

ICME Topic Study Group 16
Revised Schedule

Tuesday July 6 12:00-1:00 Chair: Walter Whiteley

Introductions and opening remarks (20 minutes)

Presentation 1: (15 min plus 5 min questions) Gerald Goldin, Rutgers University, NJ (USA), Visual imagery and cognitive representation in “thinking mathematically”

Discussion of posted papers and general discussion (20 min)

- Tania Maria Campos, Pontifical Catholic University of São Paulo (Brazil)
- Özlem Çeziktürk, Bogazici University, Istanbul (Turkey),
An investigation of the cognitive processes required for a Mathlet

Wednesday July 7 12:00-1:00 Chair: Michela Maschietto

Presentation 2: (15 min plus 5 min questions) George Malaty, University of Joensuu (Finland), Can visualization promote causal thinking?

Presentation 3: (15 min plus 5 min questions) Tadato Kotagiri, University of the Ryukyus (Japan) Developing pictorial ideas in learning numbers and calculations

Open Discussion: Trends and Questions (20 minutes)

Friday July 9 12:00-1:00 Chair: Walter Whiteley

Presentation 4: (15 min plus 5 min questions) Stefan Halverscheid, Universität Bremen (Germany), Dynamic Geometry Software as a simulation tool for algebra problems

Presentation 5: (15 min plus 5 min questions) Glenn Gordon Smith, State University of New York, Stonybrook (USA), Mental model training wheels: Scaffolding mental imagery with partial sensory support

Discussion of posted papers (20 min) Chair: Gerald Goldin

- Thomas Gawlick, Landau (Germany), Towards a theory of visualization by Dynamic Geometry Software: Paradigms, phenomena, principles
- Behiye Ubuz, Middle East Technical University, Ankara (Turkey), Students' development of geometrical concepts through a dynamic learning environment

Saturday July 10 12:00-1:30 Chair: Gerald Goldin

Presentation 6: (15 min plus 5 min questions) Michela Maschietto, University of Modena (Italy), Visual representations in the construction of mathematical meanings

Presentation 7: (15 min plus 5 min questions) John Malone, Curtin University of Technology (Australia), The problem of misperception in mathematical visualisation

Presentation 8: (15 min plus 5 min questions) Walter Whiteley: Claims about visualization in mathematics and questions for research

Summary discussion (30 minutes)