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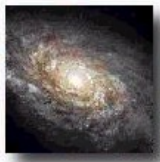
Issue 15

Knots crop up all over the place, from tying a shoelace to molecular structure, but they are also elegant mathematical objects. **Colin Adams** asks when is a molecule knot a molecule? and what happens if you try to build a knot out of sticks?



Backgammon, doubling the stakes, and Brownian motion

Backgammon is said to be one of the oldest games in the world. In this article, **Jochen Blath** and **Peter Mörters** discuss one particularly interesting aspect of the game – the doubling cube. They show how a model using Brownian motion can help a player to decide when to double or accept a double.



How big is the Milky Way?

A question which has been vexing astronomers for a long time is whether the forces of attraction between stars and galaxies will eventually result in the universe collapsing back into a single point, or whether it will expand forever with the distances between stars and galaxies growing ever larger. **Toby O'Neil** describes how the mathematical theory of dimension gives us a way of approaching the question.



RIP Claude Shannon

Plus Magazine

Claude Shannon, who died on February 24, was the founder of Information Theory, which is the basis of modern telecommunications. **Rachel Thomas** looks at Shannon's life and works.



Career interview: Systems administrator

Steve Traylen tells **Plus** about life as a Systems Administrator.



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