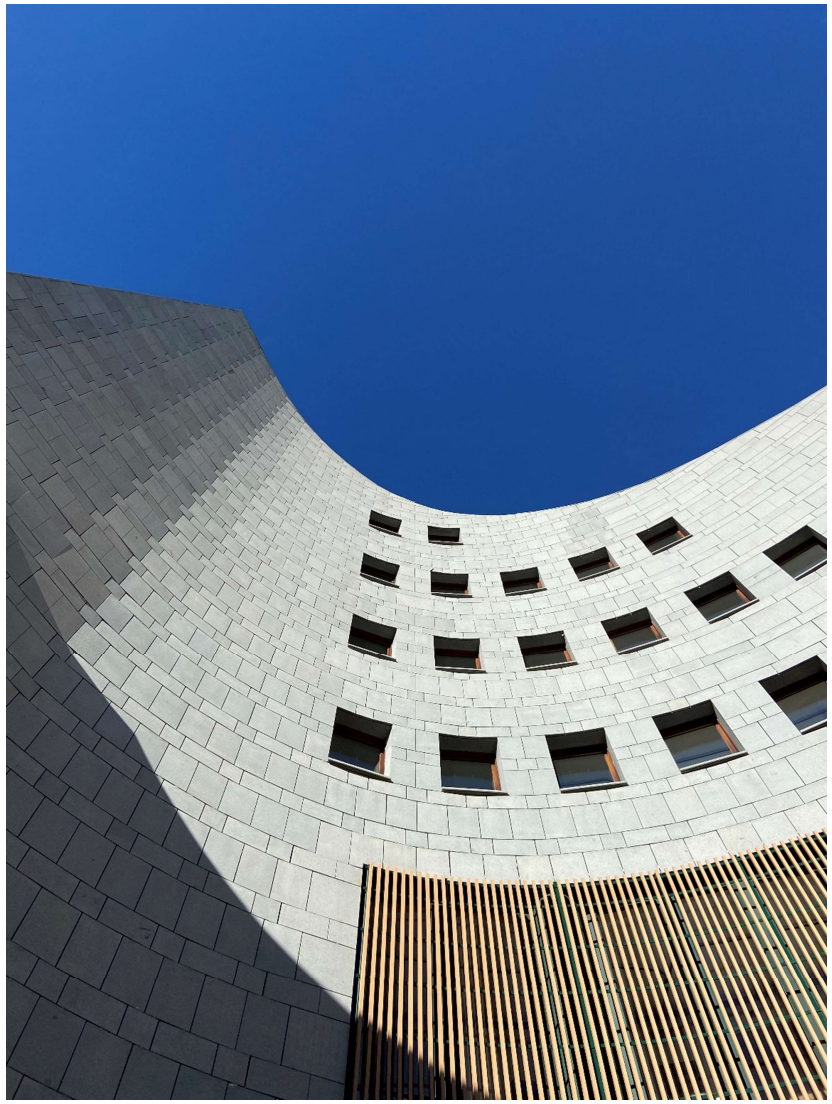
euro photomath

EUROPHOTOMATH 2023, 1º Premio_

Sly Spiral
AES Parma

This photo was taken in Bardonecchia, province of Turin. Seeing this structure, I immediately liked the stile, especially the shape it had.
So instead of taking a photo vertically I decided to work with prospective by oriented the lens bottom up.
The result it's a contrast between the shape of the building (combining the texture of the material with which it was built) and a neat blue color of the sky, thus distorting the real image, bringing it back to a spiral that seems to originate from the sky.



EUROPHOTOMATH 2022, 2º Premio_

Sky Reflection

ES Varese

The picture I chose is the one from the view of a skyscraper from below. Thanks to the mirror glass used to cover the exterior of the building, we can see a reflection of the clouds in the sky. If we assume that the line that separates the sky and the building is the x-axis, and the left vertical line of the picture frame is the y-axis, the formula for the reflection would be y = -f(×). The value of the y-coordinate of each point (of the clouds) has to be negated while the x-value stays the same. The exterior of the skyscraper also has rectangular windows, that are inclined in different ways, creating curving lines. This prevents to see the whole reflection of the sky, but I think that it shows the mathematical aspect of this picture even more clearly, by showing its geometrical forms.

EUROPHOTOMATH 2022, 3º Premio_

Cercles Infinis et Pythagore

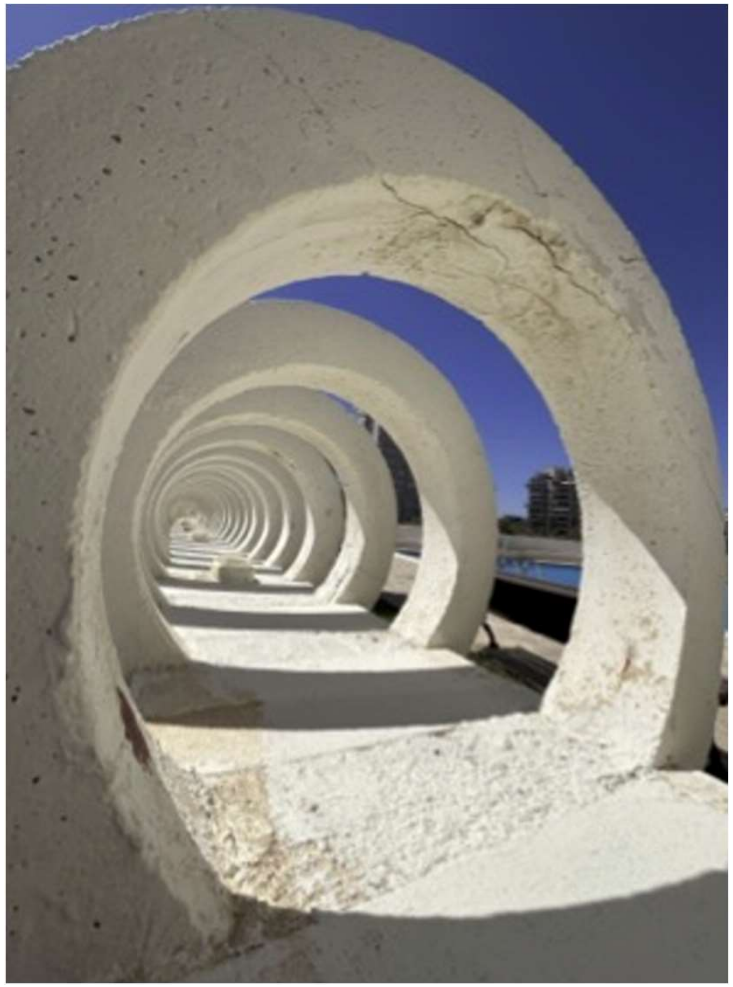
ES Alicante

Cette image prise sur une barrière d'un bâtiment représente une translation infinie d'anneaux sur une droite. Sur cette translation de cercles, chaque cercle est un ensemble de points.
Ces points sont liés par la fonction:

$$x^2 + y^2 = R^2$$

En effet, on peut construire pour chaque point du cercle un triangle rectangle dont un côté de l'angle droit est la valeur x et l'autre la valeur y et dont l'hypoténuse est le rayon.
On a bien d'après le théorème de Pythagore:

$$x^2 + y^2 = R^2$$



EUROPHOTOMATH 2023, 4º Premio_

The Down Szide, Up
ES Alicante

In this picture, the lake creates a horizon line which is also the symmetry line.
Which means the world is the same up or downside, it only changes with perspective you chose to adopt.
In this picture, what we see that the upside is only a reflection of the actual upside.
Since the picture is now upside down, the physical downside is now upside. But then, which is really the upside?

EUROPHOTOMATH 2023, 5º Premio_

Figuras de Incognito
ES Alicante

En la fotografía se puede contemplar un rostro dividido en múltiples figuras geométricas. Todas estas figuras son iguales, pero a su vez pueden ser otras muy diferentes. Desde la vista en 2D se aprecian: triángulos, rombos, puntas de flecha, hexágonos y endecágonos, entre otros. En cambio, si viajamos al mundo 3D podremos contemplar: cubos y pirámides. No obstante, lo más curioso y apasionante es que si nos proponemos ver un solo tipo de figura, veremos la fotografía repleta de esa figura y cuando queramos cambiar de figura geométrica, solo bastará con imaginárnosla.
Esto nos demuestra una de las normas más importantes de las matemáticas: para conseguir un resultado se puede llegar a él mediante diferentes caminos, para poder repletar la imagen podemos llegar viendo diferentes figuras. Para finalizar, he de añadir que esta fotografía no oculta solo figuras geométricas, ya que también se manifiestan las diferentes Leyes de la Óptica Geométrica.