9th International Conference of Maθematics Education and Society

# Program

7-12 April, Volos, 2017



### 9th International Ma0ematics Education and Society (MES9) Conference

#### **International Committee**

Yasmine Abtahi University of Ottawa, Canada Annica Andersson Malmö University, Sweden Anna Chronaki University of Thessaly, Greece Tony Cotton Sheffield Hallam University, UK Peter Gates University of Nottingham, UK (chair) Brian Greer University of Portland, USA Beth Herbel-Eisenmann Michigan State University, USA (co-chair) Eva Jablonka King's College London, UK Robyn Jorgensen University of Canberra, Australia David Kollosche Potsdam University, Germany Danny Martin University of Illinois at Chicago, USA Naresh Nirmala Miami University, USA Daniel Orey Federal University of Ouro Preto, Brazil Milton Rosa Federal University of Ouro Preto , Brazil Kate Le Roux University of Cape Town, South Africa Jayasree Subramanian Tata Institute of Social Science, India Wee Tiong Seah Melbourne Graduate School of Education, Australia David Wagner University of Brunswick, Canada

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#### Local Organizing Committee

Anna Chronaki (chair) Eleni Kontaxi Andreas Moutsios-Rentzos Yiannis Pechtelides Anthi Tsirogianni (conference secretary) Giorgos Giannikis Olga Ntasioti (secretarial support) Anastasios Matos (social media)

#### **Organization**

Department of Early Childhood Education School of Human and Social Sciences



University of Thessaly http://ece.uth.gr

Argonafton & Filellinon Volos, 382 21, Greece

<u>Venue</u> Valis Hotel, Agria, Volos

http://mes9.ece.uth.gr

## 7<sup>th</sup> April, Friday



## 8<sup>th</sup> April, Saturday

	T	Disnow:	Valis Grand Ball Room		
8.45		Plenary			
	Mathematical Futures: Discourses of Mathematics in Fictions of the Post 2008 Financial Crisis Heather Mendick				
9.40	Heather				
10.00 -	10 30	Reactors: Gelsa Knijnik, David Kollosche Coffee			
10.00 -	- 10.50	Conte			
10 30 -	- 11.30	Working Groups			
	- 12.30	Plenary Response Session			
	- 14.00	Lunch			
14.00 -	- 16.00	Parallell Presentations			
	Unpacki	ng Dominant Discourses	Iolkos Room		
	Historiciz	ing "Math For All" Ayşe Yolcu			
	Bildung, Mathematical Literacy and Civic Education: The (Strange?) Case of Contemporary Austria and Germany Andreas Vohns				
	Old and I	New Naturalized Truths in Mathematics Education			
	Panagio	is Spyrou, Andromachi Karagiannidou, Villy Michelakou			
	Gamifica	tion, Standards and Surveillance in Mathematics Education: An Illustro	ative Example Eva Jablonka		
	Race, Cl	ass, Caste	Pilio Room		
		ing "Race" without Researching White Supremacy in Mathematics Edu ic Discursive Practice David Stinson	ication Research:		
	Working Class, Intelligentsia and the "Spirit of Generalization" Bronislaw Czarnocha Beyond Poverty and Development: Caste Dynamics and Access to Mathematics Education in India Jayasree Subramanian				
	Examinin	g Relations Between Students' Perception of "Being Known" and their Tanner Wallace, Charles Munter	Mathematics and Racial		
	Mathematical Temporalities Zeus Room				
		hemacy: Time to Reset? Karen François, Rik Pinxten			
	Thinking Forward: Using Stories From the Recent Past in Mathematics Education in England Hilary Povey, Gill Adams				
	When an Education Ideology Travels: The Experience of the New Math Reform in Luxembourg Shaghayegh Nadimi (Chista)		in Luxembourg		
		ng MathLife Chronotopes Anna Chronaki			
		atics in Higher Education	Argo Room		
		nstructors' Attitudes Toward Statistics			
	5	Jon Kim, Xiaohui Wang, Bongju Lee, Angelica Castillo			
	Moving Up or Down the Ladder: University Mathematics Students Talk About Progress Kate le Roux An Empirical Study into Difficulties Faced by 'Hindi Medium Board Students' in India at Undergraduate Mathematics and its Social Implications Kumar Gandharv Mishra, Jyoti Sharma		Progress		
			-		
	Working with Peers as a Means for Enhancing Mathematical Learning at University Level: Preliminary Investigation of Student Perceptions Marios Ioannou (project)				
	Sympos		Artemis Room		
	Ethnoma Milton R	thematics Meets Curriculum Theory through Crisis Peter Appelbaum osa, Daniel Clark Orey, Samuel Edmundo Lopez Bello, Dalene Sw Robert Klein, Miriam Amrit	, Charoula Stathopoulou,		
	Sympos	um	Valis Grand Ball Room		
		Counts: What Mathematics for Life, to deal with Crises? Brian Greer, stein, Swapna Mukhopadhyay, Anita Rampal	Rochelle Gutiérrez,		
16.00 -	- 16:30	Coffee			

# 8<sup>th</sup> April, Saturday

16.30 -	- 18.30	Parallell Presentations		
		liberal Teacher	Iolkos Room	
	What is Desired and the Governing of the Mathematics Teacher Alex Montecino			
	Fears and	d Desires: Researching Teachers in Neoliberal Contexts Lisa Darragh (J	project)	
	Be the Be	est Version of Your Self! OECD'S Promises of Welfare Through School M	athematics	
	Melissa Andrade-Molina			
	Compete	nce-Based Teacher Education – Revisited Johanna Ruge		
	Equity R	econsidered	Pilio Room	
		a College Readiness Math Modelling Program: Limitations and Opportu aats, Douglas Robertson	nities	
	Macroinclusion and Microexclusion in Mathematics Education Ana Carolina Faustino, Amanda Queiroz Moura, Guilherme Henrique Gomes da Silva, João Luiz Muzinatti, Ole Skovsmose			
	-	Challenges when Teaching Pre-Service Mathematics Teachers through cLeman, Eugenia Vomvoridi-Ivanovié (project)	a Lens of Equity	
	Identity	Urgencies	Zeus Room	
	-	hange Through Inner and Outer Driving Forces for Studying Mathemati n Program <mark>Ola Helenius, Linda Ahl</mark> (project)	cs in the Swedish Prison	
		tical Mathematics Teacher Identity: Mathography as Window arene Gargroetzi, Brian Lawler (project)		
	The Relevance of Pre-Service Teachers' Funds of Knowledge in their Adaptations of Mathematics Lessons Carlos LópezLeiva (project)			
	Academic Agency: A Framework for Responsibility Lisa Poling, Tracy Goodson-Espy			
	Develop	ing Activity, Tasks and Creativity	Argo Room	
		nent and Contextualization of Tasks from an Ethnomathematical Perspe Albanese, Natividad Adamuz-Povedano, Rafael Bracho-López	ective	
	Creative	Insubordination Aspects Found in Ethnomodelling Milton Rosa, Daniel	Clark Orey	
	When Geometry Meets the Language of Arts: Questioning the Disciplinary Boundaries of a School Curriculum Panagiota Kotarinou, Eleni Gana, Charoula Stathopoulou			
	Symposi	ium	Artemis Room	
		ism, and Mathematics Education: Local and Global Perspectives		
		yes-Chávez, Danny Martin, Joi Spencer, Paola Valero, Anna Chrona	1	
-	Symposi		Valis Grand Ball Room	
		nd Interface with Mathematics Education Research and Practice: An Eve		
19.70		ra, Arindam Bose, Jehad Alshwaikh, Magda González, Renato Mar	Valis Grand Ball Room	
20.30	- 20.30	Agora I Dinner	Valls Granu Ball Room	
20.30		Mujaawarah	Valis Grand Ball Room	
		AND		

## 9<sup>th</sup> April, Sunday

8.45		Plenary	Valis Grand Ball Room	
	Biosocial Becomings: Rethinking the Biolopitics of Mathematics Education Research			
	Elisabeth de Freitas			
9.40		Reactors: Karen Francois, Andreas Moutsios-Rentzos with Panayiotis Spyrou		
	- 10.30	Coffee		
	- 11.30	Working Groups		
	- 12.30	Plenary Response Session		
	- 14.00	Lunch		
14.00 -	- 16.00	Parallell Presentations		
		and the Subject	Iolkos Room	
		ogy of Relevance in School Mathematics David Kollosche		
		ession of the Subject? - Quilting Threads of Subjectivization Felix Lens	sing	
	·	ect of Mathematics Education Research Alexandre Pais		
		, Policies, Politics	Zeus Room	
		e the Children? An Analysis of News Media Reporting on Mathematics E Abtahi, Richard Barwell	ducation	
		on of Newly Arrived Students as Mathematical Learners in Swedish Poli in, Petra Svensson Källberg	cy	
		truction of the Mathematical Child in Swedish Preschool Delacour (project)		
	Social Aspects of Undergraduate Mathematics Students' Learning: Preparing for The Coursework Marios Joannou			
			Pilio Room	
-		ses of Dis/Ability n Mathematics Education: Ideology, Resistance and Solidarity Rossi D's		
	From Policy to Practice: Discourses of Mastery and "Ability" in England Candia Morgan 'Sets 4 and 5 Were Stuffed Full of Pupil Premium Kids': Two Teachers Experiences of 'Ability' Grouping Colin Jackson			
		istice Revisited	Argo Room	
	Coming to Understand the Big Issues: Remaking Meaning of Social Justice Through Mathematics Across the School Year Frances Harper			
		Mathematics for Social Justice: Transforming Classroom Practice Pete	Wright	
		es in Dealing with Social Justice Concerns in Mathematics Classrooms S		
	Symposi		Artemis Room	
	Neoliberalism: A Crisis for Mathematics Education? Lisa Darragh, Lisa Björklund Boistrup, Paola Valero, Gill Adams, Hilary Povey			
	Symposi		Kentavros Room	
	Ethnomathematics Meets Curriculum Theory through Crisis Peter Appelbaum, Charoula Stathopoulou, Milton Rosa, Daniel Clark Orey, Samuel Edmundo Lopez Bello Dalene Swanson, Franco Favilli, Fiorenza Toriano, Robert Klein, Miriam Amrit			
	Poster S	ession	Valis Grand Ball Room	
	Why Do We Need Them to Be Different Low Achieving Children's Conceptions of Unit Fraction Jessica Hunt, Arla Westenskow, Patricia Moyer-Packenham			
	Math, Social Justice, and Prospective Teachers in U.S.A. and Uruguay: Learning Together Paula Guerra, Woong Lim, Raisa Lopez			
	Enhancin	g Students Quantitative Literacy Skills: Using Google Drive as a Collabo redback Michelle Henry, Jumani Clarke, Sheena Rughubar-Reddy, Is	-	
	Doing Re	search with Teachers: Ethical Considerations that Shaped the Researche	er Stance Annie Savard	
	Mathema	itical Fiction in Education: Text in Action Eleni Kontaxi, Stella Dimitra	akopoulou	
		Geometries in the UrbanScape: Interrogating the Echo of Geometry An Papasarantou, Irene Lazaridi, Efi Manioti, Magda Koumparelou, Gio		
16.00 -	- 16:30	Coffee		

# 9<sup>th</sup> April, Sunday

16.30 -	- 18.30	Parallell Presentations	
	Ethical I	Encounters in the Field	Iolkos Room
	Diversity in Meanings as an Issue in Research Interviews Helena Grundén		
	Tensions and Dilemmas as Source of Coherence Jehad Alshwaikh, Jill Adler		
	How Local are Local People? Beyond Exoticism Eric Vandendriessche, José Ricardo e Souza Mafra,		
	Maria Co	ecilia Fantinato, Karen François	
	Learner	s in their Social Contexts	Pilio Room
	5	tting Parental Influences on Sixth Graders' Mathematical Identity: The Co afoussi, Andreas Moutsios-Rentzos, Petros Chaviaris	ase of Attainment
		he Role of Value Alignment in Engaging Mathematics Learners? e Kalogeropoulos, Alan Bishop	
	Love and	Bullying in Mathematical Conversations Annica Andersson, David Wa	agner
		guiry with Mathematics in two High School Classrooms Anastasia Brel	-
		s Professional Growth	Zeus Room
	5 5	ical and Mathematical Capital: Does Teacher Education Make a Differen orgensen (Zevenbergen), Tom Lowrie	ce?
	Mathematics Teacher Professional Development Toward Equitable Systems: Weaving Together Mathematics, Discourse, Community, Positionality, and Action Research Ashley Scroggins, Beth Herbel-Eisenmann, Frances Harper, Tonya Bartell		
	Mathemo	atics Teachers' Professional Learning Iben Christiansen, Kicki Skog, S	arah Bansilal (project)
		Power, Mathematics	Argo Room
	-	ng Manipulatives: Toward a Critical Analysis of Gender and Mathematica Gresalfi, Katherine Chapman	l Practice
	Understanding Relations of Power in the Mathematics Classroom: Explorations in Positioning Theory Jennifer Langer-Osuna, Maxine McKinney de Royston		
	Performi	ng Girl and Good at Mathematics: Scripts in Young Adult Fiction Lisa Da	rragh (project)
	Sympos	ium	Artemis Room
	Beyond t	he Box: Rethinking Gender in Mathematics Education Research Margar	et Walshaw,
	Anna Ch	ronaki, Luis Leyva, David Stinson, Dalene Swanson, Kathy Nolan, I	Heather Mendick
	Sympos	ium	Valis Grand Ball Room
		itical/Radical Mathematics Education: A Video Exploration Maisie Ghol	son, Patricia Buenrostro,
	-	Mann, Eric Gutstein, Mark Hoover	
19:30 -	- 20.30	Open Talk	Valis Grand Ball Room
		and Orthodox Christianity: a conflictual relationship? Efthymios Nicola 1, National Hellenic Research Foundation	idis Institute of Historical
		Reactor: Rik Rinxten	
20.30		Dinner	
21.30		Swing Night Trio	
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## 10<sup>th</sup> April, Monday



### **11<sup>th</sup>** April, Tuesday

LT AP	in, iucsuay	
8.45	Plenary	Valis Grand Ball Room
	s Have the Power' Or the Key Role of Numerical Discourse in Establishin	g
	e of Truth about Crisis in Greece Dimitris Chassapis	
9.40	Reactors: Fragkiskos Kalavasis, Alex Pais	
10.00 - 10.30	Coffee	
10.70 11.70	Washing Course	
10.30 - 11.30 11.30 - 12.30	Working Groups Plenary Response Session	
11.50 - 12.50	Pienary Response Session	
12.30 - 14.00	Lunch	
14.00 - 16.00	Parallell Presentations	
Crisis, I	ducation, Mathematics	Iolkos Room
	ntanglement of Mathematics Remediation, Gatekeeping, and the Coolin	g-Out Phenomenon
	tion Gregory Larnell	
	idn't Light it, But we Tried to Fight it: Acknowledging and Connecting ar	n Acute Crisis
	Craig, Lynette Guzmán (project)	
	atics and Human Flourishing Samuel Luke Tunstall	Pilio Room
	Mathematics Education and Social Inquiry	
5	AE to Empower Prospective Teachers (and Students) Emerge as Mathem 1 Naresh, Lisa Poling, Tracy Goodson-Espy	natical Modellers
	es of Critical Mathematics Based Reflections on Climate Change	
5	His Hauge, Peter Gøtze, Ragnhild Hansen, Lisa Steffensen	
Extendir	g the Landscapes of Mathematical Investigation through Philosophical	Inquiry
	toyanova Kennedy	
Empowe	ring Students in Citizenship: Teaching Mathematics and Learning Finan	cial Concepts
Annie S	avard (project)	
Space(s	) for Mathematical Experience	Zeus Room
	uring Mathematical Settings and Representations Through Whole-Body Ma, Molly Kelton	Collaboration
	ature of Mathematical Reasoning: Problem Solving Strategies of Middle chool Experience Arindam Bose	Graders' with Diverse
	pe of Taping Shape: Visitor Experiences with an Immersive Mathematics elton, Bohdan Rhodehamel, Cierra Rawlings, Patti Saraniero, Ricar	
Discuss	ion Group	Argo Room
Anna Jo Efthalia	g and Accessing Learning Experiences of Refugee Students and Teacher ber, Anna Chronaki, Christine Knipping, Lena Anderson, Peter Ben Balla, Eirini Lazaridou, Olga Ntasioti, Eirini Avgoustaki, Ismini So Swanson, Nuria Planas, Candia Morgan	gston,
Sympos	ium	Artemis Room
Ethnome	thematics and Reconciliation Lisa Lunney Borden, David Wagner	
16.00 - 16:30	Coffee	

## 11<sup>th</sup> April, Tuesday

16.30 - 18.30 Parallell Presentations					
First Nation, Indigenous People, Rural Communities	Iolkos Room				
Reflections on Pedagogy in a Remote Indigenous Community Dianne Siemo	n				
Mathematics Learning and Social Background: Studying the Context of Learn in a Semi Rural Area of Maharashtra Varsha Sadafule, Maxine Berntsen	Mathematics Learning and Social Background: Studying the Context of Learning in a Secondary School in a Semi Rural Area of Maharashtra Varsha Sadafule, Maxine Berntsen				
Prioritizing Visual Spatial Mathematical Approaches in First Nation Early Yeo Joan Moss, Bev Caswell, Zachary Hawes, Jason Jones	Prioritizing Visual Spatial Mathematical Approaches in First Nation Early Years Classrooms Joan Moss, Bev Caswell, Zachary Hawes, Jason Jones				
Developing 'Quality' Teachers in Remote Indigenous Contexts: Numeracy Lea Robyn Jorgensen (Zevenbergen)	Developing 'Quality' Teachers in Remote Indigenous Contexts: Numeracy Leaders Robyn Jorgensen (Zevenbergen)				
Dialogue, Mathematising, Thinking	Pilio Room				
"How did you get to that Result?": The Process of Holding a Dialogue in Math of Primary School Ana Carolina Faustino (project)	Classes of the Early Years				
Strengthening the Ways of Mathematising of Mapuche People at the School	Huencho Anahí (project)				
The Process of Dialogue in Teaching and Learning Mathematics with Deaf ar Amanda Queiroz Moura, Miriam Godoy Penteado (project)	The Process of Dialogue in Teaching and Learning Mathematics with Deaf and Hearing Students Amanda Queiroz Moura, Miriam Godoy Penteado (project)				
Social Creativity in the Design of Digital Resources to Afford Creative Mather Chronis Kynigos, Maria Daskolia, Ioannis Papadopoulos (project)	Social Creativity in the Design of Digital Resources to Afford Creative Mathematical Thinking Chronis Kynigos, Maria Daskolia, Ioannis Papadopoulos (project)				
Developing Mathematical Concepts	Zeus Room				
Statistics Education: An Alternative for Children in Literacy Cycle to Develop Maria Lúcia Wodewotzki, Sandra Gonçalves Vilas Bôas Campos	the Number Sense				
The Concept of the Tangent in the Transition from Euclidean Geometry to An Panagiotis Stavropoulos, Maria Toultsinaki	alysis – A Visualization via Touch				
Developing Concepts in a Study of Mathematics Learning Pathways Jasmine	e Ma, Molly Kelton (project)				
Critical, Reflective, Affective	Argo Room				
Developing Critical and Reflective Dimensions of Mathematical Modelling Daniel Orey Clark, Milton Rosa					
How Confidence Relates to Mathematics Achievement: A New Framework Lesa Covington Clarkson, Quintin Love, Forster Ntow					
Economic Crisis: The Educational Game Euro-Axio-Polis Maria Chionidou-Moskofoglou, Aikaterini Vamvouli (project)					
Discussion Group	Artemis Room				
	Trajectories of Mathematics Education Research in Greece Sonia Kafousi, Anna Chronaki, Panagiotis Spyrou, Mariana Tzekaki, Babis Lemonidis, Despoina Potari, Babis Sakonidis				
Symposium	Kentavros Room				
Dealing with our Own Shit: The Researcher Behind the [Mathematics Education] Research Alexandre Pais, Alyse Schneider, Mônica Mesquita					
20.30 Conference Dinner					
21.30 The Jacks + Party					

## 12<sup>th</sup> April, Wednesday

9.00 - 10.00	Final Discussion Session	Valis Grand Ball Room
10.00 - 10.30	Coffee	
10.30 – noon	Agora II, Closing	Valis Grand Ball Room
	Lunch	

### 9th International Ma0ematics Education and Society (MES9) Conference

### Organization

Department of Early Childhood Education School of Human and Social Sciences



University of Thessaly http://ece.uth.gr

### Volunteers

Asimina Angeli, Mariana Athanasouli, Kleopatra Barda, Violeta Eleni Bligiannou, Angelos Bourdakis, Maria-Rafaela Bourdaki, Michail Boutis, Rizos Chaliampalias, Yannis Constantinides, Vaggelis Diplas, Areti Efstathiou, Vithleem Eftychiadou, Ifigenia Iliopoulou, Paraskeui Kaltsa, Theodora Kaplani, Charalampos Kotteakos, Christina Koufou, Magda Koumparelou, Freideriki Kourdi, Spyros Kourias, Efthymia Krikoni, George Kyriakopoulos, Irene Lazaridou, Vasiliki Lytaki, Nikos Makrakis, Efi Manioti, Eleni Matou, Panagiota Mytiliou, Vasilis Nanouris, Vasiliki Ntagka, Anastasia Oikonomou, Melina Orachidou, Marianthi Ortantzoglou, Irini Pata, Aggeliki Pisimisi, Evdokia Potamia, Georgia Sakellariou, Dimitris Sklavos, Ismini-Marina Sotiri, Foteini Terzi, Varvara Toura, Myrsini Tzortzaki, Eleni Vasileiou, Andriani Vassiou.

### Reviewers

Yasmine Abtahi, Veronica Albanese, Annica Andersson, Melissa Andrade Molina, Tonya Bartell, Hannah Bartholomew, Richard Barwell, Mark Boylan, Erika Bullock, Dimitris Chassapis, Anna Chronaki, Daniel Clark Orey, Tony Cotton, Lisa Darragh, Karen Francois, Peter Gates, Miriam Godoy, Brian Greer, Melissa Gresalfi, Helena Grundén, Rochelle Gutiérrez, Eric (Rico) Gutstein, Victoria Hand, Beth Herbel-Eisenmann, Kjellrun Hiis Hauge, Jessica Hunt, Nadia Jaber, Eva Jablonka, Robyn Jorgensen (Zevenbergen), Sonia Kafoussi, Penelope Kalogeropoulos, David Kollosche, Donna Kotsopoulos, Gregory Larnell, Brian Lawler, Felix Lensing, Lisa Lunney Borden, Danny Martin, Swapna Maukhopadhyay, Heather Mendick, Monica Mesquita, Alex Montecino, Candia Morgan, Andreas Moutsios-Rentzos, Nirmala Naresh, Eva Norén, Lisa Österling, Herine Otieno, Alexandre Pais, Aldo Parra, Yannis Pechtelidis, Nuria Planas, Hilary Povey, Anita Rampal, Milton Rosa, Kate le Roux, Natalia Ruiz López, Annie Savard, Ali Sikunder, Kicki Skog, Charoula Stathopoulou, David Stinson, Hauke Straehler-Pohl, Jayasree Subramanian, Wee Tiong Seah, Anna Tsatsaroni, Paola Valero, Luz Valoyes-Chávez, Eric Vandendriessche, David Wagner, Ayşe Yolcu.







### Credits

The conference's banners consist of a collage of Street Artists' graffiti works. The covers of the conference's program and proceedings are artwork by Banksy. We would like to thank STMTS (www.stmtsart.com), Bleeps (www.bleeps.gr) and Dimitris Taxis (www.instagram.com/o\_taxis/) for their contributions.



