

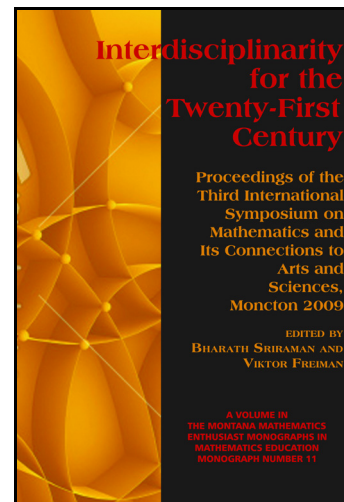


New Book Information

Interdisciplinarity for the 21st Century: Proceedings of the 3rd International Symposium on Mathematics and its Connections to Arts and Sciences, Moncton 2009

*Edited by Bharath Sriraman, The University of Montana, USA
and Viktor Freiman, University of Moncton, Canada*

Interdisciplinarity has become increasingly important for emergent professions of the 21st century yet there is a dearth of systematic studies aimed at implementing it in the school and university curricula. The Mathematics and its Connections to the Arts and Sciences (MACAS) group places Mathematics as a vehicle through which deep and meaningful connections can be forged with the Arts and the Sciences and as a means of promoting interdisciplinary and transdisciplinary thinking traits amongst students. The Third International Symposium held by the MACAS group in Moncton, Canada in 2009 included numerous initiatives and ideas for interdisciplinarity that are implementable in both the school and university setting. The chapters in this book cover interdisciplinary links with mathematics found in the domains of culture, art, aesthetics, music, cognition, history, philosophy, engineering, technology and science with contributors from Canada, U.S, Denmark, Germany, Mexico, Iran and Poland amongst others.



CONTENTS: Introduction: Interdisciplinary Networks for Better Education in Mathematics, Science, and the Arts, *Viktor Freiman and Bharath Sriraman*. Intercultural Positioning in Mathematics, *David Wagner*. History in Mathematics Education—Why Bother? Interdisciplinarity, Mathematical Competence, and the Learning of Mathematics, *Tinne Hoff Kjeldsen*. The Role of the Aesthetic in Mathematical Problem Solving, *Nathalie Sinclair and Christian Berneche*. Mathematics in the Everyday World and at Work: Prolegomena for Rethinking the Concept of Interdisciplinarity, *Wolff-Michael Roth*. A Portrait on How Groups of Elementary Age Students in a French Language Minority Setting Pose an Environmental Problem, *Viktor Freiman, Diane Pruneau, Joanne Langis, Pierre-Yves Barbier, Marianne Cormier, and Monique Langis*. Teaching Citizenship Education Through the Mathematics Course, *Annie Savard*. Flow: An Emotional Experience in Mathematics Problem Solving, *T. Seifert, O. Radu, and A. Doyle*. Learner Directed Opportunities Through Adaptive Hypermedia Systems, *Adnen Barhoumi and Chadia Moghrabi*. Quantitative Reasoning as a Tool for Understanding, *Natalya Vinogradova*. Interdisciplinarity Through Processes of Modeling and Sociomathematical Decision Making, *Claus Michelsen and Jan Alexis Nielsen*. Do Mathematical Laboratories Enhance Primary School Students' Hands-On Learning Experiences? *Mark Applebaum and Viktor Freiman*. Amazing Math-Science-Arts Connections: Getting Insight Into the Golden Ratio, *Dominic Manuel, Viktor Freiman, Edel Reilly, Ildiko Pelczer, Natalya Vinogradova, Bharath Sriraman, and Astrid Beckmann*. Mathematics in Contemporary Art, *Nathalie Sayac*. Advancing the Concept of Variables Through Cross-Curricular Stations Between Arts and Mathematics Instruction, *Astrid Beckmann*. Visual Arts and Mathematics: Intertwining for a New Conversation in Education, *Lise Robichaud*. Why is a Negative \times a Negative = a Positive? Possible Benefits of Interdisciplinarity, *Polotskaia Elena*. Writing + Math = Opportunity: Forging New Interdisciplinary Connections, *Edel M. Reilly*. Study of the Potential of the Use of Degrees of Certainty to Provide the Common Sense with an "Alert Bell", *Sophie René de Cotret, Manon LeBlanc, and Réal Larose*. Visuo-Dynamic Learning: How Does the Net Generation Learn? *Zekeriya Karadag*. Online Video Technology as Enabler for Teaching and Learning Multidisciplinary Topics, *Dragana Martinovic*. Directional Pitch Spaces, *Ilhan M. Zmirlı*. A Note on Fibonacci Numbers in Music, *Larry G. Blaine*. Robotic-Based Learning: RoboMaTIC, *Samuel F. J. Blanchard*. NET Generation: Social Media and its Link to Interdisciplinarity, *Samuel F. J. Blanchard*. A City Built on Geometry: Project-Based Learning in a Grade 10 Math Classroom, *Marcia Cormier*. Plato's Timaeus and the Intervals Used in Traditional Music of the Middle Classroom, *Amirhossein Damadi and Payam Seraji*. Using Origami as Context Builder to Teach (Pre)Math Skills, *Ildikó Pelczer*. Are There Mathematical Phenomena? Herbert Gerstberger. Mathematical Literacy and How Scientific Experiments Can Promote That Conception, *Simon Zell*. Cross-Curricular Teaching between Mathematics and Biology—Nutrition Circle, Similarity, and Allometry, *Astrid Beckmann and Annika Grube*. A Call for Integrating Engineering Through Cooperative Learning in the Mathematics and Science Teacher Education Program, *Ke Wu Norman, Anne L. Kern, and Tamara J. Moore*. Choosing to Study Mathematics and Science Beyond the Classroom: Who Participates and Why? *Karen Sullenger and Viktor Freiman*. A Brief History and Exploration of Some Didactic Journeys to Connect the Great Continents of Knowledge, *Alan Rogerson*. Some Remarks on the Comparison Between Mathematical and Poetical Facts/Events, *Romualdas Kašuba*.

Publication Date:
2010

ISBN's:
Paperback:
Hardcover:
EBook:
Price:
Paperback: \$39.99
Hardcover: \$73.99

Trim Size: 6X9

Subject:
Education, Mathematics

IAP - Information Age Publishing Inc.

*List Price: \$39.99 paperbacks plus s/h and \$73.99 hardcover plus s/h
Special Price: \$34.95 paperbacks plus s/h and \$69.95 hardcover plus s/h*

Title	Paperback	Hardcover
The First Sourcebook on Nordic Research in Mathematics Education: Norway, Sweden, Iceland, Denmark and contributions from Finland (\$299.99 for paperback and \$399.99 for hardcover)	_____	_____
Relatively and Philosophically E^arnest Festschrift in honor of Paul Ernest's 65th Birthday	_____	_____
Interdisciplinarity, Creativity, and Learning: Mathematics with Literature, Paradoxes, History, Technology, and Modeling	_____	_____
Critical Issues In Mathematics Education	_____	_____
Interdisciplinary Educational Research In Mathematics and Its Connections to The Arts and Sciences	_____	_____
Creativity, Giftedness, and Talent Development in Mathematics	_____	_____
Mathematics Education and the Legacy of Zoltan Paul Dienes	_____	_____
International Perspectives on Social Justice in Mathematics Education	_____	_____
Beliefs and Mathematics: Festschrift in honor of Guenter Toerner's 60th Birthday	_____	_____
Total	_____	_____

Shipping and Handling for Books:

Please include \$7.50 for the first book on U.S. orders; \$9.00 for the rest of the world. (\$2.50 per additional book)

Online shopping available at www.infoagepub.com

Please place a check on the appropriate line:

Visa Mastercard American Express Check Enclosed

Charge Card Number _____ Exp. Date _____ Sec Code _____

Name _____

Your Signature _____

Address _____

City _____ State _____ Zip _____

(Country if outside U.S.A.)

Phone _____ Fax _____

Email _____

IAP - Information Age Publishing Inc., PO Box 79049, Charlotte, NC 28271

tel: 704-752-9125 fax: 704-752-9113 e-mail: orders@infoagepub.com URL: www.infoagepub.com