

# The Cognitive and Neural Basis for the Development of Numeric Understanding

Sunday April 26<sup>th</sup> to Thursday April 30<sup>th</sup>, 2015

## PROGRAM

### Sunday April 26 (Beer Sheva)

- 13:00-13:40 *Registration*
- 13:40-13:50 *Introduction: Rector/Dean* (Ben-Gurion University of the Negev)
- 13:50-14:00 *Opening remarks: Avishai Henik* (Ben-Gurion University of the Negev)

### **NUMBER, SIZES, SPACE**<sup>1</sup>

- 14:00-14:40 **Bert Reynvoet** (Catholic University of Leuven)  
*Symbolic Number Processing: Has Digit Comparison Fooled Us?*
- 14:40-15:20 **Dan Zakay** (IDC Herzliya)  
*The Temporal-Relevance Temporal-Uncertainty Model of Prospective Duration Judgment*
- 15:20-15:40 *Coffee Break*
- 15:40-16: 20 **Orly Rubinsten** (University of Haifa)  
*The Ordinal Instinct: A Neurocognitive Perspective*
- 16:20-17:00 **Martin H. Fischer** (University of Potsdam)  
*Embodied Representation of Number Knowledge*
- 19:00 *Dinner for Speakers*

### Monday April 27 (Beer Sheva)

### **NUMBER, SIZES, SPACE (continued)**

- 09:00-9:40 **Daniel Algom** (Tel-Aviv University)  
*Do Numbers Carry Emotion? Evidence from the Emotional SNARC Effect*
- 9:40-10:20 **Shai Gabay** (University of Haifa)  
*Shared Neural Substrates for Conceptual Size and Numerical Magnitudes*

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<sup>1</sup> Speaker talks are 30 min + 10 min Q&A; Student talks are 15 min + 5 min for Q&A

## **WORKING MEMORY, HIGHER COGNITIVE FUNCTIONS AND ARITHMETIC**

- 10:20-11:00 **Torkel Klingberg** (Karolinska Institute)  
*The Relationship between Visuo-Spatial Working Memory and Arithmetics – During Development and in Training*
- 11:00-11:40 **Evelyn Kroesbergen** (Utrecht University)  
*Explaining Individual Differences in Mathematics: Number Sense, Working Memory, and Creativity*
- 11:40-13:40 *Lunch for Speakers (put up posters)*
- 13:40-14:20 **Sarit Ashkenazi** (The Hebrew University)  
*Do Enumeration Processes Involve Spatial Working Memory? Evidences from Behavioral and Eye Tracking Methods*
- 14:20-15:00 **Liat Goldfarb** (University of Haifa)  
*Relationship between Numerical Processes, Statistical Learning and the Spatial System*

## **STUDENT PRESENTATIONS**

- 15:00-15:20 **Luca Rinaldi** (University of Milano-Bicocca)  
*Mind the Space in Time: The Role of Sensorimotor Experience in Temporal Order Processing*
- 15:20-15:40 **Dana Sury** (University of Haifa)  
*Uncovering Numerical Ordinal Processing: The Use of Implicit Measures and low visual features*
- 15:40 **Poster Session** (with coffee)
- 19:00 *Dinner for Speakers*

## **Tuesday April 28**

- 9:00 **Organized trip** (for Speakers)

## **Wednesday April 29** (Haifa)

- 09:00-09:10 *Opening remarks: Lily Orland-Barak* (Dean of the Faculty of Education, Haifa University)

## **DEVELOPMENT DEFICIENCIES AND REHABILITATION**

- 09:10-9:50 **Daniel Ansari** (University of Western Ontario)  
*Number Symbols in the Brain and Mind*
- 9:50-10:30 **Susan Golden-Meadow** (University of Chicago) - **CANCELLED**  
*Communicating About Quantity without a Language Model: The Ways in Which Number Devices Are, and Are Not, Like Words in Homesign*

- 10:30-11:10 **Andrea Berger** (Ben-Gurion University of the Negev)  
*Atypical Numerosity Processing: ERP Evidence in Infants with Prenatal Alcohol Exposure*
- 11:10-11:50 **Margarete Delazer** (Innsbruck Medical University)  
*Numeracy, Processing of Probabilities and Risks and Decision Making*
- 11:50-13:50 *Lunch for Speakers*
- 13:50-14:30 **Roza Leikin** (University of Haifa)  
*On the Distinctions between Solving Conventional and Unconventional Mathematical Problems: Evidences from an ERP study*
- 14:30-15:10 **Dana Ganor–Stern** (Achva Academic College)  
*Cognitive and Developmental Perspectives of Computation Estimation*

### **STUDENT PRESENTATIONS**

- 15:10-15:30 **Zahira Cohen** (Ben-Gurion University of the Negev)  
*Tactile Enumeration using Both Hands and the Effect of Numerosity Range on the Enumeration Process*
- 15:30-15:50 **Arava Kallai** (Ben-Gurion University of the Negev)  
*Behavioral and Brain Processing of Different Types of Rational Numbers*
- 15:50-16:10 **Ronit Goldman** (Ben-Gurion University of the Negev)  
*The Representation of End Stimuli and its Implications on Number Representations*
- 19:00 *Dinner for Speakers*

### **Thursday April 30** (Haifa)

#### **NUMBER, SIZES, SPACE** (*continued*)

- 9:00-9:40 **Avishai Henik** (Ben-Gurion University of the Negev)  
*Numerical Cognition and Size Perception*
- 9:40-10:20 **Yossi Tzelgov** (Ben-Gurion University of the Negev)  
*In Search of the SNARC Effect in Hebrew Readers: We Looked for It, We Found It, It was There All the Time*
- 10:20-11:00 **Ruth Stavy / Reuven Babai** (Tel Aviv University)  
*Role of Salience in Comparison of Quantities*
- 11:10-11:50 **Samuel Shaki** (Ariel University)  
*Contrasting Biases in Mental Arithmetic: Operational Momentum Revisited*
- 11:50-12:10 *Concluding remarks: Orly Rubinsten*
- 12:10 *Lunch for Speakers*