Day 1: Sunday June 16

9:00 am – 12:00 pm: Pre-conference workshops

12:00 pm – 1:00 pm: Lunch and Welcome

1:00 - 2:05 Symposia session 1

S1	HomeNumeracy158.1	**Home numeracy activities and mathematical achievement** 1: Venera Gashaj, University Pompeu Fabra, Barcelona 2: Sum Kwing Cheung, The Education University of Hong Kong 3: David Munez, National Institute of Education, Singapore 4: Kerry Lee, The Education University of Hong Kong
S2	EarlyMathSkills162.4	**Numerical skills and cognition in kindergarten: Predictors of individual differences in math ability and growth in math skills in early elementary school.** 1: Nathan Lau, Western University, Canada 2: Andrew Ribner, University of Pittsburgh, USA 3: Rebecca Bull, Macquarie University, Australia 4: Daniel Ansari, Western University, Canada
S3	MathLearning63.2	**Understanding Mathematical Notations and Representations** 1: Dirk Schlimm, McGill 2: Ulises Xolocotzin Eligio, Cinvestav 3: Juan Pablo Mejía Ramos, Rutgers University, USA 4: David Landy, Indiana University

2:25 - 3:30 Symposia session 2

S4	EarlyMathSkills142.3	**A tricky mathematical problem: Developing rigorous and valid measurements of the preschool home numeracy environment** 1: Victoria Simms, Ulster University, UK 2: Camilla Gilmore, Loughborough University, UK 3: David Purpura, Purdue University, USA 4: Sanne Rathé, KU Leuven, Belgium
S5	NumericalCognition157.1	**Numerical Cognition: Domain-General and Domain-Specific Processes** 1: Elien Bellon, KU Leuven 2: Ian Lyons, Georgetown University 3: Jamie Campbell, University of Saskatchewan 4: Angélique Roquet, Aix-Marseille Universite
S6	NumberLine26.1	**Number line estimation: Understanding strategy use, digit placement, and gamification for typical and atypical number lines.** 1: Korbinian Moeller, Leibniz-Institut für Wissensmedien, Tuebingen, Germany 2: Hilary Barth, Wesleyan University, CT, USA 3: Koen Luwel, KU Leuven, Belgium 4: Sabrina Di Lonardo, Carleton University

4:00 pm-6:00pm: Poster Session (P1) and Lightning Talks (L1)

4:00pm Lightning Talks Session 1

4:00 pm Collaboration Pitches	C1. **Opportunities to Learn via Big Data in a Numeracy Intelligent Tutor** - Rene Grimes, University of Texas, Austin C2. **Mathemarmite: a video game to train children count** - Pedro Cardoso-Leite, University of Luxembourg C3. **Study of the causal role of the intraparietal sulcus in tasks that involve complex processing of magnitudes: space, number and time** - Sara Garcia Sanz, Universidad de la Sabana, Colombia
4:30pm Data Blitzes	L1. **Math and the brain: Lessons from functional neuroimaging** - Marie Arsalidou, National Research University, Moscow L2. **Pupillometric Indices of Arithmetic Approximation in College-Aged Adults** - Amanda L. McGowan, Michigan State University L3. **Effects of different transcranial electrical stimulation protocols on arithmetic learning** - Jochen Mosbacher, University of Graz L4. **Development of a Negative Priming effect in a non-symbolic numerical comparison task** - Arnaud Viarouge, University Paris Descartes L5. **Investigating the modality specific cognitive abilities predictive of arithmetic ability** - Rosemary Penford, University of Cambridge L6. **Rules of Order: Evidence for a fundamental bias when processing the ordinality of numbers** - Selvia Gattas, Georgetown University
5:15pm Data Blitzes	L7. **Spontaneous Gestures When Explaining Fraction Comparison Problems** - Michelle Hurst, University of Chicago L8. **Predictors of Fraction Word Problem Solving** - Haobai Zhang, University of Delaware L9. **Spatial Representations of Symbolic Fractions and Non-Symbolic Ratios: SNARC Effects and Number Line Estimation** - Rui Meng, University of Wisconsin L10. **Changes in Students' Fraction Arithmetic Errors from Fourth through Sixth Grades in Response to Classroom Fraction Instruction** - Kelly-Ann Gesuelli, University of Delaware L11. **Specific early numeracy skills mediate the relation between executive function skills and mathematical skills** - Jenny Yun-Chen Chan, University of Minnesota L12. **Giving students control: Improving the math outcomes of at-risk elementary students** - Macey Cartwright, University of Cincinnati

Day 2: Monday June 17

9:00 - 10:05 Symposia session 3

S7	CognitiveTraining58.1	**Improving mathematics using cognitive training: From basic mechanisms to translation** 1: Korbinian Moeller, University of Tubingen, Germany 2: Roi Cohen Kadosh, University of Oxford, England 3: Geetha B. Ramani, University of Maryland, College Park, USA 4: Torkel Klingberg, Karolinska Institutet, Sweden
S8	MathAndCulture217.1	**Language, culture, and numerical thinking in non-industrialized cultures** 1: Isabelle Boni, UC Berkeley 2: Rose M. Schneider, UC San Diego 3: Benjamin Pitt, UC Berkeley 4: Tania Cruz, UC Berkeley
S9	MathCognition68.1	**Whole Number Bias: Developmental, Contextual, Linguistic and Neural Perspectives** 1: David W. Braithwaite, Florida State University 2: Jake McMullen, University of Turku, Finland 3: Kexin Ren, Temple University, USA) 4: Miriam Rosenberg-Lee, Rutgers University, USA

10:25 - 11:30   Symposia session 4

S10	InhibitorySkills92.1	**Are inhibitory skills important for mathematical performance?** 1: Caron Clark, University of Nebraska 2: Kerry Lee, The Education University of Hong Kong 3: Sum Kwing Cheung, The Education University of Hong Kong 4: Bert de Smedt, University of Leuven, Belgium
S11	SymbolicProcessing126.1	**Current Directions in Symbolic Number Processing** 1: Hans-Christoph Nuerk, University of Tuebingen, Germany 2: Erin Maloney, University of Ottawa 3: Krzysztof Cipora University of Tuebingen, Tuebingen 4: Tom Faulkenberry, Tarleton State University, Texas
S12	MathAndLanguage54.1	**Language: A tool for learning arithmetic** 1: David J. Purpura, Purdue University 2: Kiran Vanbinst, University of Leuven 3: Chang Xu, Carleton University 4: Jason C. Chow, Virginia Commonwealth University,

11:50 am - 1:30 pm: Lunch + Poster session (P2)

1:40 - 2:45 Symposia session 5

S13	SpontaneousFocusing103.1	**Expanding examinations of spontaneous mathematical focusing tendencies** 1: Michele Mazzocco, University of Minnesota 2: Alex Silver, University of Pittsburgh 3: Richard Prather, University of Maryland 4: Jake McMullen, University of Turku, Finland
S14	EarlyMathSkills35.1	**Home numeracy and early math skills in Latin America: Findings from Chile, México, and Uruguay** 1: María Inés Susperreguy, Pontificia Universidad Católica de Chile. 2: Diana Leyva, Davidson College 3: Dinorah de León, Universidad de la República, Uruguay 4: Carolina Jiménez Lira, Universidad Autónoma de Chihuahua
S15	Dyscalculia55.1	**Neuroscience of Dyscalculia** 1: Bert De Smedt, University of Leuven, Leuven, Belgium 2: Karin Kucian, University Children's Hospital, Zurich 3: Teresa Iuculano, Centre National de la Recherche Scientifique & Université de Paris, La Sorbonne 4: Mojtaba Soltanlou, Department of Psychology, University of Tuebingen, Tuebingen, Germany

3:10 – 4:15 Symposia session 6

S16	Fractions84.1	**Individual Differences in Fractions Knowledge** 1: Priya B. Kalra, University of Wisconsin-Madison 2: David W. Braithwaite, Florida State University 3: Jake McMullen, University of Turku Discussant: Martha W. Alibali, University of Wisconsin-Madison
S17	CognitiveProcesses138.1	**Beyond number sense: Exploring the contribution of domain-general cognitive processes to the development of mathematical thinking** Discussant: Rebecca Merkley, Carleton University 1. Ilse Coolen, Université Paris Descartes 2: Eric Wilkey, University of Western Ontario 3: Kelly Mix, University of Maryland 4: Gavin Price, Vanderbilt University
S18	MathLearning114.4	**Leveraging gesture to enrich math learning for diverse learners** 1: Ruth B. Church, Northeastern Illinois University 2: Elizabeth M. Wakefield, Loyola University, Chicago 3: Susan W. Cook, University of Iowa 4: Shereen O. Beilstein, University of Illinois Urbana-Champaign

4:30 pm - 6:15 pm: Poster Session (P3) and Lightning talks (L2)

4:30 pm Lightning Talks Session 2

4:30 pm Collaboration Pitches	C4. **Effects of attitudes, mindset, and anxiety on children's maths performance** - Dawn Short, Abertay University C5. **Home Numeracy Experiences In Many Countries** - Jo-Anne LeFevre, Carleton University C6. **Working memory and math performance: the influences of SES and parenting practices** - Kerry Lee, The Education University of Hong Kong
5:00 pm Data Blitzes	L13. **Move over worksheets: Parents want preschool to be math fun and engaging** - Michele Stites, University of Maryland Baltimore County L14. **Preschool Children's Changes over Time in Affective Attitudes towards Mathematics: A Latent Transition Analysis** - Xiao Zhang, University of Hong Kong L15. **Partial Number Word Knowledge on the Give-N Task** - Connor O'Rear, University of Notre Dame L16. **Number gesture, finger gnosia and manual dexterity : Which contribution to verbal number knowledge development?** - Laurence Rousselle, University of Liege L17. **Which is more, 123 or 321?: A study on preschool children's understanding of place value** - Pierina Cheung, National Institute of Education, Singapore L18. **Finger games to improve basic numerical skills in preschool children as a precursor of arithmetic learning later** - Line Vossius, Research Unit 'Enfances', Liege, Belgium
5:45 pm Data Blitzes	L19. **Conceptions of math and art are linked to avoidance of the domains** - Rachel Jansen, University of California Berkeley L20. **Measuring mathematical ability during the transition to college** - Dominic Kelly, University of Michigan L21. **Birth of the First Mathematical Concepts. (Mathematics About 2 Million Years Ago) -** Said Boutiche, Université de Boumerdes L22. **What Explains the Covariance Between Arithmetic and Reading? A Multivariate Model** – Vivian Singer, Universida Alberto Hurtado L23. **Collecting Surveys and Consent Forms from Parents for Basic Cognitive Research; What Worked, What Didn't Work, and a Few Surprises…** - Sheri-Lynn Skwarchuk L24. **What are we missing in math assessments? Validating an IRT based math assessment in kindergarteners.** - Alexa Ellis, University of Michigan

Day 3: Tuesday June 18

8:00 am – 9:00 am: MCLS Business Meeting [everyone welcome to attend]

9:00 - 10:05 Symposia session 7

S19	EarlyMathSkills174.5	**Early numerical and non-numerical abilities and their relation with mathematical education** 1: Wei Wei, Zhejiang University, China 2: Sara Caviola, University of Leeds 3: Tali Leibovich-Raveh, University of Haifa 4: Krzysztof Cipora, University of Tuebingen, Tuebingen,
S20	MathematicalDiscourse29.1	**Mathematical discourse - The symbols we use to communicate mathematical ideas** 1: Sarah Powell, University of Texas 2: Heather Douglas, Carleton University 3: Erica Zippert, Vanderbilt University 4: Discussant: M. Gail Headley, University of Delaware
S21	MathLearning53.1	**From the math lab to the math class: can we improve math learning by targeting specific cognitive mechanisms?** 1: Flávia H. Santos, University College Dublin 2: Ipek Saralar, University of Nottingham 3: Ann Dowker, Oxford University, England 4: Dror Dotan, Tel Aviv University, Israel

10:25 - 11:30 Symposia session 8

S22	EarlyMathSkills193.6	**Early Mathematical Screening Tools: Bridging the Research-Practice Gap** 1: Marcie Penner, King's University College at Western University 2: Brianna Devlin, University of Delaware 3: Stephanie Bugden, University of Pennsylvania 4: Rebecca Merkley, Carleton University
S23	MathLearning156.6	**Unpacking Manipulatives: Recommendations for the Mathematics Classroom** Chair: Helena Osana, Concordia University 1: Anne Lafay, Concordia University 2: Andrea M. Donovan, University of Wisconsin—Madison 3: Emmanuelle Adrien, Concordia University Discussant: Martha W. Alibali, University of Wisconsin—Madison
S24	MathAndLanguage164.3	**Cognitive Underpinnings of Mathematics versus Reading Skills: Similarities and Differences** 1: Tuire Koponen, University of Jyväskylä, Finland 2: Xiujie Yang, Chinese University of Hong Kong 3: Xiao Zhang, The University of Hong Kong Discussants: Kiran Vanbinst & Lien Peters

11:50 - 1:30 pm: Lunch + Poster session (P4)

1:40 - 2:45 Symposia session 9

S25	MathLearning154.5	**What I Can Bring to my Math Classroom: Putting Numeracy Research to Work** Chair: Helena Osana, Concordia University 1: Martha W. Alibali, University of Wisconsin—Madison 2: Sarah Powell, University of Texas at Austin 3: Nancy C. Jordan, University of Delaware 4: Tracy Solomon, Hospital for Sick Children
S26	EarlyMathAssessment 232.1	**A variety of early grade mathematics assessments and their uses in South Africa** 1: Hanrie Bezuidenhout & Elizabeth Henning, University of Johannesburg, South Africa 2: Caroline Fitzpatrick, Université Sainte-Anne 3: Nicky Roberts, University of Johannesburg, South Africa 4: Ingrid Mostert, University of Johannesburg, South Africa
S27	MathAndLanguage15 1.2	**Linguistic influences on early numerical development** 1: Mojtaba Soltanlou, University of Tuebingen, Tuebingen 2: Krzysztof Cipora, University of Tuebingen, Tuebingen, Germany 3: Jacob Paul, Utrecht University, Utrecht, Netherlands 4: Victoria Simms, Ulster University, Northern Ireland 5: Thomas Gallagher-Mitchell, Liverpool Hope University

3:10 – 4:15 Symposia session 10

S28	MathAndTechnology7 9.1	**Is touch screen technology a double-edged sword in mathematics education?** 1: Joanne Lee, Developmental Psychology, Department of Psychology 2: Adam K. Dubé, Learning Sciences, McGill University 3: Marjorie W. Schaeffer, Department of Psychology Discussant: Erin Maloney, School of Psychology, University of Ottawa
S29	EarlyMathSkills43.2	**Early symbolic numerical skills: theoretical and educational implications.** 1: Francesco Sella, University of Sheffield, UK 2: Rose M. Schneider, University of California, San Diego, USA 3: Camilla Gilmore, Loughborough University, UK 4: Silke M. Göbel, University of York, UK
S30	MathLearning75.3	**Understanding the Factors Affecting Mathematics Development and Supporting Children Through Home and School Interventions** Chair: Sheri-Lynn Skwarchuk, University of Winnipeg, Canada 1: Maureen Vandermaas-Peeler, Elon University, 2: Sarah Melo, Faculty of Education, University of Manitoba 3: Prentice Starkey, WestEd, San Francisco, California 4: Jalisha Braxton, University of Chicago, Chicago, Illinois, USA