



OPERATION AND BY-LAWS

ARTICLE 1. MISSION

The Kaput Center for Research and Innovation in STEM Education at the University of Massachusetts Dartmouth has been established in the spirit and vision of James Kaput, whose innovative thinking and leadership inspired many in the field of mathematics education. The purpose of this Center is to provide a focus and support for sustained investigation of foundational issues in the fields of Science, Technology, Engineering and Mathematics (STEM) education, issues that will be chosen to enhance and deepen ongoing research by its members and associates. The Center is an interdisciplinary research unit where fundamental problems in STEM education will be studied, discussed and analyzed through conferences, interdisciplinary colloquium series, basic research and development, commissioned reports, and think-tank meetings.

ARTICLE 2. ORGANIZATION

The Kaput Center for Research and Innovation in STEM Education at the University of Massachusetts Dartmouth (hereon called the “Kaput Center”) consists of a Director, an Executive Board, an external Advisory Board, Focus Area Heads, Senior Research Scientists, Research Scientists, Adjunct Senior Research Scientists, Adjunct Research Scientists, Visiting Research Scientists, Research Associates, and Research Assistants. The Kaput Center is a separate cost unit within the School of Education, Public Policy and Civic Engagement of the University of Massachusetts Dartmouth. The Kaput Center shall operate according to its own By-Laws and Policies, subject to the provision that no By-Law shall be in conflict with any official regulation, guideline or policy of the University of Massachusetts, nor with any provision of the Massachusetts General Laws, and report to the Provost of the University of Massachusetts Dartmouth for general organizational matters and the Dean of the School of Education, Public Policy and Civic Engagement of the University of Massachusetts Dartmouth for academic and administrative matters.

2.A. DIRECTOR:

2.A.1. Appointment. The Director of the Kaput Center is appointed by and serves at the pleasure of the Chancellor of the University of Massachusetts Dartmouth. The initial appointment is for two years and may be renewed subject to an evaluation of the Director’s performance.

2.A.2. Duties. The duties of the Director are:

- to provide overall direction and leadership for the Center's activities,
- to approve, amend, or reject all proposed research projects, service agreements, sponsored research agreements and all other activities to be carried out consistent with the Mission of the Kaput Center,
- to appoint new members of the Executive Board, subject to the approval of existing Executive Board members,
- to appoint Senior Research Scientists, Research Scientists, Adjunct Senior Research Scientists, Adjunct Research Scientists, Visiting Research Scientists, Research Associates, and Research Assistants subject to the approval of the Executive Board,
- to work with the Deans of the Colleges, and the appropriate Department Chairpersons, to replace faculty who have received external funding for projects sponsored by the Kaput Center,
- to appoint Research Assistants,
- to approve Interns working on projects or graduate programs sponsored or funded by the Kaput Center—subject to resources and a Research Scientist Sponsor,
- to terminate a member of the Executive Board, if the member violates the contractual agreement,
- to advise and assist with graduate student recruitment strategies,
- to convene quarterly meetings of the Executive Board and to preside over said meetings,
- to submit to the Executive Board a proposed annual budget,
- to submit a list, at quarterly meetings, of all research projects, service agreements, and other activities being carried out under the auspices of the Kaput Center that shall include the title of the project, the names and titles of the principal investigators, the amount of funding, and the sources of all internal and external funding of the project, agreement, or activity,
- to submit to the Executive Board a quarterly update of the Center's budget that shall include: (a) the sources of revenue specifying the amounts from state, local, and federal government; private contributions or contracts; interest and endowment income; non-profit contributions or contracts; university support; sponsored research agreements, (b) an itemized list of expenditures and all outstanding encumbrances, (c) the total fund balance of unspent and unencumbered revenues available to the Center,
- to appoint an Advisory Board, in consultation with the Executive Board, and to periodically consult with the Advisory Board,
- to appoint an Acting Director, subject to approval by the Dean, whenever the Director is expected to be absent from work for a period exceeding ten (10) working days, but such appointments shall not be effective for more than one-hundred-thirty-five (135) working days,

- to recommend to the Executive Board the creation or discontinuance of functional Focus Areas of the Kaput Center for purposes of organizing and administering research, service, and educational projects,
- to nominate to the Executive Board the appointment and removal of Heads of Focus Areas,
- to maintain a written record of all policies governing the operation of the Center and its personnel,
- to recommend to the Executive Board a schedule of fees and charges for labor, photocopying, document sales, and other services based on a total cost recovery method, including the costs of materials, production, distribution, and capital depreciation,
- to submit an annual report in writing to the Chancellor, Provost and the Dean describing the Center's activities, personnel, expenditures, and sources of funding,
- to ensure that the mission of the Center is being operationalized.

2.A.3. Evaluation of Director. The Director's performance of these duties will be evaluated by the Dean of SEPPCE of the University of Massachusetts Dartmouth. Evaluation of faculty activities will be completed separately under the appropriate categories of evaluation established in the Agreement between the University of Massachusetts Board of Trustees and the University of Massachusetts Faculty Federation.

An individual may be removed as Director of the Kaput Center before the expiration of their term of appointment by a two-thirds vote of the full Executive Board, and subject to the approval of the Chancellor of the University of Massachusetts Dartmouth.

2.B. EXECUTIVE BOARD:

2.B.1. Membership and Eligibility. The Executive Board will consist of the Director of the Kaput Center, ex-officio, and no more than fifteen other individuals who shall be faculty members at an accredited institution of higher education or a qualified professional practitioner with a documented record of scholarship or professional experience in education or educational policy, particularly, but not constrained to, STEM education research. The Director will invite and accept nominations for members of the Executive Board for review by the Executive Board. All members of the Executive Board will sign a contract that states that they agree to execute the mission of the center in collaboration with other Executive Board members, and abide by the policy on center operations. A full list of members will always be displayed in the Kaput Center and as an appendix to this document.

2.B.2. Meetings. The Executive Board will be convened quarterly by the Director of the Kaput Center. The Director of the Kaput Center must notify all members of the Executive Board of the time, date, and place of all quarterly meetings at least one week prior to said meetings. A simple majority of the Executive Board shall constitute a quorum. Meetings will be run subject to Robert's Rules of Order. The Provost and the Chancellor of the University of Massachusetts Dartmouth can attend all Executive Board Meetings, although they are not members of the Executive Board.

2.B.3. Powers. The Executive Board shall exercise the following powers and authority:

- to review the Director's quarterly update on research projects, service agreements, sponsored research agreements, and other activities,
- to review the Director's quarterly statement of the budget for the Center and to make recommendations for expenditures and encumbrances from the budget,
- to approve or reject nominations of individuals for appointment to the Center as Senior Research Scientists, Research Scientists, Adjunct Senior Research Scientists, Adjunct Research Scientists, Visiting Research Scientists, Research Associates, and Research Assistants,
- to approve or reject nominations of individuals for appointment to the Executive Board,
- to approve or reject the Director's recommendations for creating or discontinuing functional Focus Areas of the Kaput Center,
- to approve or reject the Director's nominations of individuals for the appointment and removal of Heads of Focus Areas,
- to review, recommend, and approve any policies governing the Center's operations as specified in the By-Laws,
- to approve or reject the establishment and termination of research publications that are longitudinal in nature,
- to approve or reject the Director's recommendations for a standardized schedule of fees and charges for labor, photocopying, document sales, and other services,
- to approve or amend the Director's proposed annual report, financial statement, and proposed budget before it is submitted to the Provost or other officers of the University,
- to approve all recommendations from standing committees of the Executive Board,
- to advise and assist with graduate student recruitment strategies.

2.B.4. Approvals. A simple majority of those members present and voting shall be sufficient to grant or withhold the approval of the Executive Board on all matters, except as specified elsewhere in the By-Laws.

2.B.5. Membership shall be for two (2) years and renewable..

2.C. ADVISORY BOARD:

2.C.1. Purpose. The Kaput Center is linked to the wider community through an Advisory Board. The Advisory Board shall be composed of individuals, appointed by the Director in consultation with the Executive Board, who are drawn from positions of leadership in the public, non-profit, and private sectors. The Board will assist in setting the Center's research agenda and in developing research resources. The Board will also advise and assist the Director and Executive board in developing strategic plans to achieve its mission that responds to educational need both locally, nationally and internationally in the field of STEM education. Advisory Board Members are considered advocates of the Center, promoting the work of the Center and establishing new associations with leaders in STEM education research and innovation.

2.D. STANDING COMMITTEES

2.D.1. *Research Activities Committee.*

The Research Activities Committee shall consist of the Director ex-officio, who serves as the committee's chairperson, two (2) members of the Advisory Board to be appointed by the Director of the Kaput Center with approval of the Executive Board, and two (2) members of the Executive Board who shall be elected by the Executive Board. The purpose of the Research Activities Committee shall be:

- (a) to identify themes and topics for the interdisciplinary colloquium series, the research paper series, resulting notes, monographs, or white papers made available through these activities, and any other outreach work.
- (b) to recommend and recruit speakers for the interdisciplinary colloquium series, the research paper series, resulting notes, monographs, or white papers made available through these activities, and any other outreach work.
- (c) to manage activities and arrangements related to the interdisciplinary colloquium series, the research paper series, resulting notes, monographs, or white papers made available through these activities, and any other outreach work.

Membership shall be for two (2) years and renewable.

2.D.2. *Steering Committee*

The Steering Committee shall consist of the Director, ex-officio, who serves as the committee's chairperson, two (2) members of the Advisory Board to be appointed by the Director of the Kaput Center with approval of the Executive Board, and two (2) members of the Executive Board who shall be elected by the Executive Board. The purpose of the Steering Committee is to assist the Director with the evolution of the center, to advise and assess the goals of the Center, and offer advise on best practices to meet these goals.

Membership shall be for two (2) years and renewable.

2.E. RESEARCH SCIENTISTS, ASSOCIATES & ASSISTANTS:

2.E.1. Titles. Individuals may be appointed to the Kaput Center as a Senior Research Scientist, Research Scientist, Adjunct Senior Research Scientist, Adjunct Research Scientist, Visiting Research Scientist, Research Associate and Research Assistant.

2.E.2. Eligibility: All research scientists, research associates and research assistants of the Kaput Center will sign an agreement that states that they agree to execute the mission of the center in collaboration with other associates of the center, and abide by the policy on center operations.

2.E.3. Qualifications. The minimum qualifications for appointment to the Kaput Center are as follows:

a. Senior Research Scientist: (1) a tenured faculty member of the University of Massachusetts Dartmouth with a documented record of scholarship in STEM education, who is developing or executing a research, public service, or educational project under the auspices of the Kaput Center, or (2) a qualified professional practitioner with a documented record of scholarship in STEM education, who is locally developing or executing a research, public service, or educational project under the auspices of the Kaput Center,

b. Research Scientist: (1) a tenured or tenure-track faculty member at the University of Massachusetts Dartmouth, who is developing or executing a research, public service, or educational project under the auspices of the Kaput Center, or (2) a qualified professional practitioner, who is locally developing or executing a research, public service, or educational project under the auspices of the Kaput Center,

c. Adjunct Senior Research Scientist: (1) any tenured faculty member at an accredited college or university, who is developing or executing a research, public service, or educational project under the auspices of the Kaput Center with a documented record of scholarship in STEM education, or (2) a qualified professional practitioner, who is developing or executing a research, public service, or educational project in collaboration with the Kaput Center but at a distance, with a documented record of scholarship in STEM education,

d. Adjunct Research Scientist: (1) any faculty member at an accredited college or university, who is developing or executing a research, public service, or educational project under the auspices of the Kaput Center, or (2) a qualified professional practitioner, who is developing or executing a research, public service, or educational project in collaboration with the Kaput Center but at a distance.

e. Visiting Research Scientist: (1) any faculty member at an accredited college or university, who is developing or executing a research, public service, or educational project related to the mission of the Kaput Center and is visiting the Center for more than one (1) month, or (2) a qualified professional practitioner, who is developing or executing a research, public service, or educational project related to the mission of the Kaput Center and is visiting the Center for more than one (1) month.

f. Research Associate: (1) a qualified professional practitioner, who is developing or executing a research, public service, or educational project under the auspices of the Kaput Center,

g. Research Assistant: (1) any PhD student accepted onto the Doctoral Program in STEM Education at the University of Massachusetts Dartmouth and working with a faculty member of the Center, (2) any student who has been working on a research project conducted within the Center for more than six (6) months.

2.E.4. Appointment. Individuals from any academic or professional area may apply, or be nominated by an officer or faculty member of the University of Massachusetts Dartmouth, for appointment as a Senior Research Scientist, Research Scientist, Adjunct Senior Research Scientist, Adjunct Research Scientist, Visiting Research Scientist, Research Associate, and Research Assistant. The procedure for appointment to any of the aforementioned positions in the Kaput Center will be as follows: (1) an individual must submit a written application or nomination to the Director of the Kaput Center together with a current curriculum vitae, (2) the application or nomination must be accompanied by a bona fide written proposal for a research, public service, or educational project, (3) if approved by the Director, the Director will nominate the individual for appointment at the next quarterly meeting of the Executive Board, (4) all appointments as Senior Research Scientist, Research Scientist, Adjunct Senior Research Scientist, Adjunct Research Scientist, Visiting Research Scientist, Research Associate, and Research Assistant must be approved by a majority of the Executive Board, (5) if a nomination for appointment to the Kaput Center is approved by a majority of the Executive Board, the Director shall inform the Chancellor, Provost and Dean. Individuals wishing to be a Visiting Research Associate will apply to the Director. Approval by the Director will lead to a temporary title for the duration of their visit.

2.E.5. Duration of Appointments. Appointments may range in duration from one month to two years.

2.E.6. Release-Time. Senior Research Scientists and Research Scientists as faculty or with teaching positions at the University of Massachusetts Dartmouth and with appropriate external funding, may have their teaching load reduced by three units or one course per semester during their appointment and may, with the approval of the Provost and the appropriate College Dean and Department Chair, buy additional release time with grant funding or funds allocated by the Director for this purpose. However, no individual who is also a member of the regular full-time faculty of the University of Massachusetts Dartmouth may carry a teaching load of less than three units, or one course per semester.

2.F FOCUS AREAS

There will exist three conceptual Focus Areas operating within the Center: (1) Learning Design, (2) Teacher Quality, and (3) Education Policy. The Director will appoint a Head to each Focus Area for a renewable term of 2 years. Each Head shall report to the Director on a regular basis to present new funding opportunities or initiatives to pursue within each Focus Area. It is expected that members of the Center and the Advisory Board will be associated to at least one of these divisions. The Director will bring together associates of each Focus Area on an annual basis through summits or symposia to ascertain new trans-disciplinary projects.

ARTICLE 3. OPERATION

3.A PUBLICATIONS BY RESEARCH SCIENTISTS, ASSOCIATES & ASSISTANTS.

All STEM education-related books, book chapters, and scholarly articles published by Senior Research Scientists, Research Scientists, Adjunct Senior Research Scientists, Adjunct Research Scientists, Visiting Research Scientists, Research Associates and Research Assistants shall acknowledge or note the individual's affiliation with the Kaput Center. Any individual who receives financial or other resource support from the Kaput Center shall acknowledge or note the Center's assistance in any publications resulting from such support.

3.B SOFTWARE, CURRICULUM AND RELATED PROFESSIONAL DEVELOPMENT SERVICES.

Software and Curriculum products from research projects conducted within the Center, as well as related professional development services will be sold through the University of Massachusetts Dartmouth. Revenue collected from such ventures will be placed in a revenue account administered by the Office of Research Administration, University of Massachusetts Dartmouth, for use by the Director to sustain growth within the Center. In addition, such products and services can be provided by commercial partners through a legal licensing agreement or contract established by the Legal Counsel of the UMass President's Office. All gifts will be placed in an endowment fund administered by the UMass Foundation or in a suitable account administered by the Office of Research and Administration and the University of Massachusetts' Commercial Ventures and Intellectual Property Office.

3.C TRAVEL REIMBURSEMENT.

Senior Research Scientists, Research Scientists, Adjunct Senior Research Scientists, Adjunct Research Scientists, Visiting Research Scientists, Research Associates and Research Assistants shall be eligible to receive supplemental funding for travel, if approved by the Director, and subject to University policy. An individual shall ordinarily have exhausted all other sources of travel funding, including University entitlements, discretionary funding, and any grant funds allocated for travel before requesting funds from the Kaput Center. Preference in funding travel shall be given to:

- a. the presentation of STEM education-oriented papers at scholarly conferences, where the research findings stem directly from a research project sponsored by the Kaput Center,
- b. the presentation of other STEM education or innovation-centered papers at scholarly conferences,
- c. reimbursement for attendance at meetings directly related to the operations of the Kaput Center,
- d. the conduct of individual research that is STEM education-oriented,
- e. other travel.

All papers presented at a scholarly or professional conference with travel assistance from the Kaput Center must include the individual's affiliation with the Kaput Center on the title page. Any published articles that include findings obtained through travel assistance from the Kaput Center must note the individual's affiliation with the Kaput Center.

3.D PUBLICATIONS OF THE KAPUT CENTER.

3.D.1 The Kaput Center shall establish the following series of on-line publications:

- Interdisciplinary Colloquium Series webinars/podcasts and other associated materials
- Technical Report Series
- Blog/Wiki to support social networking of educators
- Monograph Series of Foundational Issues in Mathematics Education
- Notes Series on Famous Authors

All reports shall be numbered consecutively beginning with No. 1, No. 2, etc. The titles in each series and the numbering of each series shall include all publications by the Kaput Center since its founding in 2007.

3.D.2 All publications in an official series of the Kaput Center will be so designated, with the appropriate number and series name, on the inside front cover of said publication.

3.D.3 All publications in an official series of the Kaput Center will include the price of the publication on the inside front cover (if applicable).

3.D.4 All publications in an official series of the Kaput Center shall be submitted to the Massachusetts State Library, where appropriate, for designation as an official document of the Commonwealth of Massachusetts.

3.D.5 The Kaput Center will provide one copy of all official publications and monographs to the University of Massachusetts Dartmouth Library for its general collection.

3.D.6 The Kaput Center will maintain a library of its official publications.

3.D.7 All grant proposals and service agreements should include funding to cover the costs of printing and distribution of any monograph published as a result of said grant or service agreement.

3.D.8 Classification of Documents. The Director, in consultation with the principal investigator(s) on the relevant project, shall classify all research documents, monographs, and publications as one of the following:

- (1) Proprietary, Not for Sale or Distribution. Proprietary documents are any published or unpublished materials, in a printed, computer, or electronic format, where the data, information, analyses, or copyright is owned by a private corporation or individual.
- (2) Confidential, Not for Sale. Confidential documents are any published or unpublished materials, in a printed, computer, or electronic format, where the data, information, analyses, or copyright is owned by a public agency, including the Kaput Center, and is therefore subject to the provisions of a state or federal Freedom of Information Act. Confidential documents and

materials will not ordinarily be distributed to individuals not affiliated with the project Sponsor.

- (3) Public. Public documents are any published or unpublished materials, in a printed, computer, or electronic format, that are not Proprietary or Confidential:

(a) Price. All public documents in an official series of the Kaput Center will include the price of the publication on the inside front cover.

(b) Release. If the Director and principal investigator(s) determine that there is no substantial likelihood of selling a public document, but that its public release brings value added to the project sponsor, generates additional good will from the community, or additional publicity for the Center's work, the document shall be available at no cost on the Center's Website.

Research Students. When students are working on a thesis or dissertation under the sponsorship of an external grant or sponsored research agreement that fall under such definitions of a publication of the Center, the associates of such work—the funder, student, PI and Director—should be notified that they have a specific time frame to take confidential material out of their work.

3.D.9 All Senior Research Scientists, Research Scientists, Adjunct Senior Research Scientists, Adjunct Research Scientists, Visiting Research Scientists, Research Associates, and Research Assistants and other individuals receiving financial or other resource support from the Kaput Center, are expected to forward to the Director copies of all STEM education-related publications, conference papers, and media citations authored by or credited to them during the course of each academic year.

3.E. COMMITTEE ON LIBRARY AND ACQUISITIONS.

A Committee of three Research Associates shall be appointed by the Director for the purpose of recommending scholarly journals, statistical compilations, and other publications to be purchased and maintained on a regular basis for use by members of the Kaput Center.

The Committee on Library and Acquisitions shall meet at least once annually to review the Center's acquisitions and collection needs.

3.F. BROCHURE ON THE KAPUT CENTER.

The Kaput Center shall fund the regular publication of a brochure that includes a statement of the mission of the Kaput Center emphasizing its commitment to STEM education and related interdisciplinary work to policy makers, educational leaders, researchers, teacher and parents.

3.G AMENDMENTS AND CHANGES TO THE BY-LAWS.

Any new by-laws or amendments to existing by-laws must be submitted in writing at a regular quarterly meeting of the Executive Board. All recommended amendments must pass a simple majority by the Executive Board and be forwarded by the Director to the Chancellor of the University of Massachusetts Dartmouth for approval.

This Mission Statement and By-Laws for the Kaput Center for Research and Innovation in STEM Education is effective after August 25th 2009.

Recommended:

Stephen J. Hegedus

Director, Dr Stephen J. Hegedus

9.22.09

Date

Approved by:

Jean F. MacCormack

Chancellor, Dr Jean F. MacCormack

9/24/09

Date

APPENDICES

APPENDIX A: Executive Board

Dr. Stephen J. Hegedus

Director, Founding Faculty Member and Professor of Mathematics Education

Dr. Luis Moreno-Armella

*Senior Research Scientist, Founding Faculty Member and Professor of Mathematics Education
CINVESTAV, Mexico*

Dr. Maria Blanton

*Senior Research Scientist, Founding Faculty Member and Professor of Mathematics Education
UMass Dartmouth*

Ms. Dona Apple

Senior Consultant for Research & Staff Development

Ms. Brenda Berube

*Research Scientist and Associate Professor of Science Education
UMass Dartmouth*

Ms. Marylou T. Clarke (Retired)

*Assistant Superintendent
Dartmouth Public Schools*

Dr. Marjorie Condon

*Curriculum Director
Westport Public Schools*

Mr. Edward Lambert

*Director, The Urban Initiative
UMass Dartmouth*

Dr. Robert McCabe

*Professor of Mathematics Emeritus
UMass Dartmouth*

Ms. Rebecca Moniz

*Research Associate & Project Manager
UMass Dartmouth*

Ms. Karen O'Connor

*Director, Center for University, School & Community Partnerships
UMass Dartmouth*

Dr. Louis Petrovic

Director, Advanced Technology & Manufacturing Center, UMass Dartmouth

Dr. Ismael Ramírez Soto
Dean, School of Education, Public Policy & Civic Engagement
UMass Dartmouth

Dr. John Russell
Chancellor Professor of Physics Emeritus
UMass Dartmouth

Dr. Bal Ram Singh
Director, Botulinum Research Center
Professor of Chemistry, Biochemistry & Biology
UMass Dartmouth

APPENDIX B: Research Scientists/Associates

Senior Research Scientists

Maria Blanton, PhD, Professor, STEM Department, UMass Dartmouth

Luis Moreno-Armella, PhD, Professor, Cinvestav, Mexico; STEM Department, UMass Dartmouth

Senior Research Scientists (Adjunct)

Eric Heller, PhD, Director of Evaluation, Donahue Institute, University of Massachusetts

Eric Knuth, PhD, Associate Professor, University of Wisconsin, Madison

Richard Lesh, PhD, Professor/Director, Indiana University Bloomington

William Penuel, PhD, Director of Evaluation Research, SRI International

Jeremy Roschelle, PhD, Director of Center for Technology in Learning, SRI International

David Tall, PhD, Emeritus Professor, Warwick University, UK

Deborah Tatar, PhD, Associate Professor, Virginia Tech

Research Scientists

Dona Apple, Independent Senior Consultant for Research & Staff Development, MA

Brenda Berube, Associate Professor and Chair of STEM Department, UMass Dartmouth

Research Scientists (Adjunct)

Corey Brady, CEO, Inquire Learning, LLC

Steve Harrison, Research Faculty, Virginia Tech

Nick Jackiw, CTO, KCP Technologies

Research Associates

Rebecca Moniz, Project Manager, UMass Dartmouth

Arden Brookstein, Research Associate and School Liaison, UMass Dartmouth

James Burke, Senior Software Developer, UMass Dartmouth

Sara Dalton, Research Associate and School Liaison, UMass Dartmouth

Ryan Robidoux, Software Developer and Research Associate, UMass Dartmouth

Research Assistants

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APPENDIX C: Advisory Board

Nancy Ares

University of Rochester, USA - Social Cognition, Culture & Race

Ferdinando Arzarello

Università di Torino, ITALY

Nicolas Balacheff

Laboratoire Leibniz, FRANCE - Teaching and Learning of Mathematical Proof

Yaneer Bar-Yam

New England Complex Systems Institute, USA - Complexity Theory, Complex Systems

Hyman Bass

Michigan State University, USA - Mathematician's Use of Symbols, Elementary Mathematical Thinking

Corey Brady

Inquire Learning, LLC, USA - Discourse, Networks, Technology Design and Use, Activity Theory

Tânia Maria Mendonça Campos

Bandeirante University of São Paulo, BRAZIL

David Carraher

TERC, USA - Early Algebra

Constantinos Christou

University of Cyprus, CYPRUS - Cognitive Development of Mathematical Concepts

Jere Confrey

North Carolina State University, USA - Simulations and Policy Assessment

Al Cuoco

Educational Development Center, USA - Assessment Design, Lesson Study

Ubiratan D'Ambrosio

BRAZIL - Ethnomathematics, International Collaborations

Sarah Davis

National Institute of Education, SINGAPORE - Connected Classrooms, Affect, Agents, Anonymity

Chris Dede

Harvard University, USA - Expanded Human Capabilities for Knowledge Creation that Emerging Technologies Enable

Tommy Dreyfus

Tel Aviv University, ISRAEL - Mathematical Thinking, Pedagogy

Raymond Duval

FRANCE - Linguistics, Mathematical Register

Ted Eisenberg

Ben Gurion University, ISRAEL - Learning Theory

Lyn English

Queensland University of Technology, AUSTRALIA - Learning Sciences, Mathematical Thinking

William Finzer

KCP Technologies, USA - Software Design, Data analysis and Probability Simulation

Megan Franke

University of California, Los Angeles, USA - Teacher Learning, Professional Development, Elementary Mathematics

Paul Goldenberg

Educational Development Center, USA - On-line Networks

Gerald Goldin

Rutgers University, USA - Affect, Cognition, Representation Theory

Charles Goodwin

University of California, Los Angeles, USA - Linguistics, Gesture

Angappa (Guna) Gunasekaran

University of Massachusetts Dartmouth, USA - Human Management

Rogers Hall

Vanderbilt University, USA - Cognition, Culture

Eric Hamilton

United States Air Force Academy, USA - Innovation, International Collaborations, Networks

Guershon Harel

University of California at San Diego, USA - Advanced Mathematical Thinking, Teaching & Learning of Linear Algebra

Lulu Healy

Bandeirante University of São Paulo, BRAZIL

Eric Heller

University of Massachusetts Donahue Institute, USA

Celia Hoyles

University of London, UK - Technology, Geometry, Undergraduate Education

Nicholas Jackiw

KCP Technologies, USA - Technology Design & Use for Early Learners, Futurism

Barbara Jaworski

Loughborough University, UK - Undergraduate Education, Teacher Development

Keith Jones

University of Southampton, UK - Knowledge Acquisition, Knowledge Usage, Learning Technology

David Kirshner

Louisiana State University, USA - Situated Cognition

Cliff Konold

University of Massachusetts Amherst, USA - Study of How Children/Adults Reason About Probability, Statistics

Chronis Kynigos

University of Athens, GREECE - Design of Socio-Constructivist Inquiry, Dialogical Learning Environments

Colette Laborde

Equipe IAM, FRANCE - Instrumental Genesis, Dynamic Geometry

Jean-Marie Laborde

Cabrilog, FRANCE - Dynamic Geometry

Richard

University of Indiana, USA - Modeling, Foundational Research

Rosana Nogueira de Lima

Bandeirante University of São Paulo, BRAZIL - Mathematics Education, Teaching & Learning of Algebra

Marcia Linn

University of California at Berkeley, USA - Technology & Innovation

Chee-Kit Looi
National Institute of Education, SINGAPORE - Learning Sciences

Joanna Mamona-Downs
University of Patras, GREECE

Maria Allesandra Mariotti
Universita di Siena, ITALY - Dynamic Geometry

Fred Martin
University of Massachusetts Lowell, USA - Robotics, Computer Science

John Mason
Open University, UK - Mathematical Thinking & Learning, Problem-Posing

James Middleton
Arizona State University, USA - Methodology

Nicholas G. Mousoulides
University of Cyprus, CYPRUS - Implementation of ICT in Mathematics Education, Effect of Integrating Models

Elena Nardi
University of East Anglia, UK - Advanced Mathematical Thinking, Undergraduate Mathematics Practice

Ricardo Nemirovsky
San Diego State University, USA - Dynamic Mathematics, Video Analysis

John Olive
University of Georgia, USA - Children's Mathematical Learning, Technology as a Tool to Enhance Learning

Richard Noss
London Knowledge Lab, UK - Technology, Representation Theory

Michael Otte
Bielefeld University, GERMANY - Scientific Discovery, Semiotics, Analysis

William Penuel
SRI International, USA - Discourse Analysis, Dialogic Inquiry, Evaluation

Demetra Pitta-Pantazi
University of Cyprus, CYPRUS

Norma Presmeg
Illinois State University, USA - Semiotics

Luis Radford
Laurentian University, CANADA - Kinesthetics, Semiotics

Steve Rasmussen
KCP Technologies, USA - Technology & Curriculum Innovation

Teresa Rojano
ILCE, MEXICO - International Collaboration

Jeremy Roschelle
SRI International, USA - Design, Technology, Scale

Susan Jo Russell
TERC, USA - Early Algebra, Proof in the Early Grades

Nora Sabelli
SRI International, USA - Math & Science Education Innovation, International Collaboration

Adalira Sáenz-Ludlow
University of North Carolina at Charlotte, USA - Semiotics, Proof, Dynamic Geometry

Deborah Schifter
Educational Development Center, USA - Mathematics Education, Applied Mathematics

Analucia Schliemann
Tufts University, USA - Algebraic Reasoning, Algebra Notation in Elementary Schools, Mathematics Education

Alan Schoenfeld
University of California at Berkeley, USA - Theories of Mathematical Thinking, Policy, Pre-Service

Roberta Schorr
Rutgers University, USA - Teacher Growth, Affect

Judah Schwartz
Tufts University, USA - Alternative Modes of Assessment, Science Education for Elementary & Middle Teachers

Falk Seeger
Bielefeld University, GERMANY - Psychological Questions for Representation, Theory of Learning

Annie Selden

New Mexico State University, USA - Undergraduate Mathematics

John Selden

New Mexico State University, USA - Advanced Mathematical Thinking

Anna Sfard

University of Haifa, ISRAEL - Theories of Learning, Learning Discourse

David Shaffer

University of Wisconsin Madison, USA - Semiosis, Evolution Theory

Nathalie Sinclair

Simon Fraser University, CANADA - Technology, Aesthetics, Motivation

Finbarr (Barry) Sloane

Arizona State University, USA - Psychometrics, Research Design

Judith Sowder

San Diego State University (Professor Emerita), USA - Mathematics Education, Number Sense

Bharath Sriraman

University of Montana, USA - Generalization, Abstract Reasoning

Walter Stroup

University of Texas at Austin, USA - Classroom Connectivity, Agency, Social Theory

Despina Stylianou

City College of New York, USA - Proof & Reasoning

David Tall

University of Warwick, UK - Theories of Learning, Advanced Mathematical Thinking

Deborah Tatar

Virginia Tech, USA - Cognitive Science, Data Analysis

Pat Thompson

Arizona State University, USA - Algebra, Multiplicative Reasoning, Statistical and Probabilistic Reasoning

Dina Tirosh

Tel Aviv University, ISRAEL - Theories of Learning

Pessia Tsamir

Tel Aviv University, ISRAEL - Mathematics Education

Phil Vahey

SRI International , USA - Technology & Curriculum Innovation

Shlomo Vinner

Ben Gurion University of the Negev, ISRAEL - Mathematics Education

Keith Weber

Rutgers University, USA - Advanced Mathematical Thinking, Justification

Michal Yerushalmy

University of Haifa, ISRAEL - Mathematics Teaching & Learning, Technology in Education

APPENDIX D: Standing Committees

1. Research Activities Committee

Maria Blanton

Luis Moreno-Armella

Stephen Hegedus (ex-officio)

Deborah Tatar, Virginia Tech

David Kirshner, Louisiana State University

2. Steering Committee

Brenda Berube

Dona Apple

Stephen Hegedus (ex-officio)

Jeremy Roschelle, SRI International

Richard Lesh, Indiana University

APPENDIX E: Focus Areas

1. Learning Design

Head: Richard Lesh, University of Indiana

2. Teacher Quality

Head: Dona Apple, Kaput Center

3. Education Policy

Head: Ed Lambert, UMass Dartmouth