



Our final meeting of 2019 will be on **Monday 2nd December**, it starts at **8pm** sharp in our usual venue of **Ilyclare High School Lecture Theatre**

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[Directions can be found here.](#)

The speaker for this meeting is **Dr Matt Redman** from The Centre of Astronomy at Galway University. He will be giving a talk entitled **e Shaping of Planetary Nebulae**

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About Matt: *Dr Matt Redman is Director of the Centre for Astronomy NUI Galway, and is Chair of the Astronomical Sciences Group of Ireland, the professional association for astronomers in Ireland. His research interests are in star formation and star destruction processes. Matt uses radio and millimetre telescope data to look inside star forming molecular clouds, and optical and millimetre data for studying planetary nebulae, novae and supernova remnants. He works at the observational and theory interface, simulating data from telescopes using state of the art computer codes. His work has been supported by SFI and IRC grants, an equipment grant for I-LOFAR, and through telescope time awards.*

About the talk: *Planetary nebulae often exhibit stunning shapes and intricate features, but it is a long-standing puzzle as to how such a wide range of shapes can arise because the stars from which they form are spherical. Binary companions offer one way to break the symmetry, but there are not enough of them in close orbits to account for the numbers of non-spherical planetary nebulae. Instead, we examine whether exoplanets, engulfed at the end of the stars*

life, can be responsible for the shaping. The talk will be illustrated with many examples of planetary nebulae, including the intriguing Boomerang Nebula, which is currently the coldest object ever observed in space.

Please note: Under 16's are very welcome but due to our child protection policy, we ask that they are accompanied by an adult.

As always we will have refreshments available after the meeting including mince pies, a festive treat on the run up to Christmas. A donation bucket is available at the door if you wish to support us in our work!

Hope to see you all there!