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features...

Many people find no beauty and pleasure in maths – but, as **Lewis Dartnell** explains, our brains have evolved to take pleasure in rhythm, structure and pattern. Since these topics are fundamentally mathematical, it should be no surprise that mathematical methods can illuminate our aesthetic sense.



All about averages

Did you know that you can't average averages? Or that Paris is rainier than London ... but it rains more in London than in Paris? **Andrew Stickland** explores the dangers that face the unwary when using a single number to summarise complex data.



They never saw it coming

Most of us have heard of "stealth" – a technology used by the military to disguise craft from enemy radar. But nature's stealth fighters are not so well known – creatures that use motion camouflaging to approach their prey undetected. **Lewis Dartnell** looks at the vector mathematics behind the phenomenon.



features...

Ubiquitous octonions

Mathematician and physicist **John Baez** declares himself fascinated by exceptions in mathematics. This interest has led him to study the octonions, and, through them, to find out more about the origins of complex numbers and quaternions. In the second of two articles, he talks about the characters of the different dimensions, beauty and utility in mathematics, and just why he likes dimension 8 so much.



Career interview: Biomechanical engineer

Jose Munoz explains how engineering can allow you to explore the unknown, from understanding how mechanical structures bend to investigating the way genes affect the shape of embryos.



Plus is part of the family of activities in the Millennium Mathematics Project, which also includes the NRICH and MOTIVATE sites.