Mathematics & Mathematics Education: Searching for Common Ground

A Symposium in Honor of Ted Eisenberg

April 29- May 3, 2012

Ben-Gurion University of the Negev
Beer Sheva, Israel

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Symposium Theme:

When the meaning of being mathematically educated could be summed up simply as a familiarity with certain key mathematical ideas—integer, algebraic equation, function, proof—and ways of working with such ideas, one could state unequivocally what the interests, foundations, and goals of mathematics education as a field should be. And, as to that, no doubt could arise that mathematics education and the discipline of mathematics were closely and naturally allied.

However, for better or for worse (and it is not *all* for the worse!), this simple notion of what mathematics education aims for has over the last quarter century or so been offset by other goals and interests allying mathematics education research more closely with fields relating to psychology of learning, cultural differences, and social justice, than to mathematics itself. Thus, while the first half of the twentieth century could boast of great mathematicians such as Felix Klein, Jacques Hadamard, and George Polya making contributions to mathematics education, today, not only are such figures rare in the field, they have also been to an extent alienated by it.

The growing divide between the mathematical community and the mathematics education community is clearly unhealthy for both. Ted Eisenberg has lamented this situation profoundly over the years. The symposium in Ted's honor, therefore, will try to confront this divide, define more clearly the role mathematics as a discipline plays in mathematics education and mathematics education research, and gain insight into the mutual benefit both stand to lose by weakening the natural bonds between them.

Program

The symposium will be organized around eight topics, each of which will be discussed during morning, afternoon, and one evening session, according to the following plan. Unless otherwise indicated, all sessions will be held in the Alon Building for Hi-Tech: Building 37, Lecture Hall 202

Sunday, April 29
Evening
   Reception for Invited Participants
      18:00-19:30 Light refreshments to be served in the Deichmann Building for
                     Mathematics: Building 58, Room -101

Monday, April 30
Morning
   Greetings:
   10:00-10:30 Prof. Miriam Cohen: Head of the Center for Advanced Studies in
                  Mathematics
                  Prof. Rivka Carmi: President of Ben-Gurion University
                  Prof. Zecharia Madar: Chief Scientist of the Ministry of
                  Education
                  Prof. Tommy Dreyfus: Chair of the Symposium Program
                  Committee

   Opening session
   10:30-11:30 Plenary: Michael N. Fried (Ben-Gurion University), Ted
                  Eisenberg (Ben-Gurion University), Norma Presmeg (Illinois State
                  University)

   11:30-12:00 Coffee

   Mutual expectations of mathematicians & mathematics educators
   12:00-13:45 Panel: Tommy Dreyfus (Tel Aviv University, moderator), Stephen
                  Lerman (South Bank University), Ioanna Mamona (University of
                  Patras), Tahl Nowik (Bar Ilan University) and Uri Onn (Ben-
                  Gurion University)

   13:45-15:00 Lunch

 Afternoon
   Mathematics and mathematics education policy
   15:00-16:00 Plenary: Mogens Niss (Roskilde University)

   16:00-17:45 Panel: Nitsa Movshovitz-Hadar (IIT Technion, moderator), Jonas
                  Emanuelson (Göteborgs Universitet), Davida Fischman (CSU San
                  Bernardino), Azriel Levy (Hebrew University) and Zalman Usiskin
                  (University of Chicago)

   17:45-18:15 Coffee

 Evening
   Problem solving in mathematics and in mathematics education
   18:15-20:00 Panel: Boris Koichu (IIT Technion, moderator), Gerald Goldin
                  (Rutgers University), Roza Leikin (University of Haifa), Shlomo
                  Vinner (Ben-Gurion University) and Izzie Weinzweig (University
                  of Illinois at Chicago)

Tuesday, May 1
Morning
   Visualization in mathematics and mathematics education
   10:00-11:00 <u>Plenary</u>: Ken Clements (Illinois State University)

   11:00-11:30 Coffee

   11:30-13:30 <u>Panel</u>: Elena Nardi (University of East Anglia, moderator), Rina Hershkowitz (Weizmann Institute of Science), Norma Presmeg (Illinois State University), Raz Kupferman (Hebrew University) and Michal Yerushalmi (University of Haifa)

   13:30-14:30 Lunch

Afternoon
   14:45-19:00 Excursion for Invited Participants

Wednesday, May 2
Morning
   History of mathematics and mathematics education
   10:00-11:00 <u>Plenary</u>: Hans Niels Jahnke (Universität Duisburg-Essen)

   11:00-11:30 Coffee

   11:30-13:30 <u>Panel</u>: Luis Radford (Université Laurentienne, moderator), Alain Bernard (Centre A. Koyré, CNRS, Paris), Michael N. Fried (Ben-Gurion University), Fulvia Furinghetti (Università degli Studi di Genova) and Nathalie Sinclair (Simon Fraser University)

   13:30-14:45 Lunch

Afternoon
   Special session: The requisite mathematical knowledge of mathematics teachers, its acquisition and lifelong development
   14:45-15:30 <u>Plenary</u>: Hanoch Gutfreund (Hebrew University)

   Justification in mathematics and mathematics education
   15:45-16:45 <u>Plenary</u>: David Tall (University of Warwick)

   16:45-17:15 Coffee

   17:15-19:15 <u>Panel</u>: Keith Weber (Rutgers University, moderator), Gila Hanna (University of Toronto), Guershon Harel (UC San Diego), Ivy Kidron (Jerusalem College of Technology) and Annie Selden (New Mexico State University)

Evening
   19:30 Festive dinner for invited participants in the Senate Building Lobby (Building 71a) & Ted Eisenberg: Teacher, Associate, and Friend
   <u>Panel</u>: Amichai Menuhin (Sapir College), Guershon Harel (UC San Diego), Alex Braverman, Miriam Amit (Ben-Gurion University), Francis Lowenthal (University of Mons), Tommy Dreyfus (Tel Aviv University, and others to be announced.

Thursday, May 3
Morning
Mathematical literacy and mathematics education
10:00-11:00 <u>Plenary</u>: Paul Goldenberg (Education Development Center, Newton, Massachusetts)

11:00-11:30 Coffee

11:30-13:30 <u>Panel</u>: Anna Sfard (University of Haifa, moderator), Abraham Arcavi (Weizmann Institute of Science), Iddo Gal (University of Haifa), Ron Livne (Hebrew University), Hannah Perl (Ministry of Education)

13:30-15:00 Lunch

Afternoon
Collaboration between mathematics and mathematics education
15:00-16:00 <u>Plenary</u>: Hyman Bass (University of Michigan)

16:00-16:30 Coffee

16:30-18:30 <u>Panel</u>: Pat Thompson (Arizona State University, moderator), Michèle Artigue (Université Paris 7 Diderot), Ehud de Shalit (Hebrew University) and Günter Törner (Universität Duisburg-Essen)

Closing Session

Program Committee

Tommy Dreyfus (Chair, Tel Aviv University)

Abraham Arcavi (Weizmann Institute of Science)

Michael N. Fried (Ben-Gurion University of the Negev)

Hannah Perl (Ministry of Education)

Norma Presmeg (Illinois State University)

Local Organizing Committee

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Miriam Cohen (Ben-Gurion University of the Negev)

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