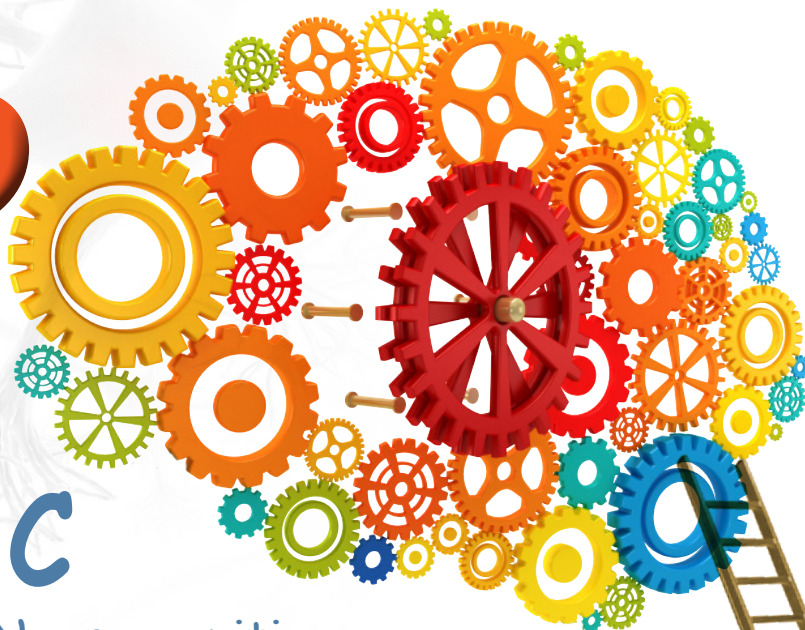


4²5⁹



C N B N C

The Center for the Neurocognitive
Basis of Numerical Cognition

in collaboration with

The Edmond J. Safra Brain Research Center
for the Study of Learning Disabilities

Research Workshop of the Israel Science Foundation

Typical and Atypical Neurocognitive Aspects of Numerical Processing

Organizers:

Avishai Henik and Orly Rubinsten

April 10 - 14, 2011

Invited Speakers

Daniel Algom / Israel
Daniel Ansari / Canada
Reuven Babai / Israel
Andrea Berger / Israel
Elizabeth M. Brannon / United States
Roi Cohen Kadosh / United Kingdom
Wim Fias / Belgium
Tzvi Ganel / Israel
Dana Ganor-Stern / Israel
Minna Hannula-Sormunen / Finland
Avishai Henik / Israel

Liane Kaufmann / Austria
Karin Kucian / Switzerland
Hans-Christoph Nuerk / Germany
Marie-Pascale Noël / Belgium
Orly Rubinsten / Israel
Ruth Shalev / Israel
Ruth Stavy / Israel
Denes Szucs / United Kingdom
Joseph Tzelgov / Israel
Tom Verguts / Belgium
Michael von Aster / Switzerland

The conference will take place in Beer Sheva and Haifa
Contact for registration and additional information: desiree@bgu.ac.il

Typical and Atypical Neurocognitive Aspects of Numerical Processing

Sunday April 10th to Thursday April 14th, 2011

PROGRAM

Sunday April 10 (Beer Sheva)

9:00-9:50 *Registration*

9:50-10:00 *Opening remarks: Avishai Henik* (Ben-Gurion University of the Negev)

NUMBER, SIZES, SPACE¹

10:00-10:50 **Tzvi Ganel** (Ben-Gurion University of the Negev)
The Processing of Magnitude for Perception and Action

10:50-11:40 **Wim Fias** (Ghent University)
Number-Space Associations Depend on Working Memory

11:40-12:10 *Coffee break*

12:10-13:00 **Tom Verguts** (Ghent University)
Number, Space, and Language in Parietal Cortex

13:00-15:00 *Lunch for Speakers (put up posters)*

15:00-15:50 **Daniel Algom** (Tel-Aviv University)
On the Nature of Automatic Activation of Numerical Magnitude

15:50-16:40 **Dana Ganor-Stern** (Achva Academic College)
An Overview of Research on the Numbers Beyond the First Decade

16:40 **Poster Session** (*with coffee*)

19:00 *Dinner for Speakers*

Monday April 11 (Beer Sheva)

NUMBER, SIZES, SPACE (*continued*)

9:30-10:20 **Joseph Tzelgov** (Ben-Gurion University of the Negev)
In Search of the Primitives of Numerical Representations Stored in Long-Term Memory

10:20-11:10 **Hans-Christoph Nuerk** (University of Tuebingen)
Embodied Numerosity

11:10-11:40 *Coffee break*

11:40-12:30 **Ruth Stavy / Reuven Babai** (Tel Aviv University)
Intuitive Interference in Proportional Reasoning

¹ *Speaker talks are 35 min + 15 min Q&A; Student talks are 15 min + 5 min for Q&A*

12:30-14:30 *Lunch for Speakers*

14:30-15:20 **Avishai Henik** (Ben-Gurion University of the Negev)
Size, Numbers and the Numerical Core System

DEVELOPMENT

15:20-16:10 **Pearla Neshet / Shelley Shaul** (University of Haifa)
Beyond the Split Effect: An ERP Study of Simple Addition

16:10-16:30 *Coffee break*

16:30-17:20 **Minna Hannula-Sormunen** (University of Turku)
Spontaneous Focusing on Numerosity (SFON) in the Development of Numeracy

BRIEF PRESENTATIONS

17:20-17:40 **Ezer Karash** (Bar Ilan University)
Hemispheric differences for exact and approximate computing

17:40-18:00 **Sharon Naparstek** (Ben-Gurion University of the Negev)
Which side are you on? Laterality modulates performance in a numerosity-congruity task

18:00-18:20 **Isabel Arend** (Ben-Gurion University of the Negev)
Time Counts: Bidirectional Interaction Between Time and Numbers in Human Adults

18:20 **Poster Session**

20:00 *Dinner for Speakers*

Tuesday April 12

7:30 **Organized trip** (for Speakers)

Wednesday April 13 (Haifa)

9:10-9:20 *Welcoming remarks:* **Batia Laufer** (Vice Rector, University of Haifa)

9:20-9:30 *Welcoming remarks:* **Ofra Mayseless** (Dean of the Faculty of Education, University of Haifa)

DEVELOPMENT (continued)

9:30-10:20 **Liane Kaufmann** (University of Salzburg)
Developmental Changes in Number Magnitude Processing: Evidence from Functional and Structural MRI

10:20-11:10 **Andrea Berger** (Ben-Gurion University of the Negev)
When 1+1 is not 2: The Development of Brain Responses to Arithmetical Errors

11:10-11:40 *Coffee break*

11:40-12:30 **Daniel Ansari** (University of Western Ontario)
Does Number Sense Matter? Evidence from Brain and Behavior

12:30-14:30 *Lunch for Speakers (put up posters)*

DEFICIENCIES AND REHABILITATION

14:30-15:20 **Marie-Pascale Noël** (Catholic University of Louvain)
Approaching the Core Numerical Deficit of Developmental Dyscalculia

15:20-16:10 **Orly Rubinsten** (University of Haifa)
Processing Non-Symbolic Ordinal Information: Is it an Acquired Ability?

16:10-16:30 *Coffee break*

16:30-17:20 **Ruth Shalev** (Shaare Zedek Medical Center)
Group discussion - Numerical Cognition: A Practical View
(Participants: Elizabeth Brannon, Daniel Ansari, Ruth Stavy, Marie-Pascale Noël, Denes Szucs)

BRIEF PRESENTATIONS

17:20-17:40 **Hila Kanner** (University of Haifa)
Subitizing and Counting in Typical and Atypical Development of Math Skills: Task Demands Affect Performance

17:40-18:00 **Helga Krinzinger** (RWTH Aachen University)
Does training of magnitude representation transfer to calculation ability in developmental dyscalculia?

18:00-18:20 **Marinella Cappelletti** (University College London)
Individual Differences in Magnitude Processing in the Healthy and Dyscalculic Brain

18:20 **Poster Session**

20:00 *Dinner for Speakers*

Thursday April 14 (Haifa)

DEFICIENCIES AND REHABILITATION *(continued)*

9:30-10:20 **Denes Szucs** (University of Cambridge)
EEG Studies on Numerical Cognition and Developmental Dyscalculia

10:20-11:10 **Roi Cohen Kadosh** (University of Oxford)
Learning and Representing Numbers in the Human Brain

11:10-11:40 *Coffee break*

- 11:40-12:30 **Karin Kucian** (University Children's Hospital Zurich)
Training in Children with Developmental Dyscalculia
- 12:30-13:00 *Concluding remarks:* **Orly Rubinsten** (University of Haifa)
- 13:00 *Lunch for Speakers*