcomes for children and youth all over the world. Within our research priority Science of Learning, we explore the biological bases of skill acquisition and development of children and youth and their consequences for learning environments and institutions.

jacobsfoundation.org

Kennedy Krieger Institute

Sponsor of Young Investigator Award

Kennedy Krieger Institute is a non-profit, internationally recognized specialty pediatric healthcare, education, research and related services provider whose mission is to improve the lives of the more than 24,000 children and adolescents with disorders and injuries of the brain, spinal cord, and musculoskeletal system they serve each year.

With locations throughout the Baltimore-Washington region, and welcoming children from nearby and around the world, Kennedy Krieger Institute helps children and their families through interdisciplinary inpatient and outpatient care, novel research, home and community services, training for current and future professionals and specialized school-based programs.

From autism to traumatic stress, brain injuries to rare neurological disorders like leukodystrophies and Kabuki syndrome, the people who comprise the Institute are committed to changing the trajectories of young lives through innovation, commitment, compassion and expertise.

KennedyKrieger.org

Elsevier

Sponsor of the Poster Sessions

Just as the tools used in scientific research are changing, so too are the tools used in scientific communication. Elsevier has taken a leadership role in advancing the technologies necessary to create a seamless electronic information delivery environment.

elsevier.ca

Flux Awards

Huttenlocher Lecturer Award

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

2021 Awardee: **Prof. Dr. Dr. h.c. Angela D. Friederici** | Director at the Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

Angela D. Friederici is director at the Max Planck Institute for Human Cognitive and Brain Sciences (MPI CBS) in Leipzig, Germany. She is Founding director of this institute, founded in 1994. She is honorary professor at the University of Leipzig (Psychology), the University of Potsdam (Linguistics) and the Charité Berlin (Neurology) and holds a Doctor honoris Causa from the University of Mons, Belgium. She graduated in linguistics and psychology in Bonn (Germany) and spent a postdoctoral year at MIT (USA). Prior to joining the Max Planck Society as a director, she was a professor for Cognitive Sciences at the Free University Berlin. Her research on the neural basis of language and language acquisition has received recognition across disciplines.

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.

Kennedy Krieger Institute
KennedyKrieger.org

2021 Awardee: **Kate Mills** | University of Oregon

Kate Mills is an Assistant Professor in the Department of Psychology at the University of Oregon. Her lab applies longitudinal methods to investigate the intertwined social, biological, and cognitive processes that underlie the development of skills needed to navigate the social environment.

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.

2021 Awardee: **Dr. Cameron Ellis** | Yale University

Dr. Cameron Ellis completed his PhD in Psychology in 2021 from Yale University (by way of Princeton University), working with Dr. Nicholas Turk-Browne. He received his BSc from University of Auckland (New Zealand) in 2013. In his research, he studies how basic building blocks of cognition emerge and mature in the infant brain, and seeks to understand how infants are adapted to the challenges they face during development. In his dissertation, he developed methods for conducting fMRI with awake, behaving infants and pursued three directions: 1) how the visual system is organized early in life, long before visual abilities reach maturity, 2) how attention enables infants to sift through a world full of complexity, and 3) how infants can learn so much yet remember so little of their early life experiences.

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.**

Welcome
to the ninth meeting of Flux

Dear Fluxers,

Welcome to our 9th meeting of Flux: The Society for Developmental Cognitive Neuroscience, in Virtual Space, again!

Hope you are all adapting well to the prolonged pandemic. We hope that the Flux meeting will again transport you to a place of great scientific inquiry and give you a sense of belonging to our community.

Despite the pandemic and virtual burn-out, to date we have more than **500 registrations** with more coming in! We also currently have more than 360 members committed to the Flux Society.

We are greatly indebted to our superman and Program Chair **Nikolaus Steinbeis** (University College London) and his program committee including: Duncan Astle (University of Cambridge), Anna van Duijvenvoorde (Leiden University), Jessica Church-Lang (University of Texas at Austin), Alexandra Cohen (New York University), Tobias Hauser (University College London), Rogier Kiviet (Radboud University), Kieran O'Donnell (Yale University), Jennifer Pfeifer (University of Oregon), Yee Lee Shing (Goethe University Frankfurt), Leah Somervile (Harvard University), Sarah Yip (Yale University), Lilla Zollei (Massachusetts General Hospital / Harvard Medical School) for creating a unique an outstanding scientific program. The program committee organized a total of **42 talks** including invited and selected Symposiums, Award talks, **17 Flash talks** as well as **243 Posters**. 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 **2021 Huttenlocher Award** to **Angela D. Friederici** (Max Plank Institute for Human Cognitive and Brain Sciences) for her groundbreaking and pioneering work in developmental cognitive neuroscience. Angela will share her vision of the field and its potential impact going forward, based on her groundbreaking work on the neural basis of language and language acquisition.

Kate Mills (University of Oregon) is this year's **Young Investigator Awardee**, who was selected from a highly competitive set of candidates, for her outstanding and highly productive work on longitudinal methods to investigate developmental dynamics through adolescence of social, biological, and cognitive processes. We thank the **Kennedy Krieger Institute** for their continued support of the YIA!

Congratulations to **Dr. Cameron Ellis** (Yale University) on being this year's recipient of the Flux Dissertation award! His dissertation, "Infant fMRI: A Model System for Cognitive Neuroscience" under the mentorship of Dr. Nicholas Turk-Browne, describes the development of the building blocks of cognition through infancy including the visual, attention, and memory systems.

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 **Alina Quachs**' work on the development of value-based generalization, **Iryna Schommartz's** insights on memory consolidation in children born prematurely, and **Phoebe Thomson's** findings on functional brain networks in ADHD. These three talks are followed by a **live** symposium-wide question and answer session (moderated by Jessica Church). We continue to be grateful to the **Jacobs Foundation** for enabling symposium, as well as support for students to participate in this year's Congress. We also thank **Jessica Church** (UT Austin) and **Yee Lee Shing** for organizing this effort.

We thank **Alexandra Cohen (NYU)** and **Tobias Hauser (UCL)** for organizing the Computational Modelling Development workshop and 5 tutorials that will significantly enhance our methodological and analytic approaches.

We thank **FIT'NG** (Fetal, Infant, Toddler Neuroimaging Group), co-chairs Sarah Shultz (Emory University/Marcus Autism Center) and Dustin Scheinost (Yale University School of Medicine) and their committee members Zeena Ammar (Emory University/Marcus Autism Center), Cat Camacho (Washington University in St. Louis), Aiden Ford (Emory University/Marcus Autism Center), Roxane Licandro (Vienna University of Technology), and Kelly Vaughn (University of Texas Health Science Center at Houston) for organizing yet another compelling

workshop on best practices and analytics characterizing early development.

A special thank you to **Dana Glenn** (University of California, Riverside) **and Na Yeon Kim** (Princeton University) **and the Training Committee**: Marjolein Barendse (University of Oregon), Zeena Ammar (Emory University), Leehyun Yoon (UC Davis), Jessica Flannery (UNC Chapel Hill), Maximilian Scheuplein (Leiden University), Sofia (Sofi) Cárdenas (University of Southern California), Paola Odriozola (Yale University), Suzanne van de Groep (Erasmus University Rotterdam) for organizing the Mentor/Mentee match-up, Connecting Science and Society, and Career Perspectives Panel.

We thank **Eric Feczko** (University of Minnesota Medical School) for putting together and being the MC of our traditional unofficial zoom Karaoke event Sunday September 19 (1-3pm PDT, 4-6pm EDT, 9-11pm London time). We look forward to interacting and having fun together strengthening our bonds going forward.

We thank **Stefanie Bodison** (University of Florida) Chair and **Jenn Pfeifer** (University of Oregon) Vice-Chair and their generous committee members: Lucina Uddin (UCLA), Kayla Green (Erasmus University), Julia Moser (University of Tübingen), Charles Geier (Pennsylvania State University), Carlos Cardenas-Iniguez (USC), Kristina Uban (UC Irvine), Maya Rosen (Harvard University), Marjolein Barendse (UC Davis), Maximilian Scheuplein (Leiden University), Marybel Robledo Gonzalez (UC San Diego), Ines Mürner-Lavanchy (University of Bern), Kathryn Mills (University of Oregon), and Bea Luna (University of Pittsburgh).

We are also thankful to **Elsevier** for their continued significant support of Flux and, importantly, publishing ***Developmental Cognitive Neuroscience***, the official journal of Flux. We thank **Nessa Bryce** (Harvard) and **Maggie Bryce** from Beyond Bounds Creative **www.beyondboundscreative.com** for creating a spectacular new DCN cover pro bono! We are also thankful for the continued generous support of of the Young Investigator Award by the **Kennedy Krieger Institute**.

The **Business Meeting** for Regular Members, where the status of the society will be presented will be recorded and on demand throughout the conference.

We also want to give a special thank you to **Podium Conference** Specialists Marischal DeArmond and Cendrine De Vis but especially **Casey Irelan**, who stepped in last minute after **Nick Farasopoulos** (who we also thank) had to step down due to an injury, and the amazing **Lauren Moline** who came back to help again even after recently donating a kidney to a stranger in need!

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 virtual 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!

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 10, September 6-9, 2022**, at the prestigious and historically significant **La Sorbonne**, where Piaget did his ground breaking work, in beautiful **Paris, France** hosted by our long-term fluxer and outstanding developmental cognitive neuroscientist **Gregoire Borst**, University of Paris Descartes. The scientific program will be chaired by the amazing neuroscientist, **Anna van Duijvenvoorde** (Leiden University) with what promises to be an outstanding meeting. In **2023**, we hope to finally 'return' to **Santa Rosa**, wine country, to fulfill our long-standing commitment to distributing our meetings across West Coast, East Coast, and EU venues. **Linda Wilbrecht** (Berkeley) with be our host chair!

We want to congratulate our new elected board members that include two international members: our current Program Chair, **Nikolaus Steinbeis** (University College London) and **Tzipi Horowitz-Kraus** (Technion, Israel Institute of Technology); and one US member **Lucina Uddin**, (UCLA). We also thank **Cate Hartley** (NYU) and

Bruce McCandliss (Stanford) for their service as they complete their tenure in the Flux Board. Bruce McCandliss was one of the founders of Flux and his contributions were substantative to the formation and growth of Flux. **The 2021 Flux Board is now: Damien Fair – President, Bea Luna – Past President, Eveline Crone – Vice President – President Elect, Deanna Barch – Executive Treasurer, Margaret Sheridan – Executive Secretary, and the following at large board members: Nim Tottenham, Jenn Pfeifer, Christian Tamnes, Niko Steinbeis, Tzipi Horowitz-Kraus, Brad Schlaggar, and Lucina Uddin**.

A heartfelt thank you to **Brad Schlaggar** (Kennedy Krieger Institute) as he steps down from his 9 year tenure as Vice President of Flux (and will serve a final 2 year term on the Board of Directors). He made indispensable contributions to every aspect of the formation and development of Flux bringing his expertise in directing an Institute and rigorous scientific insight. Every major decision has been made with Brad's input.

Finally, we are very excited to announce that after being one of the founders of Flux and serving as its president for 9 years, **Bea Luna** (University of Pittsburgh), will be handing over the baton to **Damien Fair** (University of Minnesota) starting at this meeting! Damien has been integral to every aspect of Flux from the beginning and as a member of the Board. His high intellect and enthusiasm guarantee that Flux will continue to grow in new ways supporting the whole field. He begins the first presidency of the established Flux society, where board members elected by the membership and who have served in executive board roles are elected by the board to serve as president. All positions are for two years with an option for two more years, Bea will remain as past president for two years assisting in whatever is needed. The official transfer ceremony, will be in Paris, because it's Paris and we want to celebrate this momentous event in person!

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

Please tweet throughout the meeting at @fluxDCN using #Flux2021

Sincerely,

Beatriz Luna
President

Brad Schlaggar
Vice-President

Damien Fair
Executive Treasurer

Eveline Crone
Executive Board Member

Bruce McCandliss
Board Member

Nim Tottenham
Board Member

Margaret Sheridan
Board Member

Catherine Hartley
Board Member

Deanna Barch
Board Member

Jennifer Pfeifer
Board Member

Flux Leadership

Society Executive Committee

Beatriz Luna President	University of Pittsburgh, USA
Brad Schlaggar Vice President	Washington University, St. Louis, USA
Damien Fair Executive Treasurer	University of Minnesota, USA
Eveline Crone	Leiden University, Netherlands
Bruce McCandliss	Stanford University, USA
Nim Tottenham	Columbia University, USA
Deanna Barch,	Washington University, St. Louis, USA
Catherine Hartley	New York University, USA
Margaret Sheridan	University of North Carolina, Chapel Hill, USA
Jennifer Pfeifer	University of Oregon, USA
Christian K. Tamnes	University of Oslo, Norway

Congress Scientific Program Committee

Nikolaus Steinbeis, Chair	University College London
Duncan Astle	University of Cambridge
Anna van Duijvenvoorde	Leiden University
Jessica Church-Lang	University of Texas at Austin
Alexandra Cohen	New York University
Tobias Hauser	University College London
Rogier Kiviet	Radboud University
Kieran O'Donnell	Yale University
Jennifer Pfeifer	University of Oregon
Yee Lee Shing	Goethe University Frankfurt
Leah Somervile	Harvard University
Sarah Yip	Yale University
Lilla Zollei	Massachusetts General Hospital/ Harvard Medical School

Award Committees

Catherine Hartley	New York University
Gaia Scerif	St. Catherine's College Oxford
Katie McLaughlin	Harvard University
Natalie Brito	New York University
Margaret Sheridan	University of North Carolina at Chapel Hill
Jennifer Pfeifer	University of Oregon
Christian Krog Tamnes	University of Oslo

Flux Trainee Committee

Dana Glenn Co-chair	University of California, Riverside
Na Yeon Kim (Co-chair),	Princeton University
Marjolein Barendse	University of Oregon
Zeena Ammar	Emory University
Leehyun Yoon	UC Davis
Jessica Flannery	UNC Chapel Hill
Maximilian Scheuplein	Leiden University
Sofia (Sofi) Cárdenas	University of Southern California
Paola Odriozola	Yale University
Suzanne van de Groep	Erasmus University Rotterdam

Flux Congress Management

Podium Conference Specialists

Marischal De Armond

Casey Irelan

Lauren Moline

General Congress Information

Pheedloop Virtual Conference Platform
Gather.town

Pre-Registration

If you have completed your registration for the virtual congress, please enter the platform through the Flux Society website, and follow the instructions to login.

Registration

If you wish to register and have not yet done so, please register **here**.

Note: Registrations completed after September 10, 2021 can experience a delayed access to the virtual Conference platform.

Code of conduct

By entering the virtual platform and participating in Flux 2021 Virtual Congress you are agreeing to the Flux Code of Conduct. To read the code of conduct, please click **here**.

Conference Timelines

Real-time streaming of the Flux Virtual Congress will take place at the following times:

- Sept 17 – Pre-conference workshops from 6am-12pm PST
- Sept 18 – 6:00am-2:30pm PST
- Sept 19 – 6:00am-2:30pm PST
- Sept 20 – 6:00am-2:30pm PST
- Sept 21 – 6:00am-1:30pm PST
- On-demand content until Dec 21, 2021

Business Meeting

The Society business meeting will be available on-demand to view any time throughout the conference dates, to ensure it is accessible to all. We encourage you to **view the Flux Business Meeting** to be better acquainted with the Flux Society.

Q&A Sessions

With the virtual conference platform, you can as questions via a text chat or in the Q&A Zoom option within the live sessions.

Flux Fun Night

Join our virtual KARAOKE night!

BRING IT! If you can sing (e.g., Damien Fair who will be on it), can barely hold a tune (e.g., Bea Luna, also participating), or just want to laugh while watching the entertainment, let's have a blast together, we deserve it to digest all the great science at the meeting. Eric Feczko will be our extraordinary MC that will make sure we laugh throughout. Complete the form to sign up to sign (or email lauren@podiumconferences.com)

Technical help during the virtual conference

If you encounter any technical issues during your virtual experience, please contact the software provider directly by accessing the help bubble in the Pheedloop platform.

Flux Congress Program Schedule

FRIDAY, SEPTEMBER 17

Computational Modelling in Development

6:00am – 12:00pm PDT (1:00pm – 7:00pm GMT)

Workshop Organizers:

- Alexandra Cohen, New York University
- Tobias Hauser, University College London

Workshop Description:

The "Computational Modeling in Development" workshop will provide a didactic, hands-on introduction to computational modeling in development for researchers with limited prior knowledge in modelling. Following an introduction to principles of computational modelling in the first session, the second session will consist of participants completing practical tutorials in small groups led by trainee facilitators. The workshop will conclude with a panel discussion on the promises and pitfalls of computational modelling in development.

CONCURRENT PRACTICAL TUTORIALS

Tutorial 1: Inferring cognitive models of reinforcement learning from choice data

Led by: Maël Lebreton & Stefano Palminteri

Tutorial Description: In the first part of the tutorial the instructors will briefly first present the behavioural task (two-armed bandit), the computational models and the data structure. In a second step, the instructors will describe the analytical pipeline and the corresponding codes. The attendees will then be asked to perform the analyses and some predefined 'exercises' (including calculating correlations and simulation experiments). In the last part the instructors will comment on the results, debrief, answer questions and put the results in a broader perspective.

Programming language: MATLAB/Octave

Tutorial 2: Uncovering heterogeneity in preferences and behavior with finite mixture models

Led by: Adrian Bruhin

Tutorial Description: Finite mixture models enable us to uncover the heterogeneity in preferences and behavior parsimoniously. Unlike most econometric models that postulate a single representative agent, they assume that the population comprises a finite number of distinct types of individuals. By estimating a finite mixture model, we can uncover the relative size and average parameters of each of these types. Furthermore, we also obtain a classification of each individual into the type best fitting her behavior. Thus, finite mixture models allow us to focus on the most relevant part of heterogeneity – namely the distribution of distinct types of individuals – without having to estimate at the individual level. This tutorial provides an introduction to finite mixture models in two parts. The first part introduces the basic concepts and highlights some applications. Subsequently, the second part features a tutorial in the context of voluntary blood donation.

Programming language: R

Tutorial 3: An introduction to drift diffusion modeling

Led by: Wenjia (Joyce) Zhao & Ian Krajbich

Tutorial description: Drift diffusion models are widely applied in psychology and neuroscience to study time-course of decision making. They have been used successfully in a range of perceptual and preferential tasks (for an incomplete list, see https://u.osu.edu/ratcliffmckoon/the-diffusion-model-for-non-specialists/). This tutorial provides a primer on the theoretical framework of the model, as well as example code for model fitting and analyses.

Programming language: Python package (HDDM) and also likely some R

Tutorial 4: Computational models of human gaze data

Led by: Angela Radulescu

Tutorial description: This tutorial will cover the theory and practice of fitting computational models to human gaze data.

Flux Congress Program Schedule

We will treat gaze data as an observable consequence of a latent selective attention process. We will build generative models of gaze that make real-time predictions about where participants will look, conditional on past choices, observations. and current attentional state. Modeling frameworks we will discuss include reinforcement learning and approximate Bayesian inference (e.g. particle filtering).

Programming language: Python

Tutorial 5: Computational modeling of goal-directed and habitual reinforcement-learning strategies

Led by: Claire Smid & Wouter Kool

Tutorial description: Human behavior is sometimes guided by habit, and sometimes by goal-directed planning. Recent advances in computational cognitive science have formalized this as a distinction between model-free and model-based reinforcement learning. In this tutorial, we will teach you how to use model fitting techniques to distinguish between these forms of decision making in humans across the developmental lifespan.

Programming language: Python (through Google colab)

FIT'NG All Ages: Advantages and Challenges of Longitudinal Fetal, Infant, and Toddler Neuroimaging

6:00am – 12:00pm PDT (9:00am – 3:00pm EST)

The fee to attend this workshop is $20 and can be purchased with your Flux Congress Registration.

Meeting Organizers:

- FIT'NG (Fetal, Infant, Toddler Neuroimaging Group)
- Sarah Shultz, PhD, Emory University/Marcus Autism Center (co-chair)
- Dustin Scheinost, PhD, Yale University School of Medicine (co-chair)
- Zeena Ammar, Emory University/Marcus Autism Center
- Cat Camacho, Washington University in St. Louis
- Aiden Ford, Emory University/Marcus Autism Center
- Roxane Licandro, Vienna University of Technology
- Kelly Vaughn, University of Texas Health Science Center at Houston

Meeting Description:

Longitudinal MRI is essential for quantifying trajectories of brain change in typical development and in neuro-developmental disorders. Rapid changes in brain anatomy and physiology during the prenatal, infant and toddler period necessitate longitudinal measurement but also present unique challenges for data acquisition, processing, and analysis. This satellite meeting will provide a forum for discussing these challenges and identifying possible solutions. Session 1 will focus on challenges relating to data collection (choice of sequence parameters and equipment, data acquisition procedures, and participant recruitment and retention) and data analysis (approaches to segmentation and parcellation, registration, and curve fitting). In Session 2, expert panelists will provide a 'behind the scenes' look at important decision points and strategies adopted in their own research designs, stimulating a live discussion of solutions to challenges inherent in longitudinal neuroimaging. Finally, Session 3 will showcase new and exciting work utilizing longitudinal approaches discussed in preceding sessions.

Speakers:

- Jonathan O'Muircheartaigh, PhD
- Cassie Hendrix, PhD
- Cynthia Rogers, MD
- Georg Langs, PhD
- Lilla Zöllei, PhD
- Kathryn Mills, PhD
- Catherine Limperopoulous, PhD
- Lana Vasung, MD, PhD
- Jana Hutter, PhD
- Weili Lin, PhD
- Mirella Dapretto, PhD
- Nadine Gaab, PhD
- Sean Deoni, PhD
- Gregor Kasprian, MD
- Richard Bethlehem, PhD

Flux Congress Program Schedule

SATURDAY, SEPTEMBER 18

Congress Opening Remarks

6:00am – 6:30am PDT (9:00am – 9:30am EST)

- Beatriz Luna, University of Pittsburgh
- Nikolaus Steinbeis, University College London

Symposium #1 - How does the developing brain organize experience to model the world?

6:30am – 8:00am PDT (9:30am – 11:00am EST)

Chairs: **Christine Coughlin**, University of Texas at Austin, and **Alison Preston**, University of Texas at Austin

Speakers: **Kate Nussenbaum**, New York University *"Adaptability of positive and negative learning rates across development"*

Christine Coughlin, University of Texas at Austin
"Developmental differences in brain function during memory-guided inference"

Thomas Wills, University College London, *"Neural correlates for the consolidation and specificity of hippocampal memories during post-natal development"*

Theresa Cheng, University of Oregon, *"Neural correlates for the consolidation and specificity of hippocampal memories during post-natal development"*

Young Investigator Award Talk

8:00am – 8:30am PDT (11:00am – 11:30am EST)

Kennedy Krieger Institute
KennedyKrieger.org

Chairs: **Jennifer Pfeifer**, University of Oregon, and **Sarah-Jayne Blakemore**, University of Cambridge

Kate Mills, University of Oregon
Kate Mills is an Assistant Professor in the Department of Psychology at the University of Oregon. Her lab applies longitudinal methods to investigate the intertwined social, biological, and cognitive processes that underlie the development of skills needed to navigate the social environment.

Symposium #2 - Transdiagnostic approaches to developmental disorders: Beyond the boundaries of diagnosis

8:30am – 10:00am PDT (11:30am – 1:00pm EST)

Chairs: **Duncan Astle**, University of Cambridge, and **Rogier Kievit**, Radboud University

Speakers: **Joe Bathelt**, University of London, *"Probing the overarching continuum theory: Data-driven phenotyping of ADHD and ASD"*

Danyal Akarca, University of Cambridge, *"Generative modelling of neurodevelopmental diversity"*

Danielle Bassett, University of Pennsylvania, *"Transdiagnostic dimensions of psychopathology explain individuals' unique deviations from normative neurodevelopment in brain structure"*

Corina Greven, Donders Institute for Brain Cognition and Behaviour, *"Mindfulness-based intervention for children with ADHD and their parents: self-control as a transdiagnostic trait"*

Essi Viding, University College London, *"Advancing the study of transdiagnostic mechanisms: The importance of considering development and measurement"*

Flux Congress Program Schedule

Trainee Dissertation Award Talk

10:30am – 11:00am PDT (1:30pm – 2:00pm EST)

Chair: **Cate Hartley**, New York University

Infant fMRI: A Model System for Cognitive Neuroscience

Dr. Cameron Ellis, Yale University

Dr. Cameron Ellis completed his PhD in Psychology in 2021 from Yale University (by way of Princeton University), working with Dr. Nicholas Turk-Browne. He received his BSc from University of Auckland (New Zealand) in 2013. In his research, he studies how basic building blocks of cognition emerge and mature in the infant brain, and seeks to understand how infants are adapted to the challenges they face during development. In his dissertation, he developed methods for conducting fMRI with awake, behaving infants and pursued three directions: 1) how the visual system is organized early in life, long before visual abilities reach maturity, 2) how attention enables infants to sift through a world full of complexity, and 3) how infants can learn so much yet remember so little of their early life experiences.

Trainee Session – Career Perspectives Panel

11:00am – 12:30pm PDT (2:00 am – 3:30pm EST)

Chairs: **Sofi Cardenas**, University of Southern California; **Maximilian Scheuplein**, Leiden University; and **Jessica Flannery**, UNC Chapel Hill

This panel discussion will include a diverse set of experts, who work within and/or outside of academia. Besides sharing their own stories about successes and struggles, they will provide hands-on advice on how to navigate the job market as an early career researcher. The goal of this session is to inspire (particularly) early career researchers about possible career trajectories as well as to discuss some common choices everyone faces. To stimulate an open and honest discussion, this session will not be recorded. Stay tuned for more information.

Gail Rosenbaum, PhD, Staff Scientist, Geisinger Health

Gail Rosenbaum is a Staff Scientist in the Behavioral Insights Team at Geisinger Health. During her PhD training at Temple University and postdoctoral fellowship at New York University, Gail's research focused on the development of risky decision making across adolescence, drawing on insights from developmental psychology, cognitive neuroscience, and behavioral economics. At Geisinger, she applies findings from research on judgment and decision making to improve healthcare decisions and outcomes for patients and employees.

Marc Seal, PhD, Murdoch Children's Research Institute & The University of Melbourne, Australia

Marc Seal currently holds a joint appointment as an Associate Professor in the Department of Paediatrics, The University of Melbourne and as Group Leader of the Developmental Imaging Research Group at the Murdoch Children's Research Institute. In this role he is responsible for coordinating and facilitating clinical research utilising the MRI Scanners at the Melbourne Children's campus and supervise a multidisciplinary team of clinicians, MRI technologists and neuroscientists. He has extensive expertise in paediatric neuroimaging and for the last 12 years his primary role has been to enable and facilitate high quality neurodevelopmental research on the Melbourne Children's Campus. The work of his team and international collaborators has provided novel information about individual differences in brain development, from birth to adolescence, and importantly the functional consequences of idiosyncratic variation in these individual developmental trajectories.

Yee Lee Shing, PhD, Department of Psychology, Goethe University Frankfurt, Germany

Yee Lee Shing is Professor of Developmental Psychology at the Department of Psychology, Goethe University Frankfurt. She is the Principal Investigator of the Lifespan Cognitive and Brain Development (LISCO) Lab and also a member of the IDeA Centre of the Leibniz Institute for Research and Information in Education (DIPF). She is interested in understanding the development of cognitive and neural functions across the human lifespan, with a focus on long-term memory and predictive processing. Her research combines neuroimaging (e.g., structural and functional magnetic resonance imaging) and multivariate developmental methodology (e.g., structural equation and latent growth curve modelling) to investigate the unfolding of brain–behaviour relationships across time. Professor Shing has received several grants and

Flux Congress Program Schedule

awards for her work, including the Heinz Maier-Leibnitz-Preis (German Research Foundation), Jacobs Foundation Research Fellow, and ERC Starting Grant.

Andrea Niles, PhD, Chief Science Officer and Co-Founder of Youper AI

Andrea Niles is the Chief Science Officer and Co-Founder of Youper AI. Youper is a digital mental health company that uses artificial intelligence to increase access to and facilitate mental health treatment. Youper delivers AI Therapy, a novel treatment approach developed by Dr. Niles and the Youper team. Youper also connects users via telehealth to providers who can prescribe psychiatric medications. Dr. Niles is passionate about using technology to disseminate evidence-based treatments. Her work at Youper falls at the intersection of her interests in technology, treatment development, research, data science, and clinical work. You can use these two links: https://www.youper.ai/ https://www.linkedin.com/in/andrea-niles-bb8772100/

Trainee Session – Connecting Science and Society Panel & Workshop

1:00pm – 2:30pm PDT (4:00pm – 5:30pm EST)

Chairs: **Na Yeon Kim**, Princeton University; **Marjolein Barendse**, University of Oregon; and **Suzanne van de Groep**, Erasmus University Rotterdam

The Flux Trainee Committee is organizing two events under the theme of "Connecting Science and Society." Our first event will be a panel discussion where we will invite experts to share their experiences in communicating science to non-academic audiences, as well as involving citizens (i.e. your research population) in research. We hope to cover expertise on science journalism, translating science to policy-making, communicating with younger audiences, and citizen science. The speakers on our panel are:

Sabine Kastner, MD, PhD, Princeton Neuroscience Institute and Department of Psychology, Princeton University

Sabine Kastner is Professor of Psychology and Neuroscience at Princeton University. She leads the Neuroscience of Attention and Perception Laboratory which investigates the neural basis of visual perception, attention, and awareness in the primate brain. One recent direction of her research includes the development of attention and perceptual functions in school-aged children with and without developmental disorders. In addition to publishing more than 150 articles in journals and books, she has served on several editorial boards and is Editor-in-Chief of Progress in Neurobiology. Professor Kastner is also one of the co-founders and chief editors for the Frontiers of Young Minds Neuroscience section. Frontiers for Young Minds provides an opportunity for children from all around the world to engage with scientific research and participate in the publishing process. Her contribution has been recognized by the Society for Neuroscience's 2019 Award for Education in Neuroscience. She will join our panel discussion and share her insights on Frontiers for Young Minds. Website: https://scholar.princeton.edu/napl

Moira O'Neil, Senior Vice Presidents of Research Interpretation at FrameWorks Institute

Moira O'Neil leads FrameWorks' efforts to interpret and share communications science with the nonprofit sector so it can more effectively drive social change. Moira manages a team of communications professionals and social scientists who help fields of practice frame social issues in ways that have the proven power to deepen understanding and inspire action.

Michelle Achterberg, PhD, Postdoctoral researcher at Erasmus University Rotterdam and Leiden University

Michelle Achterberg is a postdoctoral researcher at Erasmus University Rotterdam and Leiden University, with an interest in social emotional development. In her studies, she focuses on the underlying neural mechanisms of, and environmental influences on, social emotion regulation in childhood. In addition to her scientific research, she aims to build bridges between science and society by communicating scientific findings to the broader society, as well as incorporating the society in setting up new studies, using citizen-science. Website: https:// www.michelleachterberg.nl/ Twitter: https://twitter.com/_MAchterberg

Rebecca Schwarzlose, PhD, Department of Psychiatry, Washington University in St. Louis

Rebecca Schwarzlose is a postdoctoral scholar in the Department of Psychiatry at Washington University in St. Louis. Her research uses functional neuroimaging to investigate sensory prediction and anxiety in typically developing children and children with neurodevelopmental disorders. Before coming to Washington University, Rebecca served as chief editor of Trends in Cognitive Sciences. She is also the author of a critically acclaimed trade book about topographic brain maps called Brainscapes: The Warped,

Flux Congress Program Schedule

Wondrous Maps Written in Your Brain – And How They Guide You. She is the recipient of both research and science communication grants, including a grant from the Alfred P. Sloan Foundation Program for Public Understanding in Science and Technology. Twitter: https://twitter.com/gothemind
Website: http://www.rebeccaschwarzlose.com Blog: https://gardenofthemind.com

Workshop
The panel discussion will be followed by a trainee-led workshop that is exclusively open to Flux trainee members (i.e., students and post-docs). In this workshop attendees will brainstorm in small groups about a project of their own choice that aims to connect science and society. For example, attendees can devise their own science communication or citizen science project. After the workshop, attendees will pitch their initial ideas for a project and receive feedback. We encourage attendees to carry out the project within the next year, but this is not obligatory. Progress on implemented projects can be presented in poster format at Flux 2022. Trainees who attend this workshop will have a better understanding of the ways in which science and society can have mutually beneficial connections, will have networked with other trainees, and will find out whether they want to pursue future projects in which they aim to foster a connection between science and society.

SUNDAY, SEPTEMBER 19

Flash Talks #1

6:00am – 6:30am PDT (9:00am – 9:30am EST)

Chair: **Laurel Gabard-Durnam**, Northeastern University

Speakers: **Cong Wang**, Peking University, *"Separable neurocognitive changes underlie the development of communicative ability in adolescence"*

Max Herzberg, Washington University in St. Louis, *"The association between maternal cortisol and neonatal amygdala volume is moderated by socioeconomic advantage"*

Robert Hermosillo, University of Minnesota, *"Using Probabilistic Atlases of Functional Neural Networks in Adolescents to Improve Reliability of Group Brain-Behavior Associations"*

Vaidehi Natu, Stanford University, *"Myelin contributes to microstructural growth in human sensory cortex during early infancy"*

Nicholas Fogleman, University of North Carolina at Chapel Hill, *"Relation between intrinsic brain network organization and internalizing and externalizing behaviors in children with ADHD following methylphenidate administration"*

Dietsje Jolles, Leiden University, *"Can immaturity be adaptive? Developmental changes in the interaction between top-down control and experiential learning in a predictable task environment"*

Poster Session #1

6:30am – 8:00am PDT (9:30am – 11:00am EST)

Join us in Gather.town - https://gather.town/app/q8MPzCGuvjyko2Zo/Flux2021

Diversity Symposium

8:00am – 9:00am PDT (11:00am – 12:00pm EST)

Diversity Session Panel Members:
Stefanie Bodison, Jenn Pfeifer, Calos Cardenas-Iniguez, Lucina Uddin, Charles, Geier, Kristina Uban

Last year was the inaugural Diversity Session at Flux, which opened with a compelling presentation on systemic racism in neuroscience and smaller breakout rooms addressing a range of issues aimed towards fostering a diverse and inclusive society of developmental cognitive neuroscientists. One year later, a panel of Diversity Working Group members will have an honest conversation about where we are now; what if anything has changed; and how we can continue to make

Flux Congress Program Schedule

sustainable change for diversity, equity, and inclusion within the Flux Society. Our goal is to identify actionable steps to enhance diversity, equity, and inclusion in developmental cognitive neuroscience now, and into the near future.

We are excited to offer two diversity-related events during the Flux 2021 conference. Join our Affinity Group Meetings on Monday, Sept 20th at 1:00pm –2:00pm PDT (4:00pm – 5:00pm EST).

Symposium #3 - Exploring the depths of the brain: The functional significance of sulcal development

9:30am – 11:00am PDT (12:30pm – 2:00pm EST)

Chair: **Silvia Bunge**, University of California, Berkeley, and **Kevin Weiner**, University of California, Berkeley

Speakers: **Willa Voorhies**, University of California, Berkeley, *"Lateral prefrontal sulcal morphology predicts individual variability in reasoning"*

Jessica Dubois, Université de Paris; NeuroSpin, *"Mapping the early folding of the human brain: MRI studies in babies and relationships to functional outcome"*

Michael Arcaro, University of California, Berkeley, *"Sulcal morphology predicts face patches in macaques"*

Gregoire Borst, Université de Paris – CNRS, *"Sulcation of the intraparietal sulcus and mathematical abilities from childhood to adulthood"*

Symposium #4 - FIT'NG - Fetal and Infant Neuroimaging

11:15am – 12:45pm PDT (2:15pm – 3:45pm EST)

Chair: **Lilla Zöllei**, Harvard University

Speakers: **Josepheen Cruz**, Developing Brain Institute, *"Disrupted resting state functional connectivity in clinically high-risk fetuses"*

Joana Alves Sa De Almeida, University Hospitals of Geneva, Geneva, Switzerland, *"Music impacts brain structural maturation in very preterm infants"*

Sandra W. Jacobson, PhD, Wayne State University and **Fleur L. Warton**, University of Cape Town, *"Brain imaging of unsedated newborn infants prenatally exposed to alcohol or methamphetamine during pregnancy in Cape Town, South Africa"*

The "Fetal and Infant Neuroimaging" symposium will host a panel of invited speakers. They will present their latest findings in the areas of disrupted functional connectivity in high-risk fetuses, the impact of prematurity and early music intervention on early brain development as well as infant research on effects of contaminants and data analysis challenges. This event is organized by the Fetal, Infant, Toddler Neuroimaging Group (FIT'NG) group.

Social Event

1:00pm – 2:30pm PDT (4:00pm – 5:30pm EST)

Join Flux for our virtual KARAOKE night!

The unofficial **Flux Karaoke** event is.... so BRING IT! If you can sing (e.g., **Damien Fair** who will be on it), can barely hold a tune (e.g., **Bea Luna**, also participating), or just want to laugh while watching the entertainment, let's have a blast together, we deserve it to digest all the great science at the meeting. **Eric Feczko** will be our extraordinary MC that will make sure we laugh throughout.

We have 21 singer slots in 5min increments. Prior to your session time, find your song on YouTube by searching for "'song title' Karaoke" – make sure you have the version you want. When your time comes, you'll share your screen in the Zoom meeting and you can SING your heart out! Sign up to participate **HERE** before September 17.

Flux Congress Program Schedule

MONDAY, SEPTEMBER 20

Symposium #5 - Multidimensional Approaches to Early Adversity Across Species

6:00am – 7:30am PDT (9:00am – 10:30am EST)

Chair: **Elysia Davis**, University of Denver, and **Tallie Z. Baram**, University of California, Irvine

Speakers: **Elysia Davis**, University of Denver, *"Early life exposure to unpredictable sensory signals shapes neural circuit development"*

Mar Sanchez / Kai McCormack, Spelman College *"Effects of maternal sensitivity and predictability on the development of emotional regulation and cognitive function in rhesus macaques"*

Jamie Hanson, University of Pittsburgh, *"Expanding Bioecological Conceptualizations of Unpredictability and Volatility: Connections with Behavioral and Neurobiological Development"*

Riika Korja, University of Turku, *"Predictability of maternal care and child's neuropsychological and psychosocial development – Findings from FinnBrain Birth Cohort"*

Huttenlocher Lecture - Neural basis of language development

7:30am – 8:30am PDT (10:30am – 11:30am EST)

Chair: **Nikolaus Steinbeis**, University College London

Neural basis of language development

Prof. Dr. Dr. h.c. Angela D. Friederici, Director at the Max Planck Institute for Human Cognitive and Brain Sciences, Leipzig, Germany

Angela D. Friederici is director at the Max Planck Institute for Human Cognitive and Brain Sciences (MPI CBS) in Leipzig, Germany. She is Founding director of this institute, founded in 1994. She is honorary professor at the University of Leipzig (Psychology), the University of Potsdam (Linguistics) and the Charité Berlin (Neurology) and holds a Doctor honoris Causa from the University of Mons, Belgium.

She graduated in linguistics and psychology in Bonn (Germany) and spent a postdoctoral year at MIT (USA). Prior to joining the Max Planck Society as a director, she was a professor for Cognitive Sciences at the Free University Berlin. Her research on the neural basis of language and language acquisition has received recognition across disciplines.

Flash Talks #2

9:00am – 9:30pm PDT (12:30pm – 1:00pm EST)

Chair: **D.D. Jolles**, Leiden University

Speakers: **Tehila Nugiel**, The University of Texas at Austin, *"Functional connectivity of cognitive control and learning systems in English learners"*

Saara Nolvi, University of Turku, *"Prospective association of maternal psychosocial stress during pregnancy with newborn hippocampal volume and its implications for infant social-emotional development"*

Claire Donnici, Cumming School of Medicine, University of Calgary, *"Prenatal and postnatal maternal depressive symptoms and longitudinal changes in limbic structure in young children"*

Nourhan Elsayed, Washington University in St. Louis, *"From Poverty to Cognition: Examining the Relative Contributions of Environmental, Neural and Genetics Influences"*

Simone Dobbelaar, Leiden University, *"Aggressive responses following social evaluation and the underlying motives in middle childhood: an fMRI replication design"*

Amanda Baker, University of California, Los Angeles, *"Subclinical anxiety modulates neural and behavioral response to safety decisions in early adolescence"*

Flux Congress Program Schedule

Poster Session #2

9:30am – 11:00am PDT (12:30pm – 2:00pm EST)

Join us in Gather.town - https://gather.town/app/q8MPzCGuvjyko2Zo/Flux2021

Symposium #6 - Methodological considerations and advances in developmental neuroscience

11:00am – 12:30pm PDT (2:00pm – 3:30pm EST)

Chair: **Sarah Yip**, Yale University

Speakers: **Ethan McCormick**, University of North Carolina at Chapel Hill, *"Leveraging missing data to model simultaneous growth processe"*

Monica Rosenberg, University of Chicago, *"Characterizing working memory and attention in development with brain-based predictive models"*

Chandra Sripada, University of Michigan, *"New Methods to Investigate the Connectomic Basis of Cognitive Abilities in Childhood"*

Petra Vertes, Cambridge University, *"Imaging transcriptomic approaches to understanding brain development"*

Diversity Affinity Group Sessions

1:00pm – 2:00pm PDT (4:00pm – 5:00pm EST)

Affinity Group Facilitators:

- BIPOC (Stefanie Bodison, Lucona Uddin, Kayla Green)
- First-Gen (Jenn Pfeifer, Marjolein Barendse, Kate Mills, Julia Moser)
- LGBTQIA (Carlos Cardenas-Iniguez)
- Allies & Advocates (Chuck Geier, Kristina Uban, Maya Rosen)

For the first time, Flux will be hosting affinity group meetings for BIPOC, First-Gen, LGBTQIA, and Allies & Advocates for people to connect and work towards inclusivity within the science community by cultivating and nurturing sustainable connections within the Flux Society and beyond. We recognize that many people might intersect with multiple groups, but constraints with the online nature of the conference limits our ability to offer non-opposing sessions for each group at this time. Our plan for affinity groups to meet consistently over the next year to develop a sustainable action plan and encourage cross-group participation.

TUESDAY, SEPTEMBER 21

Flash Talks #3

6:00am – 6:30am PDT (9:00am – 9:30am EST)

Chair: **Wouter van den Bos**, University of Amsterdam

Speakers: **Hyesang Chang**, Stanford University, "*Foundational number sense training gains are predicted by hippocampal-parietal circuits"*

Sagana Vijayarajah, University of Toronto, *"Developmental refinement of attention impacts semantic memory retrieval through adolescence"*

Finnegan Calabro, University of Pittsburgh, *"Development of dopaminergic neurophysiology supports improvements in the use of optimal reward learning strategies through adolescence"*

Tristan Yates, Yale University, *"How infants carve up continuous experience into neural events"*

Yuyan (Lillian) Xu, University of Wisconsin-Madison, *"Childhood unpredictability, reward processing, and reward-related psychopathology"*

Flux Congress Program Schedule

Poster Session #3

6:30am – 8:00am PDT (9:30am – 11:00am EST)

Join us in Gather.town - https://gather.town/app/q8MPzCGuvjyko2Zo/Flux2021

Science of Learning Symposium

JACOBS FOUNDATION
Our Promise to Youth

8:00am – 9:00am PDT (11:00am – 12:00pm EST)

Chairs: **Jessica Church-Lang**, University of Texas at Austin, and **Yee Lee Shing**, Goethe University Frankfurt

Speakers: **Alina Quach**, Northeastern University, *"Guiding the future by linking the past: Adolescent development of value-based generalization"*

Iryna Schommartz, Goethe University Frankfurt, *"From learning to remembering: How do term- and preterm-born children differ from adults in memory consolidation?*

Phoebe Thomson, The University of Melbourne, *"Disconnection of functional brain networks in ADHD: A longitudinal study of child and adolescent development*

Symposium #7 - Social motivation in flux: Understanding the development of social cognition and behavior

9:30am – 11:00am PDT (12:30pm – 2:00pm EST)

Chair: **Leah Somerville**, Harvard University, and **Kieran O'Donnell**, Yale University

Speakers: **Wouter van den Bos**, University of Amsterdam, *"Social Learning in Social networks in Adolescence"*

Jennifer Silvers, University of California, Los Angeles, *"Social regulation of emotional experience and decision making across development"*

Hilary Richardson, University of Edinburgh, "*Selective responses for theory of mind in congenitally blind children"*

Hirofumi Morishita, Icahn School of Medicine at Mount Sinai, *"Prefrontal social circuit vulnerability to juvenile social isolation"*

Symposium #8 - Neurodevelopmental vulnerability to psychopathology: Building resilience

11:15am – 12:45pm PDT (2:15pm – 3:45pm EST)

Chair: **Lucy Vanes**, King's College London, and **Chiara Nosarti**, King's College London

Speakers: **Lucy Vanes**, King's College London, *"The role of neonatal brain structure and home environment in childhood outcomes following very preterm birth"*

Alexis Brieant, Yale University, *"Associations Among Negative Life Events, Changes in Cortico-Limbic Connectivity, and Psychopathology in the ABCD Study: Exploring Pathways to Resilience"*

Ronny Geva, Bar-Ilan University, *"Do Perinatal Neural Intergity and Precocial Exposure Shape Attention?"*

Nikolaos Koutsouleris, University of Munich, *"Machine learning approaches to identifying vulnerability in at-risk populations"*

Closing Remarks

12:45pm – 1:00pm PDT (3:45pm – 4:00pm EST)

- Beatriz Luna, University of Pittsburgh
- Nikolaus Steinbeis, University College London

Post Conference Flux Outreach – Public Talk September 21, 2021

We are excited to announce a new Flux initiative, the free FluxOutreach Public Talk supported by the Jacobs Foundation. This year the Public Talk will be delivered by Jessica Church-Lang followed by a discussion session with a panel formed by Bea Luna, Damien Fair, Ashley Parr (Postdoc), and Anita Randolph (community engagement and education director). The aim is to translate our findings to inform relevant constituents of the public who could share our excitement about developmental cognitive neuroscience. In particular, we hope to generate dialogue with educators as well as to connect with young potential scientists from under-represented groups at HBCUs and other organizations working to promote and encourage a multitude of voices in science.

Jessica Church-Lang
University of Texas at Austin
Moderator

Beatriz Luna
University of Pittsburgh
Panel

Damien Fair
University of Minnesota
Panel

Ashley Parr
University of Pittsburgh
Panel

Anita Randolph
University of Minnesota
Panel

When: Tuesday, September 21 at 4:00 – 5:30PDT

Cost: FREE

Register **HERE**

JACOBS FOUNDATION
Our Promise to Youth

Flux Congress Poster Author Index

Poster Session 1
Sunday, September 19 6:30am – 8:00am PDT

Poster Session 2
Monday, September 20 9:30am – 11:00am PDT

Poster Session 3
Tuesday, September 21 6:30am – 8:00am PDT

Poster board numbers are indicated as follows: Poster Session – Theme – Board Number (Example: 2-A-10)

Poster presenters will be at their poster booth during their assigned poster time but the posters are available to review throughout the congress.

Themes

A Executive Functioning
B Socioemotional Processing
C Learning
D Rewards/Motivation
E Education
F Memory
G Environment (Stress, SES)
H Brain Structure
I Networks
J Mechanisms (hormones, neurotransmitters, physiology)
K Methods
L Clinical Populations
M Attention
N Language
O Brain Function
P Brain Connectivity
Q Other

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

Flux Congress Poster Author Index

Flux Congress Poster Author Index

Flux Congress Poster Author Index

Flux Congress Poster Author Index

Flux Congress Poster Author Index

Flux Congress Poster Author Index

Flux Congress Poster Author Index

Poster Session 1

Sunday, September 19, 2021
6:30am – 8:00am PST

A – Executive functioning

1-A-1 The role of medial frontal theta among children and adolescents with consistently high threat sensitivity

Taylor Heffer[1], Stefon van Noordt[2], Teena Willoughby[1]

[1]Brock University, [2]Montréal Neurological Institute-Hospital, McGill University

1-A-2 The moderating role of parental scaffolding in relationships between low socioeconomic status and development of executive function: A preregistered longitudinal study

Maya Rosen[1], Rachel Rome[1], Liliana Lengua[2], Katie McLaughlin[1]

[1]Harvard University, [2]University of Washington

1-A-3 Examination of Neurobehavioral Developmental Trajectories of Cognitive, Motor, and Emotional Control in Relation to Sex Differences in Psychopathology

Keri Rosch[1], Rebecca Rochowiak[2], Alyssa DeRonda[2], Stewart Mostofsky[1]

[1]Kennedy Krieger Institute, Johns Hopkins University, [2]Kennedy Krieger Institute

1-A-4 Longitudinal development of response inhibition as measured by the Go/No-Go and Stop Signal Tasks across adolescence and into young adulthood

Hannah Weiss[1], Paul Collins[2], Monica Luciana[2]

[1]University of Minnesota-Twin Cities, [2]University of Minnesota Twin Cities

1-A-5 Resting State Cortical Hubs in Youths

Damion Demeter[1], Evan Gordon[2], Tehila Nugiel[3], AnnaCarolina Garza[1], Tyler Larguinho[1], Jessica Church[1]

[1]University of Texas, Austin, [2]Washington University, St. Louis, [3]University of North Carolina, Chapel Hill

1-A-6 Influence of semantic language ability on inhibitory control tasks in children across the socioeconomic spectrum

Rita Taylor[1], Deanna Barch[1]

[1]Washington University, St. Louis

1-A-7 Mindfulness Training is related to Improved Executive Functions in Preschool Children: An EEG Study

Ilana Shlomov[1], Tzipi Horowitz-kraus[1], Nava Levit-Binnun[2]

[1]Technion Israel Institute of Technology, [2]Segol

1-A-8 Training cognitive control in childhood: effects on behavioural intra-individual variability and functional connectivity of cognitive control systems

Roser Cañigueral[1], Claire Smid[1], Keertana Ganesan[1], Abigail Thompson[1], Scott Marek[2], Ryland Miller[2], Andrew Van[2], David Montez[2], Nico U. F. Dosenbach[2], Nikolaus Steinbeis[1]

[1]University College London, [2]Washington University in St. Louis

1-A-9 Brain functional topology in infancy predicts error detection twelve months later

Josué Rico-Picó[1], Sebastián Moyano[1], Ángela Conejero[1], Ángela Hoyo[1], M. Ángeles Ballesteros-Duperón[1], M. Rosario Rueda[1]

[1]University of Granada

1-A-10 Creating different cognitive and neurobiological profiles in typically developing children using a non-parametric approach: an fMRI study

Victoria Khalfin Fekson[1], Tzipi Horowitz-Kraus[1]

[1]Technion Israel Institute of Technology

1-A-11 Can immaturity be adaptive? Developmental changes in the interaction between top-down control and experiential learning in a predictable task environment

Dietsje Jolles[1], Zdena Op de Macks, Margot Schel, Bruno Bocanegra[2], Linda Van Leijenhorst[1]

[1]Leiden University, [2]Erasmus University Rotterdam

1-A-12 Reduced inter-subject correlations of brain activity patterns during lexicosemantic decision in adolescents with ASD

Kalekirstos Alemu[1], Apeksha Sridhar[1], Molly Wilkinson[1], Ksenija Marinkovic[2], R. Joanne Keehn[1], Annika Linke[1], Ralph-Axel Müller[1]

[1]San Diego State University Brain Development Imaging Labs, [2]Spatio-Temporal Brain Imaging Laboratory

B – Socioemotional processing

1-B-13 The impact of depression on mothers' neural processing of their adolescents' social cues

Marjolein Barendse[1], Nicholas Allen[1], Lisa Sheeber[1], Jennifer Pfeifer[1]

[1]University of Oregon

1-B-15 Cognitive control during an emotional interference task in adolescence: A BANDA study

Haley Hegefeld[1], Yoon Ji Lee[1], Susan Whitfield-Gabrieli[1], Juliet Davidow[1]

[1]Northeastern University

1-B-16 Behavioral and neural responses to processing facial expressions and their links with peer victimization

Sanne Kellij[1], Gerine Lodder[2], René Veenstra[3], Berna Güroğlu[4]

[1]Groningen University / Leiden University, [2]Tilburg University, [3]Groningen University, [4]Leiden University

1-B-17 Temperamental typologies in the ABCD study: Implications for psychopathology risk factors

Lauren Hill-Bowen[1], Jessica Flannery[1], Arshitha Basavaraj[2], Matthew Mattoni[3], Sarah Hartmann[1], Angela Laird[1], Elisa Trucco[1], Matthew Sutherland[1]

[1]Florida International University, [2]National Institute of Mental Health, [3]Temple University

1-B-18 Babies' processing of emotional expressions: multivariate pattern analysis of EEG signals

Angela Conejero[1], Eduardo López-Larraz[2], Angela Hoyo[1], Maria Concepción Castellanos[1], Luis Montesano[2], M. Rosario Rueda[1], María Ángeles Ballesteros[1], Aurelie Coubart

[1]University of Granada, [2]BitBrain

1-B-19 Leveraging hierarchical growth curve modeling with parcellated fMRI data to rigorously test the adolescent social reorientation model

Danielle Cosme[1], John Flournoy[2], Jordan Livingston[3], Matthew Lieberman[4], Mirella Dapretto[4], Jennifer Pfeifer[5]

[1]University of Pennsylvania, [2]Harvard University, [3]University of Toronto, [4]University of California, Los Angeles, [5]University of Oregon

1-B-20 Does Maternal Depression History Moderate Youth Reaction to Mothers' and Peers' Social Evaluation? An fMRI-daily diary study

Reuma Gadassi-Polack[1], Erica Ho[1], Wisteria Deng[1], Richard Watts[1], Dylan Gee[1], Jutta Joormann[1], Hedy Kober[1]

[1]Yale University

1-B-21 Valence Flexibility in Appraising Self and Others: Effects of Development Before and After COVID-19

Jennifer Britton[1], Beatriz Yepes[1], Stephanie Novotny[1], Evan Burdette[1]

[1]University of Miami

C – Learning

1-C-23 Young children form highly specific memory for structured experiences

Tess Allegra Forest[1], Zahra Abolghasem[1], Amy Finn[1], Margaret Schlichting[1]

[1]University of Toronto

1-C-24 Longitudinal changes in white matter properties, not cross-sectional differences, predict development of reading and math scores

Ethan Roy[1], Manjari Narayan[1], Adam Richie-Halford[2], John Kruper[2], Timothy Brown[3], Terry Jernigan[3], Ariel Rokem[2], Jason Yeatman[1]

[1]Stanford University, [2]University of Washington, [3]University of California, San Diego

1-C-25 Learning about Safety: Neural Correlates of Conditioned Inhibition in Typical Development

Paola Odriozola[1], Sahana Kribakaran[1], Stephanie DeCross[2], Emily Cohodes[1], Jason Haberman[1], Katie McLaughlin[2], Dylan Gee[1]

[1]Yale University, [2]Harvard University

1-C-26 Exploration heuristics decrease during youth

Magda Dubois[1], Aislinn Bowler[1], Madeleine Moses-Payne[1], Johanna Habicht[1], Rani Moran[1], Niko Steinbeis[1], Tobias Hauser[1]

[1]University College London

1-C-27 Longitudinal cortical changes in audio-visual letter-sound processing in typically reading children

Linda Romanovska[1], Roef Janssen[1], Milene Bonte[1]

[1]Maastricht University

1-C-28 Statistical learning in newborn infants and fetuses in the last trimester of pregnancy

Julia Moser[1], Laura Batterink[2], Franziska Schleger[1], Magdalene Weiss[3], Ken Paller[4], Hubert Preissl[1]

[1]Helmholtz Center Munich at the University of Tübingen, [2]Western University, [3]University of Tübingen, [4]Northwestern University

D – Rewards/Motivation

1-D-29 Discounting rates and reward in the ABCD cohort: Relationship to social, familial and clinical factors

Robert Kohler[1], Sarah Lichenstein[1], Sarah Yip[1]

[1]Yale University

1-D-30 The structural brain basis of model-based and model-free decision-making in childhood

Claire Smid[1], Abigail Thompson[1], Keertana Ganesan[1], Roser Canigueral[1], Wouter Kool[2], Tobias Hauser[1], Nikolaus Steinbeis[1]

[1]University College London, [2]Washington University in St Louis

1-D-32 Characterizing puberty-related changes in fronto-striatal resting-state functional connectivity in adolescence

Amar Ojha[1], Ashley Parr[1], Will Foran[1], Finnegan Calabro[1], Cecile Ladouceur[1], Beatriz Luna[1]

[1]University of Pittsburgh

E – Education

1-E-33 Exploring neural correlates of behavioral and academic resilience among children in poverty

Monica Ellwood-Lowe[1], Carolyn Irving[1], Silvia Bunge[1]

[1]University of California, Berkeley

1-E-34 Canonical network functional connectivity predicts math achievement in childhood: A connectome-based predictive modeling approach

Andrew Lynn[1], Eric Wilkey[2], Gavin Price[1]

[1]Vanderbilt University, [2]Western University

Flux Congress Posters | Titles, Authors and Affiliations

F – Memory

1-F-35 A longitudinal study of episodic memory and cognitive development in early childhood

Rachael Elward[1], Maneet Saini[2], Faraneh Vargha-Khadem[2]

[1]London South Bank University, [2]UCL

1-F-36 Effects of sleep duration and quality on memory consolidation of preterm and term born children

Tobias Haase[1], Henriette Schütz[2], Nina Wald de Chamorro[2], Iryna Schommartz[1], Angela Kaindl[2], Yee Lee Shing[1], Claudia Buss[2]

[1]Goethe University, Frankfurt, [2]Charité Universitätsmedizin, Berlin

G – Environment (Stress, SES)

1-G-38 Examining the relationship between shared book reading at home, white matter organization in kindergarten, and subsequent language and reading abilities: a longitudinal investigation

Kelsey Davison[1], Jennifer Zuk[1], Lindsay Mullin[2], Vivian Schultz[2], Ola Ozernov-Palchik[3], Elizabeth Norton[4], John Gabrieli[3], Xi Yu[5], Nadine Gaab[6]

[1]Boston University, [2]Boston Children's Hospital, [3]MIT, [4]Northwestern University, [5]Beijing Normal University, [6]Harvard University

1-G-39 Early Adversity Exposure and Brain Structure Across Development: An ROI-based Meta-Analysis

Anna Vannucci[1], Andrea Fields[1], Eleanor Hansen[1], Ariel Katz[1], Ayumi Tachida[1], John Kerwin[1], Nathan Martin[1], Nim Tottenham[1]

[1]Columbia University

1-G-40 Exploring the effect of an unsafe school environment on white matter development in late childhood: Findings from regression and family fixed effects approaches

Spencer Dudley[1]

[1]University of Colorado at Boulder

1-G-42 Examining patterns of alpha EEG asymmetry and dimensions of early adversity: a preregistration

Summer Motton[1], Sarah Furlong[1], Madeline Robertson[1], Kinjal Patel[1], Amanda Mitchell[1], Dominique Martinez[1], Toni Howell[1], *Margaret Sheridan[1]*

[1]University of North Carolina, Chapel Hill

1-G-43 The association between maternal cortisol and neonatal amygdala volume is moderated by socioeconomic advantage

Max Herzberg[1], Regina Triplett[1], Sydney Kaplan[1], Dimitrios Alexopoulos[1], Dominique Meyer[1], Jyoti Arora[1], J. Philip Miller[1], Ronald McCarthy[1], Tara Smyser[1], Erik Herzog[1], Sarah England[1], Peinan Zhao[1], Deanna Barch[1], Cynthia Rogers[1], Barbara Warner[1], Christopher Smyser[1]

[1]Washington University, St. Louis

1-G-44 Typical variations in stressful life events relate to smaller hippocampal subfield volumes in children

Morgan Botdorf[1], Tracy Riggins[1]

[1]University of Maryland, College Park

1-G-45 Early caregiving quality may mitigate the impact of severe psychosocial deprivation on neural development in previously institutionalized children

Lucy Lurie[1], Katie McLaughlin[2], Meredith Gruhn[1], Kathryn Humphreys[3], Kinjal Patel[1], Charles Zeanah[4], Nathan Fox[5], Charles Nelson[6], Margaret Sheridan[1]

[1]University of North Carolina, Chapel Hill, [2]Harvard University, [3]Vanderbilt University, [4]Tulane University, [5]University of Maryland, College Park, [6]Harvard School of Medicine

1-G-46 Modelling depressive symptom trajectories in obese pregnancies reveals complex heterogeneity in maternal inflammation, placental growth, dietary intake, infections and preterm birth: implications for fetal neurodevelopment.

Julie Nihouarn Sigurdardottir[1], Sara White[2], Angela Flynn[2], Annette Briley[2], Claire Singh[2], Mary Rutherford[2], Lucilla Poston[2]

[1]King's College London, [2]KCL

1-G-47 Examining within-person fluctuations in stressful life events, physical activity, and affect during adolescence

Elizabeth McNeilly[1], Jessica Jenness[2], John Flournoy[3], Alejandro Valdivieso[2], Alexandra Rodman[3], Constanza Vidal Bustamante[3], Katie McLaughlin[3]

[1]University of Oregon, [2]University of Washington, [3]Harvard University

1-G-48 Reduced resting state connectome similarity in parent-child dyads marked by maltreatment

Katharina Pittner[1], Carolyn Parkinson[2], Lisa van den Berg[3], Renate Buisman[3], Lenneke Alink[3], Marinus van IJzendoorn[4], Marieke Tollenaar[3], Bernet Elzinga[3], Marian Bermans-Kranenburg[5]

[1]Charité - Universitätsmedizin Berlin, corporate member of Freie Universität Berlin and Humboldt-Univ, [2]UCLA, [3]Leiden University, [4]Erasmus University Rotterdam, [5]VU University Amsterdam

1-G-49 Hippocampal - prefrontal connectivity prior to COVID-19 pandemic predicts later anxiety in adolescents

Orma Ravindranath[1], Maria Perica[1], Finnegan Calabro[1], William Foran[1], Beatriz Luna[1]

[1]University of Pittsburgh

1-G-50 The effects of perceived early-life stress event severity and reaction severity on frontoamygdala circuitry and psychopathology

Jordan Foster[1], Emily Cohodes[1], Sarah McCauley[1], Jasmyne Pierre[1], Paola Odriozola[1], Jason Haberman[1], Sadie Zacharek[1], Sahana Kribakaran[1], H.R. Hodges[1], Camila Caballero[1], Dylan Gee[1]

[1]Yale University

Flux Congress Posters | Titles, Authors and Affiliations

H – Brain Structure

1-H-53 Individual variability in adolescent longitudinal development of cortical volume, thickness, surface area, and gyrification in two large European samples and influences of sex, height, pubertal status, and site

Nora Vetter[1], Lea Backhausen[1], Hervé Lemaître, Jonas Granzow[1], Juliane Froehner[1], Jean-Luc Martinot[1], Michael Smolka[1]

[1]Technische Universität Dresden

1-H-54 Longitudinal trajectories of white matter fiber development differ between children with and without ADHD

Ian Fuelscher[1], Christian Hyde[1], Nandita Vijayakumar[1], Phoebe Thomson[2], Emma Sciberras[1], Daryl Efron[2], Vicki Anderson[2], Philip Hazell[3], Timothy Silk[1]

[1]Deakin University, [2]Murdoch Children's Research Institute, [3]University of Sydney

1-H-55 Cortical Thickness in Bilingual and Monolingual Children: Relationships to Language Use and Language Skill

My Nguyen[1], Juliana Ronderos[1], Arturo Hernandez[1], Kelly Vaughn[2]

[1]University of Houston, [2]University of Texas Health Science Center at Houston

1-H-56 Common child psychiatric symptoms relate to global but no to specific cortical morphology differences

Yingzhe Zhang[1], Scott Delaney[1], Henning Tiemeier[1]

[1]Harvard T. H. Chan School of Public Health

1-H-57 Sex differences in gray matter development: an analysis of 116 regional trajectories

Madison Long[1], Jess Reynolds[2], Jing Zheng[1], Yuankai Huo[3], Bennett Landman[3], Karthik Ramadass[3], Catherine Lebel[1]

[1]University of Calgary, [2]Telethon Kids Institute, The University of Western Australia, [3]Vanderbilt University

1-H-59 Specificity of structural markers of youth risk due to a parental history of psychopathology in the ABCD study

Matthew Mattoni[1], Helene Hopman[2], Adefunke Dadematthews[3], Thomas Olino[1]

[1]Temple University, [2]The Chinese University of Hong Kong, [3]Auburn University

1-H-60 Examining the effects of maternal psycho-pathology on neonatal neurodevelopment and infant temperament

Jesse Barr[1], Cathi Propper[1], Amanda Wylie[1], Rebecca Stephens[1], Sarah Short[1]

[1]University of North Carolina, Chapel Hill

1-H-61 The role of the extreme capsule and the uncinate fasciculus in reading and mental health

Kassondra Pedenko[1], Bryce Geeraert[1], Catherine Lebel[1]

[1]University of Calgary

1-H-62 Myelin contributes to microstructural growth in human sensory cortex during early infancy

Vaidehi Natu[1], Mona Rosenke[1], Hua Wu[1], Francesca Querdasi[1], Holly Kular[1], Nancy Lopez-Alvarez[1], Mareike Grotheer[2], Shai Berman[3], Aviv Mezer[3], Kalanit Grill-Spector[1]

[1]Stanford University, [2]University of Marburg, [3]Hebrew University of Jerusalem

I – Networks

1-I-63 Task-evoked functional brain organization and its relationship to behavior in children

Mackenzie Mitchell[1], Jessica Cohen[1]

[1]University of North Carolina, Chapel Hill

1-I-64 Relation between intrinsic brain network organization and internalizing and externalizing behaviors in children with ADHD following methylphenidate administration

Nicholas Fogleman[1], Teague Henry[2], Cleanthis Michael[1], Jessica Cohen[1]

[1]University of North Carolina, Chapel Hill, [2]University of Pittsburgh

1-I-65 Using Probabilistic Atlases of Functional Neural Networks in Adolescents to Improve Reliability of Group Brain-Behavior Associations

Robert Hermosillo[1], Lucille Moore[2], Adam Pines[3], Eric Feczko[1], Greg Conan[1], Michael Mooney[2], Anita Randolph[1], Babatunde Adeyemo[4], Eric Earl[2], Anders Perrone[2], Johnny Uriate-Lopez[2], Kathy Snider[2], Olivia Doyle[2], Michaela Cordova[5], Ally Dworetsky[4], Caterina Gratton[6] Steven Petersen[4], Theodore Satterthwaite[3], Oscar Miranda-Dominguez[1], Damien Fair[1]

[1]University of Minnesota, [2]Oregon Health & Science University, [3]University of Pennsylvania, [4]Washington University School of Medicine, [5]San Diego State University, [6]NorthWestern University

J – Mechanisms (hormones, neurotransmitters, physiology)

1-J-66 Prepubertal ovariectomy alters dorsomedial striatum indirect pathway neuron excitability and explore/exploit balance in female mice

Kristen Delevich[1], Chrisopher Hall[2], Linda Wilbrecht[2]

[1]UC Berkeley, Washington State University, [2]UC Berkeley

1-J-67 Intra- and inter-individual effects of pubertal hormones on perceived pubertal maturation: Baseline to Year 1 of the ABCD Study

Megan Patterson[1], Kristina Uban[2], Megan Herting[3], John Hewitt[4], Marie Banich[4]

[1]University of Colorado Denver, [2]University of California, Irvine, [3]University of Southern California, [4]University of Colorado, Boulder

1-J-68 fMRI-derived measures of brain tissue iron as an indirect marker of striatal dopamine for neuro-developmental research

Brenden Tervo-Clemmens[1], Bart Larsen[2], Ashley Parr[1], William Foran[1], Finnegan Calabro[1], Beatriz Luna[1]

[1]University of Pittsburgh, [2]University of Pennsylvania

1-J-69 Touch for life

Francis McGlone[1]

[1]Liverpool John Moores University

K – Methods

1-K-71 Gold Standard Practices in Infant and Toddler MRI Acquisition

Cassandra Hendrix[1], Lanxin Ji[2], Moriah Thomason[1]

[1]New York University, [2]Beijing Tiantan Hospital, Capital Medical University

1-K-72 Characterizing multimodal phenotypes in youth with Klinefelter syndrome

Elizabeth Levitis[1], Ethan Whitman[1], Siyuan Liu[1], Allysa Warling[1], Erin Torres[1], Liv Clasen[1], François Lalonde[1], Joelle Sarlls[1], Armin Raznahan[1], Daniel Alexander[2]

[1]National Institute of Mental Health, [2]University College London

1-K-73 Impact of significant motion scrubbing on dynamic functional connectivity: validation in an adult resting-state cohort

Lanxin Ji[1], Cassandra Hendrix[2], Moriah Thomason[2]

[1]Beijing Tiantan Hospital, Capital Medical University, [2]New York University

L – Clinical Populations

1-L-74 Interrogating multivariate patterns of functional connectivity related to childhood and adulthood Tourette syndrome

Matthew Feigelis[1], Ashley Nielsen[2], Deanna Greene[1]

[1]UC San Diego, [2]Washington University School of Medicine

1-L-75 Using machine learning to predict intelligence in atypically developing children and adolescents

Brian Pho[1], Yalda Mohsenzadeh[1], Bobby Stojanoski[1]

[1]Western University

1-L-76 Executive functioning, negative self-evaluation, and network coherence in depressed adolescents

Jordan Garcia[1], Johanna Walker[1], Anthony Gifuni[1], Ian Gotlib[1], Tiffany Ho[2]

[1]Stanford University, [2]University of California, San Francisco

1-L-77 Anxiety moderates attention to rapidly presented social stimuli in adolescent females

Carolyn Lasch[1], Jed Elison[1], Kathryn Cullen[1], Bonnie Klimes-Dougan[1]

[1]University of MN, Twin Cities

1-L-78 Self-concept in adolescent males with autism spectrum disorder

Renske van der Cruijsen[1], Sander Begeer[2], Eveline Crone[1]

[1]Erasmus University Rotterdam, [2]Vrije Universiteit Amsterdam

1-L-79 High genetic risk for bipolar disorder is associated with localised dysconnectivity during normal structural connectome development

Alistair Perry[1], Gloria Roberts[2], Megan Campbell[3], Kate Ridgway[2], Vivian Leung[2], Rhoshel Lenroot[4], Philip Mitchell[2], Michael Breakspear[3]

[1]University of Cambridge, [2]University of New South Wales, [3]University of Newcastle, [4]University of New Mexico

1-L-80 Developmental Trajectories of Resting-State Networks and Rumination

Katie Bessette[1], Melinda Westlund-Schreiner[2], Alina Dillahunt[2], Vincent Koppelmans[2], Robert Welsh[2], Heide Klumpp[3], Jonathan Stange[4], Katie Burkhouse[3], Scott Langenecker[2]

[1]University of Illinois at Chicago / University of Utah, [2]University of Utah, [3]University of Illinois at Chicago, [4]University of Southern California

1-L-81 Acute alterations and longitudinal changes in the brain of young children after a mild traumatic brain injury: design of the EULE pilot study

Fanny Degeilh[1], Michaela Bonfert[1], Florian Heinen[1], Miriam Beauchamp[1], Christian Tamnes[1], Inga Koerte[1]

[1]Ludwig Maximilian University of Munich

N – Language

1-N-82 Fluent reading is associated with increased functional connectivity within ventral and dorsal attention networks in children with dyslexia

Nikolay Taran[1], Rola Farah[1], Tzipi Horowitz-Kraus[1]

[1]Technion Israel Institute of Technology

O – Brain Function

1-O-83 Using task-based neural fingerprinting to predict canonical network engagement during development

Fengdan Ye[1], Robert Kohler[1], Bianca Serio[1], Sarah Lichenstein[1], Sarah Yip[1]

[1]Yale University

1-O-84 Developmental trajectories of myo-inositol across infancy via in vivo magnetic resonance spectroscopy

Marisa Spann[1], Martin Gajdosik[2], Karl Landheer[2], Dustin Scheinost[2], Christoph Juchem[1]

[1]Columbia University, [2]Yale University

1-O-85 Associations between age and brain synchrony during passive viewing in early childhood

Ryann Tansey[1], Kirk Graff[1], Christiane Rohr[1], Dennis Dimond[1], Amanda Ip[1], Shelly Yin[1], Deborah Dewey[1], Signe Bray[1]

[1]University of Calgary

P – Brain Connectivity

1-P-86 Physical fitness, hippocampal functional connectivity and academic performance in children with overweight/obesity: the ActiveBrains project

Irene Esteban-Cornejo[1], Chelsea M. Stillman[2], Maria Rodriguez-Ayllon[3], Arthur F. Kramer[4], Charles H. Hillman[4], Andrés Catena[1], Kirk I. Erickson[2], Francisco B. Ortega[1]

[1]University of Granada, [2]University of Pittsburgh, [3]Erasmus MC, [4]Northeastern University

1-P-87 Identifying differences in functional organization of left- and right-handed individuals using functional connectivity

Link Tejavibulya[1], Hannah Peterson[1], Siyuan Gao[1], Stephanie Noble[1], Max Rolison[2], Dustin Scheinost[1]

[1]Yale University, [2]Yale School of Medicine

Q – Other

1-Q-88 Relation between Irritability and Rejection-Elicited Aggression Across Development

Athena Vafiadis[1], Megan Quarmley[1], Johanna Jarcho[1]

[1]Temple University

Poster Session 2

Monday, September 20, 2021
9:30am – 11:00am PST

A – Executive functioning

2-A-89 Training cognitive control: Brain-Behaviour plasticity in childhood

Keertana Ganesan[1], Roser Cañigueral[1], Abigail Thompson[1], Claire Smid[1], Vanessa Puetz[1], Nikolaus Steinbeis[1]

[1]University College London

2-A-90 The long-term effects of social isolation during early puberty on the development of executive functioning

Katie Paige[1], Craig Colder[1]

[1]SUNY Buffalo

2-A-91 Associations between neurocognitive measures, prefrontal cortical thickness and ADHD symptoms within the ABCD Study®

Hope Doyle[1], Kelly Cosgrove[1], Florence Breslin[1], Amanda Morris[1], Martin Paulus[1], Robin Aupperle[1]

[1]Laureate Institute for Brain Research

2-A-92 Now it's your turn!: Eye blink rate modulated by interaction of wait times, inhibitory control, and internalizing behaviors in a Jenga-like inhibitory control task

Kelley Gunther[1], Xiaoxue Fu[2], Leigha MacNeill[3], Morgan Jones[1], Briana Ermanni[4], Koraly Pérez-Edgar[1]

[1]The Pennsylvania State University, [2]University of South Carolina, [3]Northwestern University Feinberg School of Medicine, [4]Virginia Tech

2-A-93 Cognitive outcome is related to functional thalamo-cortical connectivity after pediatric stroke

Leonie Steiner[1]

[1]University of Bern

2-A-94 Testing the comparative predictive validity of neural structure versus suicidal ideation history for prediction of Suicide Stroop Task performance

Kinjal Patel[1], Olivia Pollak[1], Margaret Sheridan[1], Matteo Giletta[2], Paul Hastings[3], Matthew Nock[4], Karen Rudolph[5], George Slavich[6], Leah Somerville[4], Mitchell Prinstein[1], Adam Miller[1]

[1]University of North Carolina, Chapel Hill, [2]Ghent University, [3]University of California, Davis, [4]Harvard University, [5]University of Illinois, Urbana-Champaign, [6]University of California, Los Angeles

2-A-95 Early onset consumption of coca paste associated with executive-attention vulnerability markers linked to caudate-frontal structural and functional abnormalities

Laura Alethia de la Fuente[1], Sofia Schurmann Vignaga[2], Pilar Prado[2], Rosario Figueras[2], Lucia Lizaso[2], Facundo Manes[2], Marcelo Cetkovich[2], Enzo Tagliazucchi[3], Teresa de la FuenteTorralva[2]

[1]IFIBA/INCyT, [2]INCyT, [3]IFIBA

2-A-97 A test of implicit emotion regulation in children: a modified emotional go/nogo fmri task

Stepheni Uh[1], Roma Siugzdaite[1], Alexander Anwyl-Irvine[1], Edwin Dalmaijer[1], Giacomo Bignardi[1], Tess Smith[1], Duncan Astle[1]

[1]Cambridge University

B – Socioemotional processing

2-B-14 Feedback for friends: neural processing of performance feedback in the social context of friends and unfamiliar peers across adolescence

Iris Koele[1], Jorien Van Hoorn[1], Ellen De Bruijn[1], Berna Güroğlu[1]

[1]Leiden University

2-B-98 Aggressive responses following social evaluation and the underlying motives in middle childhood: an fMRI replication design

Simone Dobbelaar[1], Michelle Achterberg[2], Lina van Drunen[1], Anna van Duijvenvoorde[1], Marinus van IJzendoorn[2], Eveline Crone[2]

[1]Leiden University, [2]Erasmus University Rotterdam

2-B-99 Neural sensitivity to social status predicts changes in risk-taking and prosocial behavior in adolescence

Jimmy Capella[1], Nathan Jorgensen[1], Seh-Joo Kwon[1], Maria Maza[1], Mitchell Prinstein[1], Kristen Lindquist[1], Eva Telzer[1]

[1]University of North Carolina, Chapel Hill

2-B-100 Longitudinal association between children's neural response to facial affect and anxiety symptoms

Dana Glenn[1], Jordan Mullins[1], Kalina Michalska[1]

[1]University of California, Riverside

2-B-101 Whole Brain Longitudinal Changes in Adolescent Social Reward and Punishment Processing

Jessica Flannery[1], Nathan Jorgensen[1], Caitlin Turpyn[1], Seh-Joo Kwon[1], Mitchell Prinstein[1], Kristen Lindquist[1], Eva Telzer[1]

[1]University of North Carolina, Chapel Hill

2-B-102 Adolescents Display Distinct Self-Referential Biases in Memory and Perspective Taking

Maximilian Scheuplein[1], Gabriele Chierchia[2], Saz Ahmed[2], Lucy Foulkes[2], Cait Griffin[2], Sarah-Jayne Blakemore[3]

[1]Leiden University, [2]University College London, [3]University of Cambridge

2-B-103 Children with a history of maltreatment show a rumination-like spontaneous thoughts network potentially highlighting increased depression risk

Ferdinand Hoffmann[1], Roman Linz[2], Claudia Buss[1], Claudia Calvano[1], Lea Bentz[1], Jan Warncke[1], Sibylle Winter[1], Sonja Entringer[1], Christine Heim[1]

[1]Charité Universitätsmedizin, Berlin, [2]Max Planck Institute for Human Cognitive and Brain Sciences

2-B-105 Cortical Response to Mother and Stranger Emotional Voices in Newborn Infants

Genevieve Patterson[1], Shannon Powers[1], Xu Han[2], Alexander Dufford[3], Tom Yeh[2], Pilyoung Kim[1]

[1]University of Denver, [2]University of Colorado Boulder, [3]Yale University

2-B-106 Neural correlates of emotional state flexibility: A developmental perspective

Stephanie Novotny[1], Evan Burdette[1], Beatriz Yepes[1], Jennifer Britton[1]

[1]University of Miami

2-B-107 The structural connectome and internalising and externalising symptoms in individuals born very preterm and full-term

Courtney Gilchrist[1], Deanne Thompson[1], Claire Kelly[1], Christopher Adamson[1], Karli Treyvaud[2], Lillian Matthews[3], Thijs Dhollander[1], Lex Doyle[1], Terrie Inder[4], Mary Tolcos[5], Angela Cumberland[5], Peter Anderson[3]

[1]Murdoch Children's Research Institute, [2]La Trobe University, [3]Monash University, [4]Harvard Medical School, [5]RMIT University

2-B-108 Proposed Study Design & Analysis to Validate a Novel, Social Negative Reinforcement Learning Task for Use in Adolescence

Logan Cummings[1], Nathan Sollenberger[1], Josefina Freitag[1], Aaron Mattfeld[1], Dana McMakin[1]

[1]Florida International University

2-B-109 Early Childhood Emotion Regulation Strategy Generation and Physiological, Neurological, and Psychopathological Correlates

Zachary Bivins[1], Adam Grabell[1]

[1]University of Massachusetts-Amherst

2-B-110 Neural response to peer feedback moderates effects of social stress on depression symptoms among adolescents

David Pagliaccio[1], Rahil Kamath[1], Poornima Kumar[2], Diego Pizzagalli[2], Randy Auerbach[1]

[1]New York State Psychiatric Institute, [2]Harvard Medical School

2-B-111 Concurrent and longitudinal associations between early childhood reward responsivity and irritability

Nicolas Camacho[1], Armen Bagdasarov[1], Amanda Caress[1], Yu Sun Chung[1], Michael Gaffrey[1]

[1]Duke University

2-B-112 Empathy and resting-state functional connectivity in children

Katherine Bray[1], Elena Pozzi[1], Sarah Whittle[1]

[1]University of Melbourne

C – Learning

2-C-113 The influence of encoding strategy on memory integration across development

Zahra Abolghasem[1], Margaret Schlichting[1]

[1]University of Toronto

2-C-114 Trauma Exposure and Safety Cue Learning in Development

Sahana Kribakaran[1], Stephanie DeCross[2], Paola Odriozola[1], Emily Cohodes[1], Jason Haberman[1], Katie McLaughlin[2], Dylan Gee[1]

[1]Yale University, [2]Harvard University

2-C-115 Unsupervised neuro-cognitive process models reveal individual differences in development of arithmetic problem solving

Percy Mistry[1], Vinod Menon[1]

[1]Stanford University

2-C-116 Hippocampal and dorsolateral striatal memory systems differentially contribute to probabilistic learning in middle childhood

Johannes Falck[1], Laurel Raffington[2], Christine Heim[3], Yee Lee Shing[1]

[1]Goethe University, Frankfurt, [2]University of Texas, Austin, [3]Charité Universitätsmedizin, Berlin

Flux Congress Posters | Titles, Authors and Affiliations

D – Rewards/Motivation

2-D-117 Failure mindset predicts error-related negativity during a go/no-go task in young adults

Salvador Vazquez[1], Amy Rapp[1], Patricia Tan[1], Jennie Grammer[1]

[1]UCLA

2-D-118 Reward-motivated memory processes and their underlying neural mechanisms change with age

Alexandra Cohen[1], Morgan Glover[1], Xinxu Shen[1], Kristen Avallone[1], Camille Phaneuf[1], Lila Davachi[2], Catherine Hartley[1]

[1]New York University, [2]Columbia University

2-D-119 Longitudinal changes of reward anticipation activation in adolescent girls: evidence for accelerated neurodevelopment in depression

David Baranger[1], Morgan Lindenmuth[1], Amanda Guyer[2], Kate Keenan[3], Alison Hipwell[1], Erika Forbes[1]

[1]University of Pittsburgh, [2]University of California, Davis, [3]University of Chicago

2-D-120 Behavioral and brain differences between younger and older adolescents Performing a delay discounting task

Yael Cycowicz[1], Diana Rodriguez-Moreno[2], Xiaoxiao Sun[1], Kelsang Bista[2], Lawrence Amsel[1], Christina Hoven[1]

[1]Columbia University / New York State Psychiatric Institute, [2]New York State Psychiatric Institute

2-D-121 Unique neural profiles underlying social motivation and psychopathology in adolescent girls

Andrea Pelletier-Baldelli[1], Margaret Sheridan[1], Kinjal Patel[1], Matteo Giletta[2], Paul Hastings[3], Matthew Nock[4], Karen Rudolph[5], George Slavich[6], Leah Somerville[4], Mitchell Prinstein[1], Adam Miller[1]

[1]University of North Carolina, Chapel Hill, [2]Ghent University, [3]University of California, Davis, [4]Harvard University, [5]University of Illinois, Urbana-Champaign, [6]University of California, Los Angeles

2-D-122 Grenading the gorilla: Self-oriented contributions to safety computations

Sarah Tashjian[1], Dean Mobbs[1]

[1]California Institute of Technology

E – Education

2-E-123 Functional connectivity of cognitive control and learning systems in English learners

Tehila Nugiel[1], Damion Demeter[1], Mackenzie Mitchell[2], AnnaCarolina Garza[1], Jenifer Juranek[3], Jessica Church[1]

[1]University of Texas, Austin, [2]University of North Carolina, Chapel Hill, [3]University of Texas, Houston

F – Memory

2-F-124 Effects of prefrontal cortex maturation on verbal memory development

Clara Ekerdt[1], Nadia Klijn[1], Willeke M. Menks[2], Guillén Fernández[1]

[1]Donders Institute for Brain, Cognition and Behaviour, Radboud University Medical Centre, [2]Donders Institute for Brain, Cognition and Behaviour, Radboud University

2-F-125 Linking changes in excitatory and inhibitory balance through adolescence with working memory

Maria Perica[1], Finnegan Calabro[1], Will Foran[1], Victor Yushmanov[1], Hoby Hetherington[1], Beatriz Luna[1]

[1]University of Pittsburgh

2-F-126 Examining prefrontal contributions to successful memory formation in 5- to 7-year-old children

Kelsey Canada[2], Lingfei Tang[2], Christina Lee[2], Roya Homayouni[2], James Wairagu[2], Noa Ofen[2]

[1]University of Maryland, [2]Wayne State University

G – Environment (Stress, SES)

2-G-127 From Poverty to Cognition: Examining the Relative Contributions of Environmental, Neural and Genetics Influences

Nourhan Elsayed[1], Sarah Paul[1], Alexander Hatoum[1], Deanna Barch[1]

[1]Washington University, St. Louis

2-G-128 Prospective association of maternal psychosocial stress during pregnancy with newborn hippocampal volume and its implications for infant social-emotional development

Saara Nolvi[1], Nora Moog[2], Theresa Kleih[3], Martin Styner[4], John Gilmore[4], Jerod Rasmussen[5], Christine Heim[2], Sonja Entringer[2], Pathik Wadhwa[5], Claudia Buss[2]

[1]University of Turku, [2]Charité Universitätsmedizin, Berlin, [3]Charité Universitätsmedizin Berlin, [4]University of North Carolina, Chapel Hill, [5]University of California, Irvine

2-G-129 Childhood adversity minimally impacts fronto-subcortical brain networks and stress-sensitivity in YOUth

Elizabeth Buimer[1], Rachel Brouwer[1], Jacobine Buizer-Voskamp[2], Rene Mandl[1], Pascal Pas[1], Hugo Schnack[1], Coosje Veldkamp[2], Anouk Vroegindeweij[1], Hilleke Hulshoff Pol[1]

[1]Utrecht Brain Center, UMC Utrecht, Utrecht University, [2]Utrecht University

2-G-130 Parsing heterogeneity in associations between dimensions of childhood stress exposure and white matter microstructure

Lucinda Sisk[1], Audrey Huang[1], Emily Cohodes[1], Sarah McCauley[1], Jasmyne Pierre[1], Paola Odriozola[1], Jason Haberman[1], Sahana Kribakaran[1], Sadie Zacharek[2], Hopewell Hodges[3], Camila Caballero[1], Dylan Gee[1]

[1]Yale University, [2]MIT, [3]University of Minnesota

2-G-131 The effects of a 20-week exercise program on blood-circulating biomarkers related to brain health in children with overweight or obesity.

María Rodriguez-Ayllon[1], Abel Plaza-Florido[2], Andrea Mendez-Gutierrez[2], Signe Altmäe[2], Francisco B. Ortega[2], Irene Esteban-Cornejo[2]

[1]Erasmus MC, [2]University of Granada

2-G-132 Demographic and mental and physical health differences between recommended and non-recommended samples for resting-state fMRI analyses in the ABCD Study

Kelly Cosgrove[1], Timothy McDermott[1], Matthew Mosconi[2], Florence Breslin[1], Martin Paulus[1], Amanda Morris[1], Robin Aupperle[1]

[1]Laureate Institute for Brain Research, [2]University of Kansas

2-G-133 Pre-pandemic mental health matters: an examination of youth well-being during early stages of the COVID-19 pandemic

Blaire Porter[1], Ian Douglas[1], Melissa Aristizabal[1], Tyler Larguinho[1], Jessica Church[1]

[1]University of Texas, Austin

2-G-134 Associations between neighborhood disadvantage, resting-state functional connectivity, and behavior in the Adolescent Brain Cognitive Development (ABCD) Study: Moderating role of positive family and school environments

Divyangana Rakesh[1], Caio Seguin[1], Andrew Zalesky[1], Vanessa Cropley[1], Sarah Whittle[1]

[1]University of Melbourne

2-G-135 A Latent Typological Approach to the Measurement of Adversity and Differential Neural Correlates

Landry Huffman[1], Rachel Brown[1], Cory Carvalho[1], Assaf Oshri[1]

[1]University of Georgia

2-G-136 Family Material Hardship, Youth Future Orientation, and Perseverance: The Protective Role of Resting-State Functional Connectivity

Zehua Cui[1], Linhao Zhang[1], Cory Carvalho[1], Landry Huffman[1], Assaf Oshri[1]

[1]University of Georgia

2-G-137 Critical windows of metal mixture exposure on functional connectivity in adolescents

Elza Rechtman[1]

[1]Icahn School of Medicine at Mount Sinai

2-G-138 Violent crime exposure during pregnancy alters white matter microstructure in neonates

Rebecca Brady[1], Christopher Smyser[1], Barbara Warner[1], Deanna Barch[1], Joan Luby[1], Cynthia Rogers[1]

[1]Washington University, St. Louis

2-G-139 The associations and interactions between prenatal alcohol exposure and prenatal tobacco exposure on adolescent brain structure in the PASS cohort

Andrew Marshall[1], Stefanie Bodison[2], Kristina Uban[3], Deborah Jonker[4], Weslin Charles[4], Shaomin Zhao[1], Shana Adise[1], Babette Steigelmann[5], Eric Kan[1], Shantanu Joshi[6], Katherine Narr[6], Kirsty Donald[4], Dan Stein[4], Elizabeth Sowell[1]

[1]Children's Hospital of Los Angeles, [2]University of Florida, [3]University of California, Irvine, [4]University of Cape Town, [5]Maastricht University, [6]University of California, Los Angeles

2-G-140 Networks of adversity in childhood and adolescence and their relationship to adult mental health

Ayla Pollmann[1], Jessica Fritz, Delia Fuhrmann[1]

[1]Kings College London

2-G-141 Neural markers of self-regulation attenuate links between institutional caregiving and sensory over-responsivity

Adriana Méndez Leal[1], João Guassi Moreira[1], Yael Waizman[1], Natalie Saragosa-Harris[1], Emilia Ninova[1], Jennifer Silvers[1]

[1]UCLA

2-G-142 Socio-economic status and the wiring economy of the developing brain

Roma Siugzdaite[1], Danyal Akarca[1], Amy Johnson[1], Edwin Dalmaijer[1], Alexander Irvine[1], Stepheni Uh[1], Tess Smith[1], Giacomo Bignardi[1], Duncan E. Astle[1]

[1]Cambridge University

2-G-143 Prenatal and postnatal maternal depressive symptoms and longitudinal changes in limbic structure in young children.

Claire Donnici[1], Jess Reynolds[2], Madison Long[1], Deborah Dewey[1], Nicole Letourneau[1], Gerald Giesbrecht[1], Bennett Landman[3], Yuankai Huo[3], Catherine Lebel[1]

[1]University of Calgary, [2]University of Western Australia, [3]Vanderbilt University

H – Brain Structure

2-H-144 Development of chronotype in adolescence: Implications for brain development and psychopathology

Rebecca Cooper[1], Maria Di Biase[1], Sarah Whittle[1], Vanessa Cropley[1]

[1]University of Melbourne

2-H-145 Hippocampal structural covariance differs between children and adolescents: a multi-cohort study

Anna Plachti[1], Robert D. Latzman[2], Somayeh Maleki Balajoo[3], Felix Hoffstaedter[3], Kathrine Skak Madsen[1], William Baare[1], Hartwig R. Siebner[1], Simon B. Eickhoff[4], Sarah Genon[4]

[1]Danish Research Centre for Magnetic Resonance, Centre for Functional and Diagnostic Imaging and Rese, [2]Department of Psychology, Georgia State University, Atlanta, GA, USA, [3]Institute of Neuroscience and Medicine (INM-7), Research Centre Juelich, Juelich

Flux Congress Posters | Titles, Authors and Affiliations

2-H-146 Associations between amygdala structure and anxiety symptoms in children with and without autism spectrum disorder

Heather Yarger[1], Christine Wu Nordahl[2], Elizabeth Redcay[1]

[1]University of Maryland, [2]UC Davis Health

2-H-147 Characterizing long-term effects of preterm birth on brain structure in 9- to 10-year-old children

Niloy Nath[1], Winnica Beltrano[1], Logan Haynes[1], Signe Bray[1]

[1]University of Calgary

2-H-148 Effects of bilingual language experience on structural language networks in the pre-adolescent brain

Lauren Wagner[1], Leanna Hernandez[1], Susan Bookheimer[1], Mirella Dapretto[1]

[1]University of California, Los Angeles

2-H-149 Relationships among Choline, white matter structure and reading in children

Meaghan Perdue[1], Roeland Hancock[1], Fumiko Hoeft[1], Kenneth Pugh[2], Nicole Landi[1]

[1]University of Connecticut, [2]Haskins Laboratories

2-H-150 The role of neurobiology in the association between pubertal timing and depression risk in early adolescence: A registered report study design

Niamh MacSweeney[1], Xueyi Shen[1], Stella Chan[2], Breda Cullen[3], Rebecca Reynolds[1], Alex Kwong[1], Stephen Lawrie[1], Liana Romaniuk[1], Heather Whalley[1]

[1]University of Edinburgh, [2]University of Reading, [3]University of Glasgow

2-H-151 Individual estradiol variability, internalizing symptoms, and the mediating role of brain structure in female adolescents

Isabel Zwaan[1], Sarah Whittle[1], Kim Felmingham[1]

[1]University of Melbourne

I – Networks

2-I-152 Prediction of Early Adolescent Functional Connectivity Development based on Preadolescent Structural Connectivity

Sin Kim[1], Jaeseung Jeong[1]

[1]Korea Advanced Institute of Science and Technology

2-I-153 Controllability of structural brain networks and the waxing and waning of negative affect in daily life

Amanda McGowan[1], Linden Parkes[1], Xiaosong He[1], Ovidia Stanoi[2], Yoona Kang[1], Silicia Lomax[1], Peter Mucha[3], Kevin Ochsner[2], Emily Falk[1], Danielle Bassett[1], David Lydon-Staley[1]

[1]University of Pennsylvania, [2]Columbia University, [3]University of North Carolina

K – Methods

2-K-155 (Un)common space in infant neuroimaging studies: a systematic review of infant templates

C. Alice Hahn[1], Silvia Gini[1], Alexis Alfano[2], Hannah Peterson[1], Saloni Mehta[1], Alexander Dufford[1], Dustin Scheinost[1]

[1]Yale University, [2]Quinnipiac University

2-K-156 Correspondence of simultaneously collected fMRI and full-head fNIRS signals across language and visual paradigms

Sara Sanchez-Alonso[1], Rebecca Canale[1], Richard Aslin[1]

[1]Haskins Laboratories

L – Clinical Populations

2-L-157 Validating the Juvenile Macaque Social Responsiveness Scale: Reverse translation of the SRS for rapid assessment of behavioral variability in developing rhesus macaques (Macaca mulatta)

Natalie Pilgeram[1], Zsofia Kovacs-Balint[2], Trina Jonesteller[2], Jabari Wesson[2], Mar Sanchez[3], Jocelyne Bachevalier[3]

[1]Emory University, [2]Yerkes National Primate Research Center, [3]Yerkes National Primate Research Center, Emory University

2-L-158 Pediatric Anxiety during the COVID-19 Pandemic: The Role of Family-Level Factors

Elizabeth Kitt[1], Emily Cohodes[1], Sarah McCauley[1], Grace Hommel[1], Cristina Nardini[1], Sadie Zacharek[1], Alyssa Martino[1], Tess Anderson[1], Hannah Spencer[1], Paola Odriozola[1], Georgia Spurrier[1], Carla Marin[1], Wendy Silverman[1], Eli Lebowitz[1], Dylan Gee[1]

[1]Yale University

2-L-159 Altered neural activity in response to native vs. non-native language in 9-month-old infants at high and low familial risk for ASD

Rebecca Altshuler[1], Nana Okada[1], Lauren Wagner[1], Janelle Liu[2], Tawny Tsang[1], Kaitlin Cummings[1], Jiwon Jung[1], Genevieve Patterson[3], Susan Bookheimer[1], Shafali Jeste[1], Mirella Dapretto[1]

[1]University of California, Los Angeles, [2]Cedars-Sinai Medical Center, [3]University of Denver

2-L-160 White and grey matter microstructural alterations and increased free-water content 13 years after very preterm birth

Claire Kelly[1], Thijs Dhollander[1], Ian Harding[2], Wasim Khan[2], Richard Beare[1], Jeanie Cheong[1], Lex Doyle[1], Marc Seal[1], Deanne Thompson[1], Peter Anderson[2]

[1]Murdoch Children's Research Institute, [2]Monash University

2-L-161 Predicting Depression from Self-Evaluation in Adolescents: A MVPA Machine-Learning Approach

Victoria Guazzelli Williamson[1], Samantha Chavez[1], Danielle Cosme[2], Robert Chavez[1], Jennifer Pfeifer[1]

[1]University of Oregon, [2]University of Pennsylvania

2-L-162 Frontolimbic network topology associated with risk and presence of depression in adolescence: A study using a composite risk stratification score in Brazil

Leehyun Yoon[1], Fernanda Rohrsetzer[2], Lucas Battel[3], Mauricio Anés[4], Pedro Manfro[2], Luis Rohde[4], Anna Viduani[2], Zuzanna Zajkowska[5], Valeria Mondelli[5], Christian Kieling[4], Johnna Swartz[6]

[1]Center for Mind and Brain, University of California, Davis, [2]Hospital de Clínicas de Porto Alegre, Universidade Federal do Rio Grande do Sul, [3]Jacobs School of Medicine and Biomedical Sciences, University at Buffalo, [4]Hospital de Clínicas de Porto Alegre

2-L-163 Subclinical anxiety modulates neural and behavioral response to safety decisions in early adolescence

Amanda Baker[1], Namita Tanya Padgaonkar[1], Tara Peris[1], Adriana Galván[1]

[1]University of California, Los Angeles

M – Attention

2-M-166 Brain functional topography in infancy is associated with the early development of attention control

Sebastián Moyano[1], Josué Rico-Picó[1], Ángela Conejero[1], Ángela Hoyo[1], María de los Ángeles Ballesteros-Duperón[1], M. M. Rosario Rueda[1]

[1]University of Granada

N – Language

2-N-167 Detection of Language Lateralization using High-Density EEG

Kerry Nix[1], Beattie Goad[1], Fiona Baumer[1]

[1]Stanford University School of Medicine

2-N-168 Atypical functional connectivity patterns of the left fusiform gyrus in infants at familial risk for developmental dyslexia

Xi Yu[1], Silvina Ferradal[2], Danielle Sliva[3], Jade Dunstan[4], Clarisa Carruthers[4], Joseph Sanfilippo[4], Jennifer Zuk[5], Yangming Ou[4], Lilla Zöllei[6], Borjan Gagoski[4], P. Ellen Grant[4], Nadine Gaab[7]

[1]Beijing Normal University, [2]Indiana University, [3]Brown University, [4]Boston Children's Hospital, [5]Boston University, [6]Massachusetts General Hospital, [7]Harvard University

O – Brain Function

2-O-169 Alcohol and marijuana use are associated with altered brain response during processing of negatively valanced emotional stimuli in adolescents

Amanda Del Giacco[1], Scott Jones[1], Bonnie Nagel[1]

[1]Oregon Health and Science University

2-O-170 Low Infant Functional Connectome-based Identification Accuracy Across the First Year of Life

Alexander Dufford[1], Stephanie Noble[1], Siyuan Gao[1], Dustin Scheinost[1]

[1]Yale University

P – Brain Connectivity

2-P-171 Sex differences in advanced measures of white matter microstructure among 9- to 10-year-old children in the ABCD study

Katherine Lawrence[1], Emily Laltoo[1], James McCracken[2], Paul Thompson[1]

[1]University of Southern California, [2]University of California, Los Angeles

2-P-172 Long lasting regional and edgewise functional connectivity alterations in adults born very preterm

Laila Hadaya[1], Frantisek Vasa[2], Serena Counsell[1], A David Edwards[1], Sukhwinder Shergill[3], Robert Leech[2], Chiara Nosarti[1]

[1]Centre for the Developing Brain, Department of Perinatal Imaging and Health, Faculty of Life Science, [2]Department of Neuroimaging, Institute of Psychiatry Psychology and Neuroscience, King's College London, [3]Psychosis Studies, Institute of Psychiatry Psych

Q – Other

2-Q-173 ABCD-ReproNim: A free online course providing training for reproducible analyses of Adolescent Brain Cognitive Development (ABCD) Study data

Jessica Bartley[1], James Kent[2], Elizabeth Levitis[3], Dustin Moraczewski[3], Kristina Rapuano[4], Adam Richie-Halford[5], Taylor Salo[1], Jean-Baptiste Poline[6], Satrajit Ghosh[7], David Kennedy[8], Angela Laird[1]

[1]Florida International University, [2]University of Texas, [3]National Institute of Mental Health, [4]Yale University, [5]University of Washington, [6]McGill University, [7]Massachusetts Institute of Technology, [8]University of Massachusetts Medical School

Poster Session 3

Tuesday, September 21, 2021
6:30am – 8:00am PST

A – Executive functioning

3-A-174 Socioeconomic Context, Polygenic Scores for Educational Attainment, and Neurocognitive Skills in Children and Adolescents

Jordan Strack[1], Hailee Hurtado[1], Budhachandra Khundrakpam[2], Uku Vainik[2], Michael Thomas[1], Emily Merz[1]

[1]Colorado State University, [2]University of Tartu

3-A-175 Can cognitive effort predict who benefits most from distinct types of inhibitory control practice?

Diego Placido[1], Hilary Traut[2], Yuko Munakata[1]

[1]University of California, Davis, [2]University of Colorado, Boulder

3-A-176 Understanding Patterns of Heterogeneity in Executive Functioning during Adolescence: Evidence from Nationally Representative Data

Natasha Chaku[1], Lindsay Till Hoyt[1], Kelly Barry[2]

[1]University of Michigan, [2]University of Pittsburg

3-A-177 Neural correlates underlying successful response inhibition following methylphenidate administration in medication-naive children with attention-deficit hyperactivity disorder

Arianna Cascone[1], Cleanthis Michael[1], Mackenzie Mitchell[1], Teague Henry[2], Margaret Sheridan[1], Jessica Cohen[1]

[1]University of North Carolina, Chapel Hill, [2]University of Virginia

3-A-178 Age differences between children and adults in the neural mechanisms of sustained and transient control during task switching

Sina Schwarze[1], Corinna Laube[1], Neda Khosravani[1], Silvia Bunge[2], Ulman Lindenberger[1], Yana Fandakova[1]

[1]Max Planck Institute for Human Development, [2]University of California, Berkeley

3-A-179 Patterns of Brain Connectivity Associated with Executive Function are Globally Distributed among Higher Order Heteromodal Areas

Gracie Grimsrud[1], Nora Byington[1], Michael Mooney[2], Michaela Cordova[2], Olivia Doyle[2], Robert Hermosillo[1], Eric Earl[2], Anders Perrone[2], Lucille Moore[2], Alice Graham[2], Joel Nigg[2], Wesley Thompson[3], Eric Feczko[1], Oscar Miranda-Dominguez[1], Damien Fair[1]

[1]University of Minnesota, [2]Oregon Health & Science University, [3]University of California, San Diego

3-A-180 Segregation of task-positive and negative functional neural networks uniquely relates to children's executive control in middle childhood

Caron Clark[1], Amelia Miramonti[2], Donna Chen[2]

[1]UNL, [2]University of Nebraska-Lincoln

3-A-181 Joint effects of functional connectivity and executive function on autistic traits in a cohort of very preterm and full-term 9- to 10-year-old children

Joseph Dust[1], Rachel Lean[1], Jeanette Kenley[1], Peppar Cyr[1], Christopher Smyser[1], Cynthia Rogers[1]

[1]Washington University, St. Louis

B – Socioemotional processing

3-B-182 Longitudinal behavioral and neural trajectories of risk taking for parent and peer across adolescence

Seh-Joo Kwon[1], Jessica Flannery[1], Caitlin Turpyn[1], Mitchell Prinstein[1], Kristen Lindquist[1], Eva Telzer[1]

[1]University of North Carolina, Chapel Hill

3-B-183 Shifting qualities of negative affective experience through adolescence: Associations with functional outcomes

Katherine Grisanzio[1], Patrick Mair[1], John Flournoy[1], HCP-D Consortium, Leah Somerville[1]

[1]Harvard University

3-B-184 Neural sensitivity to social context moderates the association between daily social media use and affective states

Maria Maza[1], Jimmy Capella[1], Seh-Joo Kwon[1], Nathan Jorgensen[1], Kristen Lindquist[1], Mitchell Prinstein[1], Eva Telzer[1]

[1]University of North Carolina, Chapel Hill

3-B-185 EEG Delta Activity Response to Peer Feedback in Young Children is associated with Internalizing Problems

Marisa Lytle[1], Alicia Vallorani[1], Santiago Morales[1], Koraly Pérez-Edgar[1]

[1]The Pennsylvania State University

3-B-186 Effects of household and neighborhood socioeconomic disadvantages on resting-state fronto-amygdala connectivity and internalizing symptoms in youth

Lucinda Sisk[1], Ka I Ip[1], Kristina Rapuano[1], Monica Rosenberg[2], Abigail Greene[1], Corey Horien[1], Dustin Scheinost[1], Todd Constable[1], BJ Casey[1], Arielle Baskin-Sommers[1], Dylan Gee[1]

[1]Yale University, [2]University of Chicago

3-B-187 Longitudinal associations between social media use and structural brain development across adolescence

Michelle Achterberg[1], Andrik Becht[1], Renske van der Cruijsen[1], Ilse van de Groep[1], Jochem Spaans[1], Eduard Klapwijk[1], Eveline Crone[1]

[1]Erasmus University Rotterdam

3-B-188 Neonatal functional network predictors of infant affective behavior

M. Catalina Camacho[1], Deanna Barch[1], Rebecca Brenner[1], Sydney Kaplan[1], Jeanette Kenley[1], Rachel Lean[1], Da Yun Lee[1], Joan Luby[1], Cynthia Rogers[1], Tara Smyser[1], Chad Sylvester[1], Barbara Warner[1], Diana Whalen[1], Muriah Wheelock[1], Christopher Smyser[1]

[1]Washington University, St. Louis

3-B-189 Resisting aggression in social contexts: individual differences in psychopathic traits influence behavioral and neural responses to social feedback

Ilse van de Groep[1], Marieke G.N. Bos[2], Desana Kocevska[3], Lucres M.C. Jansen[4], Arne Popma[4], Eveline Crone[1]

[1]Erasmus University Rotterdam, [2]Leiden University, [3]Netherlands Institute for Neuroscience, [4]Amsterdam University Medical Center

3-B-190 Adolescents' Internalization of Parent and Peer Risk Attitudes: A Longitudinal fMRI Study

Kathy Do[1], Mitchell Prinstein[1], Kristen Lindquist[1], Eva Telzer[1]

[1]University of North Carolina, Chapel Hill

3-B-191 How do adolescents use independent choice to learn about themselves?

Madeleine Moses-Payne[1], Douglas Lee[2], Tobias Hauser[1], Jonathan Roiser[1]

[1]University College London, [2]California Institute of Technology

3-B-192 BNST and amygdala responses to unpredictable threat in children

Brandee Feola[1], Jacqueline Clauss[2], Elizabeth Flook[3], Margaret Benningfield[1], Jennifer Blackford[4]

[1]Vanderbilt University Medical Center, [2]McLean Hospital, Harvard Medical School, [3]Vanderbilt University, [4]Munroe-Meyer Institute, University of Nebraska

3-B-193 Conversational theory of mind and social brain function in autistic and typically developing children and adolescents

Diana Alkire[1], Junaid Merchant[1], Kathryn McNaughton[1], Heather Yarger[1], Elizabeth Redcay[1]

[1]University of Maryland, College Park

C – Learning

3-C-195 Reward volatility modulates the use of multiple learning systems during adolescence

Catherine Insel[1], Jonathan Nicholas[1], Daphna Shohamy[1]

[1]Columbia University

3-C-196 Prediction Error and Memory Encoding: Insights from a Computational Model

Francesco Pupillo[1], Javier Ortiz-tudela[1], Yee Lee Shing[1], Rasmus Bruckner[2]

[1]Goethe University, Frankfurt, [2]Free University Berlin

3-C-197 The development of numeral processing in the ventral visual stream: A longitudinal fMRI study

Benjamin Conrad[1], Gavin Price[1]

[1]Vanderbilt University

3-C-198 Foundational number sense training gains are predicted by hippocampal-parietal circuits

Hyesang Chang[1], Lang Chen[2], Yuan Zhang[1], Ye Xie[3], Carlo de Los Angeles[1], Emma Adair[1], Gaston Zanitti[4], Demian Wassermann[4], Miriam Rosenberg-Lee[5], Vinod Menon[1]

[1]Stanford University, [2]Santa Clara University, [3]Sun Yat-Sen University, [4]Inria Saclay Île-de-France, [5]Rutgers University

3-C-199 Sign-tracking behaviors in children may help identify early risk of psychopathology

Janna Colaizzi[1], Shelly Flagel[2], Martin Paulus[1]

[1]Laureate Institute for Brain Research, [2]University of Michigan

D – Rewards/Motivation

3-D-200 Development of dopaminergic neuro-physiology supports improvements in the use of optimal reward learning strategies through adolescence

Finnegan Calabro[1], Ashley Parr[1], William Foran[1], Beatriz Luna[1]

[1]University of Pittsburgh

3-D-201 Childhood unpredictability, reward processing, and reward-related psychopathology

Yuyan (Lillian) Xu[1], Cassandra Lowe[2], Mingyeong Choi[3], Seth Pollak[1]

[1]University of Wisconsin-Madison, [2]University of Western Ontario, [3]University of Alabama

3-D-202 Tissue iron, an indirect marker of striatal dopamine, is associated with delinquency and related personality characteristics in late childhood: Initial findings from the ABCD-Social Development Study

Ashley Parr[1], Finnegan Calabro[1], Will Foran[1], Douglas Fitzgerald[1], Kaylee Klingensmith[1], Duncan Clark[1], Lia Ahonen[1], Beatriz Luna[1]

[1]University of Pittsburgh

3-D-203 Illustrating rsfMRI striatal tissue iron measurements as developmentally sensitive, using neonatal data from the Developing Human Connectome Project to examine pre and postnatal age effects

Cabral Laura[1], Will Foran[1], Finn Calabro[1], Bea Luna[1]

[1]University of Pittsburgh

3-D-204 Sleep Health Is Associated with Different Patterns of Striatal Response to Rewards in Youth with Anxiety and Healthy Youth

Nathan Sollenberger[1], Stefanie Sequeira[2], Aaron Mattfeld[1], Dana McMakin[1]

[1]Florida International University, [2]University of Pittsburgh

E – Education

3-E-205 Associations between intrinsic motivation and neural response to reward in Mexican-origin youth

Angelica Carranza[1], Sarah Beard[1], Richard Robins[1], Paul Hastings[1], Amanda Guyer[1], Johnna Swartz[1]

[1]University of California, Davis

F – Memory

3-F-206 How infants carve up continuous experience into neural events

Tristan Yates[1], Lena Skalaban[1], Cameron Ellis[1], Angelika Bracher[2], Chris Baldassano[3], Nick Turk-Browne[1]

[1]Yale University, [2]Max Planck Institute for Human Cognitive and Brain Sciences, [3]Columbia University

3-F-207 Examining whether hippocampal volume at initial recall predicts autobiographical memory retention after a one-year and two-year delay in 4- to 8-year-old children

Jade Dunstan[1], Sanaa Amin[1], Rylee Duncan[1], Carli Fine[2], Tracy Riggins[1]

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

3-F-209 Developmental refinement of attention impacts semantic memory retrieval through adolescence

Sagana Vijayarajah[1], Margaret Schlichting[1]

[1]University of Toronto

G – Environment (Stress, SES)

3-G-210 Prenatal PM2.5 and subcortical volumes in children with neurodevelopmental disorders

Elza Rechtman[1], Lindsay Alexander[2], Esmeralda Navarro[1], Demetrios Papazaharias[1], Allan Just[1], Robert Wright[1], Michael Milham[2], Chris Gennings[1], Megan Horton[1]

[1]Icahn School of Medicine at Mount Sinai, [2]Child Mind Institute

3-G-211 Developmental and Demographic Correlates of Behavioral Responses and Coping Strategies during the COVID-19 Pandemic

Ian Douglas[1], Blaire Porter[1], Melissa Aristizabal[1], Tyler Larguinho[1], Jessica Church[1]

[1]University of Texas, Austin

3-G-212 Higher cingulum fiber density and cross-section predicts resilience to depression symptom increases throughout adolescence, including during the COVID-19 pandemic

Tiffany Ho[2], Lauren Borchers[1], Ian Gotlib[1]

[1]Stanford University, [2]University of California, San Francisco

3-G-213 The importance of social support to mitigate prenatal maternal distress during the COVID-19 pandemic and its effects on infant brain connectivity

Kathryn Manning[1], Xiangyu Long[1], Lianne Tomfohr-Madsen[1], Gerald Giesbrecht[1], Catherine Lebel[1]

[1]University of Calgary

3-G-214 The Relationship between Functional Connectivity Patterns and Psychopathology in Youth Adopted from Foster Care

Jiwon Jung[1], Kaitlin Cummings[1], Nana Okada[1], Genevieve Patterson[2], Jill Waterman[1], Audra Langley[1], Susan Bookheimer[1], Mirella Dapretto[1], Nim Tottenham[3], Shulamite Green[1]

[1]University of California, Los Angeles, [2]University of Denver, [3]Columbia University

3-G-215 The Default Mode Network Resting-State Functional Connectivity as a Protective Factor in the mediating link between Environmental Unpredictability and Impulsivity via Sleep Duration

Linhao Zhang[1], Landry Huffman[1], Zehua Cui[1], Assaf Oshri[1]

[1]University of Georgia

3-G-216 The influence of stressful life events on the development of frontal cortical thickness across adolescence and related depressive symptoms in young adulthood

Lea Backhausen[1], Jonas Granzow[1], Hervé Lemaître[1], Juliane Froehner[1], Jean-Luc Martinot[1], Michael Smolka[1], Nora Vetter[1]

[1]Technische Universität Dresden

3-G-217 Socioeconomic disparities in adolescents' hippocampal volume and internalizing problems vary based on the cost of living and antipoverty programs of U.S. states

David Weissman[1], Mark Hatzenbuehler[1], Mina Cikara[1], John Flournoy[1], Deanna Barch[2], Katie McLaughlin[1]

[1]Harvard University, [2]Washington University, St. Louis

3-G-218 Changes in cortisol in youth during the COVID-19 pandemic

Madison Fung[1], Brittany Taylor[1], Rachel Spooner[1], Christine Embury[1], Michaela Frenzel[1], Hallie Johnson[1], Madelyn Willett[1], Amy Badura-Brack[2], Stuart White[1], Tony Wilson[1]

[1]Boys Town National Research Hospital, [2]Creighton University

3-G-219 A multidimensional approach to understanding the emergence of sex differences in internalizing symptoms in adolescence

Bianca Serio[1], Robert Kohler[1], Fengdan Ye[1], Sarah Lichenstein[1], Sarah Yip[1]

[1]Yale University

3-G-220 Deviations from typical fronto-amygdala circuit maturation are differentially associated with violence exposure and psychiatric symptoms in youth

Taylor Keding[1], Justin Russell[2], Ryan Herringa[2]

[1]Yale University, [2]University of Wisconsin-Madison

3-G-221 Effects of Racism on Neonatal Resting State Functional Brain Connectivity

Tammi Kral[1], Cathi Propper[2], Camille Williams[3], Kirsten McLaughlin[2], Lindsay Gomes[2], Amanda Wylie[2], Rasmus Birn[3], Sarah Short[3]

[1]University of Wisconsin, Madison; Healthy Minds Innovations, [2]University of North Carolina, Chapel Hill, [3]University of Wisconsin, Madison

H – Brain Structure

3-H-223 Application of Gaussian Graphical Models to Identify Brain Structures Associated with Children's Appetitive Traits

Alaina Pearce[1], Timothy Brick[1], Travis Masterson[1], Shana Adise[2], Laural English[3], S. Nicole Fearnbach[4], Wendy Stein[1], Bari Fuchs[1], Kathleen Keller[1]

[1]Pennsylvania State University, [2]Children's Hospital of Los Angeles, [3]The Panum Group, [4]Pennington Biomedical Research Center

3-H-224 Anxiety moderates the association between cortical thickness and anticipatory threat responding in Latina youth

Jordan Mullins[1], Rany Abend[2], Kalina Michalska[1]

[1]University of California, Riverside, [2]National Institute of Mental Health

3-H-225 Sensorimotor synchronization ability and brain plasticity: a longitudinal MRI twin study

Lina van Drunen[1], Rebecca Schaefer[1], Lara Wierenga[1]

[1]Leiden University

3-H-226 Examining cerebellum volume and postural stability after paediatric mild traumatic brain injury

Ayushi Shukla[1], Ashley Ware[1], Bradley Goodyear[1], Antonia Stang[1], Stephen Freedman[1], Keith Yeates[1], Catherine Lebel[1]

[1]University of Calgary

Flux Congress Posters | Titles, Authors and Affiliations

3-H-228 Longitudinal effects of extreme and rapid weight gain on brain structure in a diverse sample of youth 9-to-12-years-old: findings from the ABCD study.

Shana Adise[1], Andrew Marshall[1], Sage Hahn[2], Shaomin Zhao[1], Eric Kahn[1], Megan Herting[1], Elizabeth Sowell[1]

[1]Children's Hospital of Los Angeles, [2]University of Vermont

3-H-229 Examining longitudinal relationships between white matter organization in infancy and subsequent reading achievement at school age

Jennifer Zuk[1], Kelsey Davison[1], Jolijn Vanderauwera[2], Ted Turesky[3], Kathryn Garrisi[3], Ally Lee[3], Jade Dunstan[4], P. Ellen Grant[4], Nadine Gaab[3]

[1]Boston University, [2]Université Catholique de Louvain, [3]Harvard University, [4]Boston Children's Hospital

3-H-230 The role of daytime sleepiness in the association between sleep and brain morphology during childhood

Elie Yu Tong Guo[1], Véronique Daneault[1], Annie Bernier[1]

[1]University of Montreal

3-H-231 Systematic Review of Structural and Functional Neuroimaging Studies of Cannabis Use in Adolescence: Evidence from 90 studies and 9,441 participants

Sarah Lichenstein[1], Nick Manco[1], Lora Cope[2], Leslie Egbo[3], Kathleen Garrison[1], Jillian Hardee[2], Ansel Hillmer[1], Kristen Reeder[4], Elisa Stern[1], Patrick Worhunsky[1], Sarah Yip[1]

[1]Yale University, [2]University of Michigan, [3]Wesleyan University, [4]East Carolina University

I – Networks

3-I-232 Predicting ABCD Symptomatology from Network Correlations Using Elastic Net Regularized Nonparametric Regression

Kelly Duffy[1], Nathaniel Helwig[1]

[1]University of Minnesota

3-I-233 Motor learning-induced reconfiguration of functional brain networks in children

Mackenzie Woodburn[1], Margaret Sheridan[1], Cheyenne Bricken[1], Weili Lin[1], Jessica Cohen[1]

[1]University of North Carolina, Chapel Hill

3-I-234 Interrogating brain-wide patterns of functional connectivity related to age in newborns

Ashley Nielsen[1], Sydney Kaplan[2], Muriah Wheelock[2], Dominique Meyer[2], Jeanette Kenley[2], Dimitrios Alexopoulos[2], Tara Smyser[2], Lauren Wakschlag[1], Elizabeth Norton[1], Barbara Warner[2], Deanna Barch[2], Joan Luby[2], Chad Sylvester[2], Cynthia Rogers[2], Christopher Smyser[2]

[1]Northwestern University, [2]Washington University, St. Louis

3-I-235 Peripheral cytokines, network connectivity, and adolescent depression

Saché Coury[1], Vanessa López[1], Jaclyn S. Kirshenbaum[1], Giana Teresi[2], Anthony Gifuni[3], Ian Gotlib[1], Tiffany Ho[4]

[1]Stanford University, [2]University of Pittsburgh, [3]McGill University, [4]University of California, San Francisco

J – Mechanisms (hormones, neurotransmitters, physiology)

3-J-236 Mapping early brain-body interactions: associations between fetal heart rate trajectories during the second and third trimesters with newborn functional brain networks

Angeliki Pollatou[1], Arline Pierre-Louis[1], Bradley Peterson[2], Catherine Monk[1], Dustin Scheinost[3], Marisa Spann[1]

[1]Columbia University, [2]University of Southern California, [3]Yale University

K – Methods

3-K-237 Curvish: An R package for asking questions about development

John Flournoy[1], Graham Baum[1], Patrick Mair[1], Leah Somerville[1]

[1]Harvard University

3-K-238 Multiple complexity analyses of preterm neonatal combined EEG-fNIRS measurement

Lorenzo Semeia[1], Mina Nourhashemi[2], Mahdi Mahmoudzadeh[2], Fabrice Wallois[2], Hubert Preißl[1]

[1]University of Tübingen, [2]University of Picardie Jules Verne

3-K-239 The Human Connectome Project in Development: Examining sampling, attrition, and COVID-19 impacts at the study's conclusion

Melanie Grad-Freilich[1], HCP-D Consortium, Leah Somerville[1]

[1]Harvard University

3-K-240 Effective connectivity during an avoidance-based Pavlovian-to-instrumental transfer task

Daniel Petrie[1], Sy-Miin Chow[1], Charles Geier[1]

[1]The Pennsylvania State University

L – Clinical Populations

3-L-241 Peer victimization as a potential moderator of the temperament-anxiety association

Anita Harrewijn[1], Eveline Crone[1], Ingmar Franken[1], Pauline Jansen[1]

[1]Erasmus University Rotterdam

3-L-242 Cerebral blood flow and cognitive outcome after pediatric stroke in the middle cerebral artery

Regula Everts[1], Leonie Steiner[1], Andrea Federspiel[1], Nedelina Slavova[1], Roland Wiest[1], Sebastian Grunt[1], Maja Steinlin[1]

[1]University of Bern

3-L-243 Cerebellar resting-state connectivity and sensory symptoms in youth with autism

Melis Cakar[1], Nana Okada[1], Kaitlin Cummings[1], Jiwon Jung[1], Genevieve Patterson[2], Susan Bookheimer[1], Mirella Dapretto[1], Shulamite Green[1]

[1]University of California, Los Angeles, [2]University of Denver

3-L-244 Associations between Cognitive and Neural Factors with Psychopathology Symptom Changes Over Time: Specificity Versus Shared Associations

Nicole Karcher[1], Jaisal Merchant[1], Brent Rappaport[1], Deanna Barch[1]

[1]Washington University, St. Louis

3-L-245 Perceived social interaction quality as a mediator between social anxiety and ventral striatum activation to social reward in children with autism spectrum disorder

Elizabeth Giacobbe[1], Kathryn McNaughton[1], Heather Yarger[2], Elizabeth Redcay[2]

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

3-L-246 Predictors of Suicidal Thoughts and Behavior in Children: Results from Penalized Logistic Regression Analyses in the ABCD study

Laura van Velzen[1], Yara Toenders[1], Aina Avila-Parcet[2], Richard Dinga[3], Jill Rabinowitz[4], Adrián Campos[5], Neda Jahanshad[6], Miguel Rentería[5], Lianne Schmaal[1]

[1]University of Melbourne, [2]Hospital de la Santa Creu i Sant Pau, [3]Radboud University, [4]Johns Hopkins University, [5]QIMR Berghofer Medical Research Institute, [6]University of Southern California

3-L-247 Resting-state functional connectivity networks in adolescent self-harm

Ines Mürner-Lavanchy[1], Julian Koenig[1], Corinna Reichl[1], Romuald Brunner[2], Michael Kaess[1]

[1]University of Bern, [2]University of Regensburg

N – Language

3-N-249 Assessing how EEG gamma power and SES explain variability in language skills among late and typical talking toddlers

Julia Nikolaeva[1], Brittany Manning[1], Soujin (Jinnie) Choi[1], Emily Harriott[1], Kaitlyn Fredian[1], Lauren Wakschlag[1], Elizabeth Norton[1]

[1]Northwestern University

3-N-250 Reciprocal relations between reading skill and the neural basis of phonological awareness in 7- to 9-year-old children

Jin Wang[1], Julia Pines[1], Marc Joanisse[2], James Booth[1]

[1]Vanderbilt University, [2]The University of Western Ontario

3-N-251 Home literacy environment mediates the relationship between socioeconomic status and white matter structure in infants

Ted Turesky[1], Joseph Sanfilippo[2], Jennifer Zuk[3], Jolijn Vanderauwera[4], Xi Yu[5], Ally Lee[1], Kathryn Garrisi[1], Jade Dunstan[6], Clarisa Carruthers[6], Nadine Gaab[1]

[1]Harvard University, [2]Queens University, [3]Boston University, [4]Université Catholique de Louvain, [5]Beijing Normal University, [6]Boston Children's Hospital

O – Brain Function

3-O-252 Separable neurocognitive changes underlie the development of communicative ability in adolescence

Cong Wang[1], Menghan Cong[1], Qingtian Mi[1], Guihua Yu[1], Yanjie Su[1], Lusha Zhu[1]

[1]Peking University

3-O-253 Temporal Dynamics of Resting State EEG: Age and Sex Effects in Young Children

Armen Bagdasarov[1], Kenneth Roberts[1], Michael Gaffrey[1]

[1]Duke University

3-O-254 Comparing Detection of Autism Spectrum Disorder within Males and Females Using Machine Learning

Joseph Wolff[1], Jeffrey Eilbott[1]

[1]University of Virginia

P – Brain Connectivity

3-P-255 Studying training-induced neuroplasticity after cognitive and physical training in pediatric cancer survivors: a prospective monocenter trial from Bern/ Switzerland

Kirstin Schuerch[1], Valentin Benzing[1], Valerie Siegwart[1], Nedelina Slavova[2], Andrea Federspiel[2], Claus Kiefer[2], Maja Steinlin[1], Jochen Roessler[1], Regula Everts[1]

[1]University of Bern, [2]Support Center for Advanced Neuroimaging (SCAN)

flux
CONGRESS

The International Congress
for Integrative Developmenta
Cognitive Neuroscience

Thank you to our Sponsors

JACOBS FOUNDATION

Our Promise to Youth

Kennedy Krieger Institute
KennedyKrieger.org

Developmental
Cognitive
Neuroscience
Journal

ELSEVIER

Flux Congress 2022

flux
CONGRESS

The International Congress
for Integrative Developmental
Cognitive Neuroscience

September 6 - 9
La Sorbonne | Paris, France
www.fluxsociety.org