

MBR012_ITALY

SCHEDULE



Invited and Plenary Presentations
 Full Presentations
 Short Presentations

Session I: Modeling: visual, analogical, simulative
Session II: Discovery processes, reasoning, and logical models
Session III: Creative inference, abduction, ecocognitive aspects of models
Session IV: Case studies and computational issues

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Thursday

Jun 21

Morning

Location: Aula Agave

Located inside Fondazione Mediterraneo, Via Portobello (Baia del Silenzio)
 16039 Sestri Levante (GE), Italy

8.00-8.55 Registration Desk Located at the entrance of Sala Agave
 Location: Aula Agave

9.00-9.10 **Welcome by the Chair of the Conference**

9.10-10.10 Invited Lecture Location: Sala Agave Chair: **Lorenzo Magnani**
John WOODS
 How Not To Fictionalize Science

10.10-10.40	<p>Coffee Break</p> <p>Location: Aula Agave Session III Creative inferences, abduction, ecocognitive aspects of models Chair: C. Pizzi H. G. Callaway</p> <p>Abduction, competing models, and the virtues of hypotheses</p>	<p>Location: Aula Edera Session II Discovery processes, reasoning, and logical models Chair: J. Woods Vito Michele Abrusci, Claudia Casadio, Maria Teresa Medaglia</p> <p>Universal vs. particular reasoning: a study with neuroimaging techniques</p>	<p>Location: Aula Ginepro Session IV Case studies and computational issues Chair: M. Ghins Jeffrey Benjamin White</p> <p>Modeling moral cognition</p>
11.20-12.00	<p>Gianluca Caterina and Rocco Gangle</p> <p>Iconicity and abduction: using category theory to model shapes of creative hypothesis-formation in peirce's existential graphs</p>	<p>Pedro Atã and Joao Queiroz</p> <p>Cognition and semiotic artifacts: situatedness in Peircean cognitive semiotics</p>	<p>Emanuele Bardone</p> <p>Modeling digital ecosystems as super-construction and the role of chance seeking</p>

12.00-13.00 Invited Lecture Location: Aula Agave Chair: **Lorenzo Magnani**
Atocha ALISEDA
 Anomaly Abduction. The Process of Hypothesis testing in Medical Diagnosis

Afternoon

14.30-15.10	<p>Location: Sala Agave Session III Creative inferences, abduction, ecocognitive aspects of models Chair: T. Bertolotti Michael Hoffmann</p> <p>Argument mapping and knowledge management</p>	<p>Location: Sala Edera Session I Modeling: visual, analogical, simulative Chair: B. Tversky Albrecht Heffer</p> <p>Identifying adequate models in physic-mathematics: Descartes' analysis of the rainbow</p>	<p>Location: Sala Ginepro Session IV Case studies and computational issues Chair: W. Park 14.30-14.50 Natali Kareva</p> <p>Computer 3D-modeling and scientific reasoning</p>
15.10-15.50	<p>Gerhard Minnameier</p> <p>Model-based reasoning in the moral</p>	<p>Ekkehard Finkeissen</p> <p>The problem 'camera' modeling.</p>	<p>14.50-15.10 Michael R. Lissack</p> <p>Representation and compressions</p>

domain: the role of abduction, deduction, and induction in moral functioning

The acquisition, structuring, storing, processing, presentation, and reasoning of problem-oriented information

15.10-15.50 Meeting of the Group Members of the Research Funds PRIN2009, MIUR, Ministero Italiano dell'Università e della Ricerca

Invited Lecture Location: Sala Agave Chair: **P. Thagard**

15.50-16.50

Woosuk PARK
How to learn abduction from animals? From Avicenna to Magnani
 Lecture in Honor of the 60th Birthday of Lorenzo Magnani, Chair of MBR012_ITALY

16.50-17.20

Coffee Break

Location: Sala Agave
 Session I

Modeling: visual, analogical, simulative

Chair: **C. Casadio**

Location: Sala Edera
 Session II

Discovery processes, reasoning, and logical models

Chair: **P. Thagard**

Location: Sala Ginepro
 Session IV

Case studies and computational issues

Chair: **R. Gudwin**

17.20-17.40

Alisa Bokulich

How the tiger bush got its stripes: "how possibly" vs. "how actually" model explanations

P. Bokulich

Modeling causal interactions and the domains of applicability of physical dynamics

Antonino Drago

A model-based reasoning extracted from the developments of some scientific theories

Salvatore Roberto Arpaia

A class of logical models for learning processes and psychological change

Ivan Bratko

Discovery of abstract concepts by a robot

Luo Lingling and Li Shuang

The theory of affordance and technology epistemology

Nicola Angius

Model-based reasoning in model checking for the examination of software systems

Viorel Guliciuc

Chaos theory, fractal models of reasoning and non-generic universality

Sara Dellantonio

License to kill. Cognitive models, categorization and moral judgment

17.40-18.00

18.00-18.20

Plenary Lecture Location: Sala Agave Chair: **L. Magnani**

18.20-19.20

Claudio PIZZI
Counterfactuals and *modus tollens* in abductive arguments

Friday June 22

Morning

Location: Sala Agave
 Session III

Creative inferences, abduction, eco-cognitive aspects of models

Chair: **D. Portides**

Location: Sala Edera
 Session II

Discovery processes, reasoning, and logical models

Chair: **C. Pizzi**

Location: Sala Ginepro
 Case studies and computational issues

Chair: **Z. Wąsik**

9.00-9.20

Cao Dongming, Luo Lingling and Wang Jian

How affordance changes: based on the coincident model of technological innovation

Cristina Barés-Gómez, Angel Nepomuceno-Fernández, Francisco J. Salguero-Lamilla

Abduction for reconstructing proto-languages

Gustavo Cevolani

Truth approximation via abductive belief chance

Pieter Pauwels, Ronald De Meyer, Jan Van Campenhout

Towards a simulation of Peirce's cycle of abductive, deductive and inductive reasoning. van campenhout

Mathieu Beirlaen

Adaptive deontic reasoning

Silvia De Bianchi

How far can we go with fuzzy logic? Perspectives on model-based reasoning and stochastic resonance in scientific models

Alfredo Pereira Jr.

Information integration in the brain: modeling a putative function of the astroglial network

Luís Moniz Pereira

Complex networks of mindful entities

Paolo Pecere

Mechanism and phenomenon of consciousness remarks on models and analogies in Dennett and Edelman

9.20-9.40

9.40-10.00

Invited Lecture Location: Sala Agave Chair: **John Woods**

10.00-11.00

Lorenzo MAGNANI
The Non-Fictional Nature of Scientific Models. Model-based Science as Epistemic Warfare

11.00-11.30

Coffee Break

Location: Aula Agave

Location: Sala Edera

Location: Sala Ginepro

	<p>Session III Creative inferences, abduction, eco-cognitive aspects of models Chair: L. Moniz Pereira Angel Nepomuceno-Fernández, Fernando Soler-Toscano, Fernando R. Velázquez-Quesada Abductive reasoning from the agent's point of view Jun-Young Oh and YooShin Kim</p>	<p>Session I Modeling: visual, analogical, simulative Chair: A. Toon Demetris Portides Idealization and scientific models: reducing the information content Athanasios Raftopoulos Do we need inferences for recognition beliefs?</p>	<p>Session IV Case studies and computational issues Chair: C. Sinha Cameron Shelley Models and ideology in design Francesco Amigoni and Viola Schiaffonati Autonomous mobile robots as technical artifacts: a discussion of experimental issues</p>
11.30-12.10			
12.10-12.50			

Afternoon

	Invited Lecture Location: Sala Agave Chair: C. Sinha		
14.30-15.30	Paul THAGARD Fear Drive Inference: Mechanism of Gut Overreaction		
	<p>Location: Sala Agave Session III Creative inferences, abduction, eco-cognitive aspects of models Chair: A. Heffer Chiaki Sakama and Katsumi Inoue Abduction, unpredictability and Garden of Eden</p>	<p>Location: Sala Edera Session II Discovery processes, reasoning, and logical models Chair: V. Schiaffonati Juliana Bueno-Soler and Walter Carnielli Paraconsistent description logics: the formal consistency viewpoint</p>	<p>Location: Sala Ginepro Session I Modeling: visual, analogical, simulative Chair: M. Hoffmann Marcin J. Schroeder Role of theoretical models for information integration in the search for scientific explanation of consciousness Adam Toon</p>
15.30-16.10			
16.10-16.50	<p>Manuel Liz Models and points of view. Two approaches about the nature of points of view</p>	<p>Mario R. F. Benevides, Paulo A. S. Veloso and Sheila R. M. Veloso Enhancing propositional dynamic logic for structured data</p>	<p>Models, make-believe and the indirect fictions view</p>
16.50-17.10	<p>Fabio Sterpetti Scientific realism, mathematical platonism, evolutionary adaptationism: three related inferences to the best explanation. some remarks from an antirealist perspective.</p>	<p>Margarita Vázquez and Manuel Liz System dynamics modeling. A constructivist and expressivist interpretation</p>	<p>Christian Tamas The Arabic script, from visual analogy to model based reasoning</p>
17.10-17.40	Coffee Break		
	Invited Lecture Location: Sala Agave Chair: A. Aliseda		
17.40-18.40	Chris SINHA with Wany Sampaio, Vera da Silva Sinha and Jörg Zinken Living in the Model. The Cognitive Ecology of Time – A Comparative Study		
20.30	Social Dinner Fondazione Mediaterraneo, Sestri Levante		

Saturday June 23

Morning

	<p>Location: Sala Agave Session III Creative inferences, abduction, eco-cognitive aspects of models Chair: G. Cevolani Tjerk Gauderis Presuming a new particle or revising an existing law? A case study in the abduction of different formal kinds of hypotheses in physics Woosuk Park</p>	<p>Location: Sala Edera Session II Discovery processes, reasoning, and logical models Chair: E. Bardone Marion Vorms and David Lagnado The role of models in mind and science Nora Alejandrina Schwartz</p>	<p>Location: Sala Ginepro Session I Modeling: visual, analogical, simulative Chair: T. Bertolotti Mikkel Willum Johansen Diagrams as material anchors for conceptual mappings Zdzisław Wąsik</p>
9.00-9.40			
9.40-10.20			

On classifying, abduction, science, and sign

A historical case study of a “nested analogy” with models of the same matter

Modeling the solipsistic conception of subjective significance in the semiotic spheres of human nature and culture

Invited Lectures Location: Sala Agave Chair: **L. Magnani**

10.20-11.20

Barbara TVERSKY
Tools of Thought

11.20-12.00

Coffee Break

Location: Sala Agave
Session III
Creative inferences, abduction, eco-cognitive aspects of models
Chair: **H. G. Calloway**

Location: Sala Edera
Session II
Discovery processes, reasoning, and logical models
Chair: **E. Bardone**

Location: Sala Ginepro
Session I case studies and computational issues
Chair: **A. Bokulich**

12.00-12.20

Emiliano Ippoliti
Generation of hypotheses by amplification of data

Angelo Loula and João Queiroz
(presented by **Pedro Atã**)
On representation in computational modeling of the emergence of communication

Marten Franssen
Modelling systems in technology as *instrumental systems*

12.20-12.40

Priyedarshi Jetli
Abduction and model-based reasoning in Plato

Ruggero Rangoni
From informal thought experiments to agent-based models. a progressive account of modeling in social sciences

Julio Michael Stern, Carlos Alberto de Braganca Pereira
Full Bayesian epistemic significance: focus on surprise, measure probability

12.40-13.00

Tommaso Bertolotti
Two kinds of experiments. Investigating the scientific framework between generative and demonstrative experiments

Jeffrey Benjamin White
Modeling non-violent social transformation – revolution by design

Wang Yihong
Using mathematical expressions to analyze model-based reasoning for explore conceptual change in physics

Afternoon

Plenary Lectures Location: Sala Agave Chair: **J. Woods**

14.30-15.30

Ryan TWENEY
Metaphor, analogy, and model-based reasoning in mathematical physics

15.30-16.00

Coffee Break

Invited Lecture (in honor Lorenzo Magnani’s 60th Birthday)
Location: Sala Agave Chair: **R. Tweney**

16.00-17.00

Michel GHINS
Bohr’s Modelling of the Atom: Was His Demarche Inconsistent?

17.00-18.30

Closing Plenary Session, Location: Sala Agave
Chair: **Lorenzo Magnani**
A. Aliseda, L. Magnani, M. Ghins, P. Thagard, R. Tweney, J. Woods
Discussion