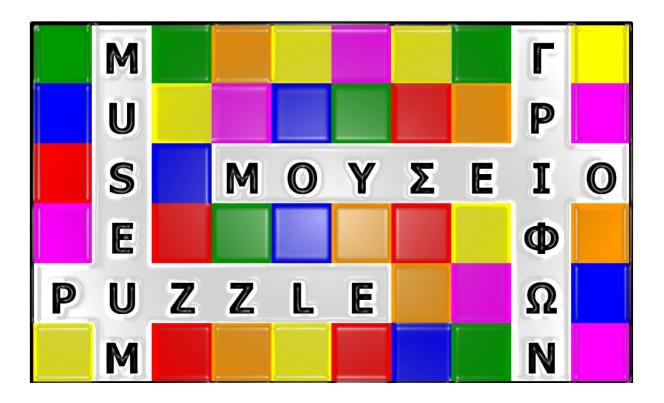


The **Megistian Aenigma Agon** is a **Quadruple International Puzzle Competition** (Inscription, Illusion, Invention and Interaction). The word Megistian comes from one of the island's name (Megisti), Aenigma means puzzle, and Agon stands for competition. It is a celebration of toys and word-games for children from 0 to 150 years old, presenting to the world Greece's leading role in puzzles. As a definition, a Puzzle, an Aenigma or a Brainteaser, is anything which trains our mind.



The very first Puzzle Museum in Greece is in Kastellorizo.

EVENTS WHICH MARKED THE 4^{rth} MAA

The new Megisti Puzzle Museum:

The biggest event of the year was the creation of the **Megisti Puzzle Museum** under the **EN.I.G.MA** club (Union of Ideas, Puzzles & Mathematics), the very first Puzzle Museum in Greece and one of the very few around the world. It is also the only interactive one. Its initial form was that of an exhibition and it opened on the 15th of August 2020 with 700 items.



Then, in November 2020, 75 boxes filled with the rest of Pantazis Houlis' collection arrived from Australia, totaling the exhibiting items to a massive 4000 unique pieces!

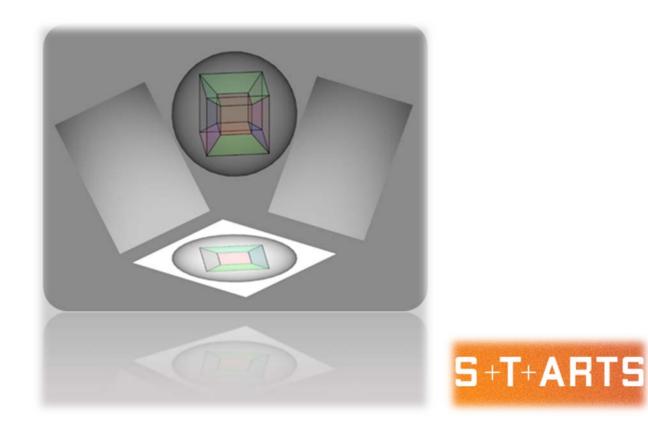


The boxes arrived from Australia, transforming the Megisti Puzzle Exhibition into a Puzzle Museum.

The work needed, the costs included, the furniture moved and/or assembled, the energy required, and the dedicated discipline to achieve this milestone, cannot be described with words. But it was all worth it!







Since October 2020, the Puzzle Museum has been declared as a European Centre for Science, Technology and Arts (S+T+ARTS). More information here:

http://www.kastellorizo.org/megisti/kastellorizo_net/STARTS.html

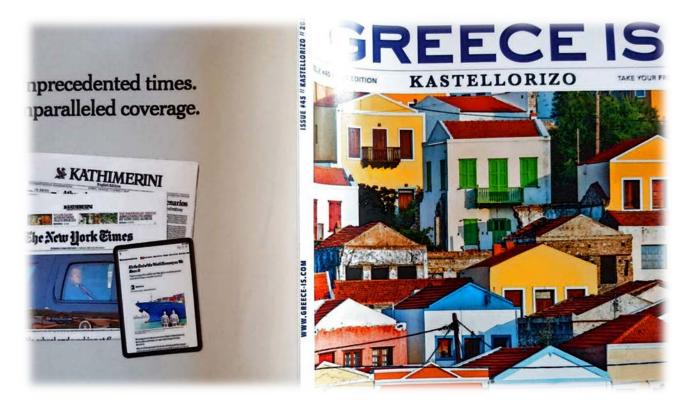
The Puzzle Museum has received a lot of media coverage through nationwide channels, such as Alpha, ERT1, ERT3, Star, and many local channels, as well as newspapers such as Vima and Kathimerini.

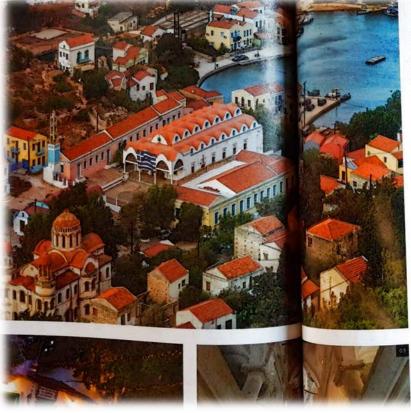












HORAFIA

Horafia, which means "fields" in Greek, Horafia, which means "fields" in Greek, is the area where the reakients of Kontel-lorizo once had their family farms. Todoy, it is the Island's religious and educational center, home to the Cathedral of Saints Constantine and Holena on one side of a pretty pubblied courtyeard and, oppo-site it, the Santrape Town School and the Girl's School (Parthenagogio). The Town School was endowed by Loulas Sant-School was endowed by Loukas Santrape (1852-1911), a wealthy contractor who had worked on irrigation systems in Egypt. He was also the benefactor of the Church of Aghlos Georgios in Horafia, an impressive eclectic-style eclifice that was never completed but is soon to be restored. There are two more ho

01. The Horafia district, d's religious to its most im

of wonhip in the immediate area – the church of Penaghia Horaflou and that of Aghico Spyridonas, and an impressive bust of the Lady of Ro, a woman who insido the Greek Rag over the leated Ro every day for decades, affirming Greek sovenightly with her action. Among the other buildings in Hora-fis is the traditional taverna Platania (Tel (+30) 22460.492.06). Now in operation or 35 years, and one of the location

for 35 years, and one of the locatio used in the film "Mediterraneo," t use in the num resolution number of two sisters and a daughter. These tireless wome prepare an array of delicious home-t-ty dishes every day, cooking up doimadail (stuffed vine severs), post of goat me chickpes fritters and octopus in toma -



MUSEUM

ISEUM DUZZLES The nainlens-painted path behind the Church of Aghina Georgia ton Horation will head you Greece's only Moseum of Puzzles. The brains of mathematician and puzzles.maker Rantarias

Meanwhile, the great wooden puzzle designer Mike Toulouzas of Kastellorizian origin, also showcased some of his award winning work on puzzles in his interview for the Metagrobologist magazine.

THE METAGROBOLOGIST MAGAZINE #08 THe agrobologist a magazine for puzzle fans everywhere his Issue Puzzling makes better ATEST NEWS Michael Toulouzas shares his thoughts, unique the latest news or philosophy, award-winning IPP designs and m the unveils some exciting upcoming projects. in and pu P.82 Delving into Cubozone! Yavuz Demirhan explores his craftsmanship, woodworking and incredile puzzle designs. Redefining Impossible 50III.es Jeff Scanlan (the modern-day Harry Kate Jones shares the Eng) shares a wonderful article behind the Kadon brand, her backgroun on Impossible Bottles. design process, puzzles in education, and

Edge latching

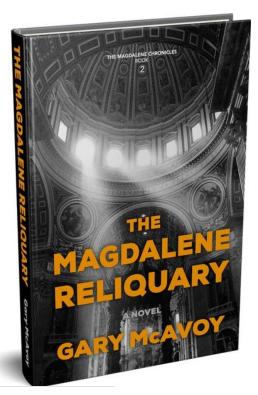
Puzzles We are also delighted to present an exploration of Major MacMahon's Revenge by Robert A. Beeler, Ph.D.

eavours into new projects

Allen Rolfs shares his lo of recreational mathematics, puzzling reflections and simple pocket puzzl

P. 16

Some more interesting happenings included "Pantazis' the Megistian" puzzle Secret of Atlantis featured inside Gary McAvoy's novel "The Magdalene Reliquary".



THE MAGDALENE RELIQUARY



"I'LL HAVE YOU KNOW," she said, tossing back her chestnut brown hair, "that I missed two conference workshops today, I was so engrossed in solving this. But I couldn't figure out where to begin. The clever way the catgut filaments are strung along each of the panels' edges allowed for virtually any formation. For a while I kept thinking along linear lines, like maybe the goal was to make it flat. But these two upright corner panels made that impossible.

"Then I searched the internet looking for unusual threedimensional puzzles and found a brilliant puzzle maker in Greece named 'Pantazis the Megistian.' His website had a similarly complex puzzle, several in fact, that he designed himself. I sent him a photo of ours and he got pretty excited.

"He indicated this was done in the manner of what's called a 'folding plate' puzzle, explaining that Pietro Vesconte had cut the map into nine square panels, apparently rearranged them out of order to heighten the complexity, then affixed slender threads of flexible sheep's intestine in a cleverly repositionable design attached to the adjoining edges of each panel. To make it especially challenging, instead of laying all nine panels flat, Vesconte placed two panels upright in one corner creating a partial

69

GARY MCAVOY

hemicube—an abstract polyhedron showing only two faces of a six-faced cube—while leaving the ninth slot vacant.

"So I started folding and refolding, thinking threedimensionally..." Hana began folding one panel after another, turning some panels on their sides, flipping others over onto one another as allowed by the internally-strung catgut.

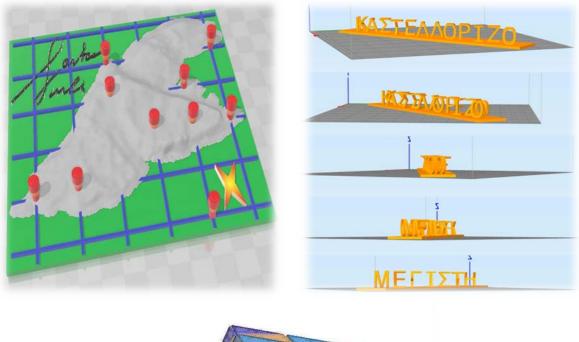
Dominic and Dengler watched in fascination as the once flattish map took on a new shape, that of a square cylindrical tower.

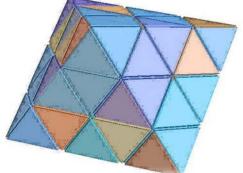
"... and Voila!" She said proudly, "I ended up with this!"



"You can see that all the contiguous paths now line up across the corners," Hana said, pointing them out. "It

Last, but not least, the addition of a 3D printer signaled a new era of puzzle designing in Kastellorizo!



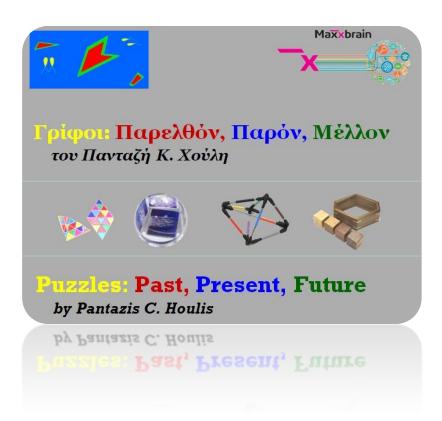


Also, the Puzzle Museum unveiled some of its ultra rare pieces, not found in any other collection.

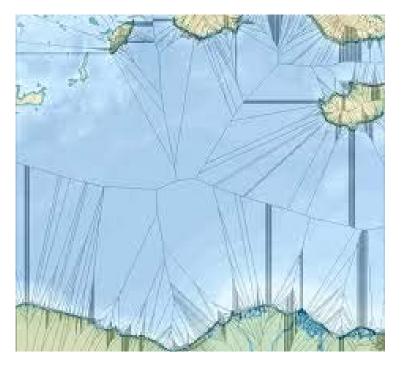


LECTURES:

1. Dr Pantazis Houlis' famous "Puzzles: Past, Present, Future" lecture, which has already been enjoyed by people in four different continents was presented again, this time in his own Puzzle Museum.



2. More lectures were presented, like one in the Drasi office, based on Voronoi diagrams



THE KASTELLORIZO ENIGMA CONGRESS

The Kastellorizo Enigma Congress (KEC, since 2008) is a celebration of puzzles for experiencing the logic and movement of mechanical puzzles, to exchange ideas and to ignite creativity. In 2020, the KEC took place in the Drasi office and it was combined with the introduction of a competition for solving the **Panta Penta 2020** puzzle with a 30 euro prize. The winner (first who solved it after one month) was **Manolis Kiriazakos**. He donated the prize to the MAA Red competition.



One of the newly made walking paths was a 5km circle route passing through above the Blue Cave, made by Manolis Roxanas and Pantazis Houlis after a one-month effort. Probably the best path on the island!



YELLOW AGON - 1D COMPETITION

Here, a smart problem (expressed mainly in words and/or numbers) will be awarded a prize.

2020 COMPETITORS

1. Puzzle by Michael Stoukas

Change a vowel I warned my XXX not to stay long under the XYX when visiting the beach.

2. Puzzle by Michael StoukasHomophonesMy doctor advised me to stay in bed at least for a XXXX since my leg is still too XXXX from the accident.

3. Puzzle by Michael Stoukas

Change the initial consonant

The eye witness informed the police that the suspect was probably a XXXX with blue eyes, blond hair and a quite YXXX face.

PRIZE: "MEGISTEUS" BEST OF THE BEST PUZZLE AWARD (YELLOW AGON):

Michael Stoukas



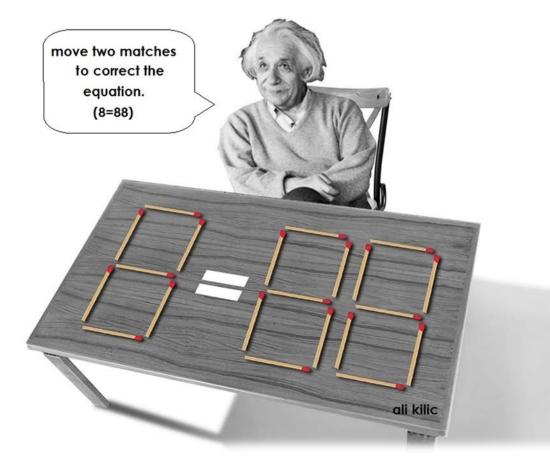
"Sphinx" Award (1D): Michael Stoukas

GREEN AGON - 2D COMPETITION

Here, a smart problem mainly expressed in a puzzling picture will be awarded a prize.

2020 COMPETITORS

1. Puzzle by Ali Kilic.

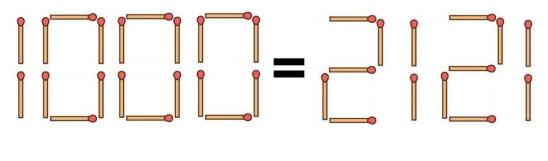


2. Puzzle by Ali Kilic.

Erase two red dot, to make a valid equetion (7+1) (7-1) = 50)

3. Puzzle by Ali Kilic.

Move two matches to correct the equation



ali kilic

PRIZE: "MEGISTEUS" BEST OF THE BEST PUZZLE AWARD (GREEN AGON)

Ali Kılıç



"Daedalus" Award (2D): Ali Kılıç



There were two other worthy entries, but the last puzzle was very clever, related to Physics.

BLUE AGON - 3D COMPETITION

Here, the best scientific and /or mechanical 3d puzzle (in the form of a toy or a gadget), is awarded.

The puzzle types are defined by the "puzzlification" puzzle database: <u>www.houlis.com/database</u> <u>www.houlis.com/database.txt</u>



2020 COMPETITORS

COOL YOUR COCKTAIL Manufactured and designed in 2019 by Diniar Namdarian

Goal: Rotate the circles so that the polyhedron piece can enter the box Puzzle Type: MC, PL.

CHOC BOX

Manufactured and designed in 2018 by Diniar Namdarian.



Goal: Disassemble and assemble . Puzzle Type: PL, DI.

JOHNSTEFY

Manufactured and designed in 2020 by Jonathan Stefanou**



Goal: Take out the pieces and put them back in the frame. Puzzle Type: MC, WD.

HEX PAVE

Created by Carl Hoff, development assisted by Kate Jones in 2020.



Goal: Match the pieces. Puzzle Type: MC, PL.

MOON AND STAR

Manufactured and designed in 2016 by Diniar Namdarian.



Goal: Move the Star around the Moon Puzzle Type: SL,PL.

KAWAI-TSUGITE PUZZLE CUBE

Manufactured and designed in 2020 by Roland Koch.



Goal: Disassemble and assemble the cube Puzzle Type: INT, PL.

SHARDINAIRES-9

Created in 2020 by George Sicherman, developed further by Kate Jones.



Goal: Use the 9 pieces to make polyominos Puzzle type: MC, PL.

BLUE COMPETITION PARAMETERS:

Originality/creativity. How new, unusual, non-repetitive and original is the puzzle compared to past ones? Can its creativity actually redefine a new category or is it a new branch of a known idea? (Odysseus Award)

Mechanism/Impression. Does it have the right geometry to move robust and slick? Is it simple AND hard? Is it complex AND easy? If there is a mechanism, is it precise? Does its movement impress? (Euclid Award)

Playability/Longevity. Is it logical, playable and addictive enough to inspire the mind? Is the depth of this puzzle enough to keep coming back for more for a long time with different ranges of difficulty? (Archimedes Award)

Research/Experience. Besides the physical structure, how well thought, effective and understandable is the puzzle's theme? How much experience was needed to make it? Can it be used in education? (Prometheus Award)

Beauty/Deluxing. Does it look artistic, attractive or classy as if it was a deluxe masterpiece? Does it have appropriate colors matching the design throughout? Is it presented well as a whole? (Apollo Award)

Quality/Aesthetics. Does it feel pleasing in terms of material? Can it be a fair challenge? Does it break easily? Is it aesthetically well made? (hand-made puzzles feel better, 3D prints vary in quality). (Hephaestus Award)

Solvability/Unpredictability. How intense, unpredictable and surprising are its "wow" or "aha" moments before, during or after finding the solution? Is it inviting enough to solve it again? (Pandora Award)

Decisions are made by three judges, experts in puzzles and/or mathematics. A puzzle with the best score in one of the above categories wins an electronic award (stated in brackets). The overall score determines the Megisteus Award winner. There are also some extra comments provided for every competing puzzle. Scale of grades can change from year to year, as original designs of one year are not original during the next year.

PRIZE: "MEGISTEUS" BEST OF THE BEST PUZZLE AWARD (BLUE AGON):



COOL YOUR COCKTAIL

by Diniar Namdarian (Winner receives the 1st place medal)



SILVER MEDAL FOR HEX PAVE &

SILVER MEDAL FOR HEX PAVE



BRONZE MEDAL FOR KAWAI-TSUGITE PUZZLE CUBE



ALL 2020 BLUE AGON AWARDS AND GRADING

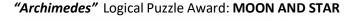
"Apollo" Attractive Puzzle Award: CHOC BOX



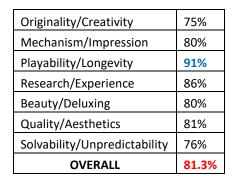


Originality/Creativity	88%
Mechanism/Impression	90%
Playability/Longevity	69%
Research/Experience	76%
Beauty/Deluxing	93%
Quality/Aesthetics	86%
Solvability/Unpredictability	70%
OVERALL	81.7%

Comments: Unique way of moving the parts to separate them.







Comments: The pieces add a new interesting twist in a sliding puzzle.

"Euclid" Geometrical Puzzle Award: JOHNSTEFY



This entry is dedicated to Jonathan who passed away in January 2021. He had helped in many ways to promote puzzles in Kastellorizo by (1) assisting in carrying puzzles for exhibitions, (2) sending puzzles to the competition, (3) fixing puzzles like the Princeps, (4) assembling puzzles, and (5) preparing puzzle cards. He will be missed...

"Hephaestus" Quality Puzzle Award: HEX PAVE



A puzzle with a huge frame, interesting challenge and quality value.

"Odysseus" Creative Puzzle Award: KAWAI-TSUGITE PUZZLE CUBE



A new way to assemble a very intriguing cube.



Originality/Creativity	93%
Mechanism/Impression	83%
Playability/Longevity	70%
Research/Experience	82%
Beauty/Deluxing	89%
Quality/Aesthetics	82%
Solvability/Unpredictability	75%
OVERALL	82.0%

"Pandora" Unpredictable Puzzle Award: COOL YOUR COCKTAIL



A brilliant idea which was very popular among the judges.

Originality/Creativity 92% Mechanism/Impression 91% Playability/Longevity 72% Research/Experience 86% Beauty/Deluxing 80% Quality/Aesthetics 81% Solvability/Unpredictability 95% OVERALL 85.3%

"Prometheus" Well Thought Puzzle Award: SHARDINAIRES-9



Create polyominos shapes using combinations with a predefined set of pieces. Very nice touch!

RED AGON - 4D COMPETITION (SPEEDSOLVING)

This is a speed solving competition. The Red Agon took place at the Agora on the 2nd of September.

2020 COMPETITORS



ALL COMPETITORS (RED AGON):

ΣΤΑΜΑΤΙΑ ΑΧΛΑΔΙΩΤΗ	ΜΑΡΙΑ ΚΑΡΑΒΕΛΑΤΖΗ	0-1, 0-2, 0-3, 1-3		
ΚΑΤΕΡΙΝΑ ΛΑΖΑΡΙΔΟΥ	ΓΙΩΡΓΟΣ ΚΑΡΑΒΕΛΑΤΖΗΣ	0-1, 1-1, 1-2, 1-3		
ΕΙΣΟΔΙΑ ΛΑΛΙΩΤΗ	ΚΩΝΣΤΑΝΤΙΝΟΣ ΣΙΣΚΑΚΗΣ	0-1, 1-1, 1-2, 2-2	TT 12-12	TT 17-8
ΔΗΜΗΤΡΗΣ ΚΥΡΚΟΣ	ΓΙΩΡΓΟΣ ΧΑΡΑΛΑΜΤΤΙΔΗΣ	0-1, 1-1, 1-2, 1-3		
ΘΕΟΔΩΡΟΣ ΑΧΛ	ΑΔΙΩΤΗΣ			
ΜΙΧΑΗΛΑ ΚΟΥΤ	РОҮЛН			
ΝΙΚΟΣ ΚΑΡΑΒΕ.	ΛΑΤΖΗΣ			
ΔΕΣΠΟΙΝΑ ΑΧΛΑΔΙΩΤΗ	ΑΝΑΣΤΑΣΙΑ ΚΑΛΟΜΟΙΡΟΥ	1-0, 1-1, 1-2, 1-3		
ΝΙΚΟΣ ΚΑΡΑΒΕΛΑΤΖΗΣ	ΓΙΩΡΓΟΣ ΚΑΡΑΒΕΛΑΤΖΗΣ	 1-0, 2-0, 2-1, 2-2	TT 1-8	
ΓΙΩΡΓΟΣ ΧΑΡΑΛΑΜΤΓΙΔΗΣ	ΜΑΡΙΑ ΚΑΡΑΒΕΛΑΤΖΗ	0-1, 1-1, 1-2, 1-3		
ΕΙΣΟΔΙΑ ΛΑΛΙΩΤΗ	ΜΙΧΑΗΛΑ ΚΟΥΤΡΟΥΛΗ	1-0, 2-0, 3-0, 3-1		
ΘΕΟΔΩΡΟΣ ΑΧΛΑΔΙΩΤΗΣ	ΑΝΑΣΤΑΣΙΑ ΚΑΛΟΜΟΙΡΟΥ	1-0, 1-1, 2-1, 3-1		
		=		
ΓΙΩΡΓΟΣ ΚΑΡΑΒΕΛΑΤΖΗΣ	ΕΙΣΟΔΙΑ ΛΑΛΙΩΤΗ	1-0, 2-0, 3-0, 3-1		
ΘΕΟΔΩΡΟΣ ΑΧΛΑΔΙΩΤΗΣ	ΜΑΡΙΑ ΚΑΡΑΒΕΛΑΤΖΗ	1-0, 1-1, 1-2, 1-3		
		=		
ΤΕΛ	ΙΚΟΣ			
ΓΙΩΡΓΟΣ ΚΑΡΑΒΕΛΑΤΖΗΣ	ΜΑΡΙΑ ΚΑΡΑΒΕΛΑΤΖΗ	1-0, 2-0, 2-1, 3-1		

"MEGISTEUS" BEST OF THE BEST PUZZLE AWARD (RED AGON): Giorgos Karavelatzis (Winner received 50 euros as a prize)



"Hermes" Fastest Solver Award: Giorgos Karavelatzis



"Achilles" Hero Solver Award (Finalist): Maria Karavelatzi



WHY KASTELLORIZO? The reasons for the existence of the MAA:

 Kastellorizo has a long history in puzzles. In the past, there were plenty of puzzle magazines circulated on the island. A good example is the 19th century magazine "Anamniseis" by Michael Petridou, which can be found at the Megisti museum.

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2. Two of the three internationally known Greek mechanical puzzle designers (*Michael Toulouzas* and *Pantazis Houlis*) have origins from Kastellorizo Island.



3. Kastellorizo's isolated geographical position and beautiful landscape provides the perfect place for mind concentration and inspiration, especially for puzzles.

The 2018 MEGISTIAN AENIGMA AGON would like to thank:

- 1. Yiannis Sampsakos, Anna Sampsakos, Nikitas Sampsakos, Antonis Sampsakos, Michalis Hatzigiakomis, Garifalia Koti and Thanasis Kotis.
- 2. Stephanos Bouhounas, Eleni Bouhouna, Athena Bouhouna, Giannis Stamatiou, Christos Bouhounas, Kaiti Bouhouna, Nora Bouhouna, and... Sandy (their help in Rhodes was critical)).
- 3. The *Municipality of Megisti*.
- 4. **Drasi** for providing to us the usage of key areas.
- 5. *Pantazis Houlis* for exhibiting and providing hands-on his prototypes and vast puzzle collection (which contains expensive, impressive, rare, and one of a kind designs).
- 6. *Gabriel Fernandes'* Puzzle Collection blog (<u>http://mypuzzlecollection.blogspot.com</u>), the *Midlands Puzzle Party* (<u>https://web.facebook.com/groups/306368582822017</u>), <u>http://www.kastellorizo.com</u> and <u>http://www.kastellorizo.net</u> for promoting the MAA.
- 7. The support of people related to the prestigious International Puzzle Party.
- 8. The participation of world famous puzzle designers (who also provided extremely positive and encouraging feedback) and the unexpected high quality of the competition puzzles.
- 9. Professor *Michael Lambrou* from the University of Crete, the main organiser in Greece of the international Kangaroo competition (<u>http://www.kangaroo.gr</u>).
- 10. Father Christos, Katerina Lazarizou and Dimitris Kurkos for the help at the MAA red completion.
- 11. The existence of judges with immense experience in puzzles (collecting and designing) and puzzle competitions (Australia, Greece, Singapore, India, Turkey).
- 12. The effort of the organisers to minimize the cost to allow global participation (only the postage of physical puzzles in the blue competition was needed).
- 13. The hospitality of the local people nicely combined with Kastellorizo's puzzle tradition.
- 14. The organisers' choice of the beautiful surroundings and location of Kastellorizo, with so much to offer to anyone who stayed for a few days (crystal clear water, mountain paths with amazing views, the blue cave, the excellent local food and sweets, etc).
- 15. Jonathan Stefanou, who had supported the KEC and then the MAA more than anyone else, but he passed away in a very young age.
- 16. And most importantly, the... *Puzzle Ninja*, who helped us to protect the puzzles and stop people from cheating at the competitions.



The Puzzle Ninja protects the MAA from above