

Student solves a 30 year old mathematics problem

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UQ postgraduate student Daniel Horsley has solved a mathematics problem that has defied experts around the world for more than 30 years.

The problem is in a field of mathematics known as combinatorial design theory and its solution has been described by researchers in the area as a major breakthrough.

Daniel worked with his supervisor Dr Darryn Bryant on the problem, known as Lindner's conjecture on embeddings of partial Steiner triple systems.

Dr Bryant said the problem was first posed in the 1970s by Professor Curt Lindner of Auburn University, USA.

"The problem has confounded leading international combinatorial mathematics experts for many years and for Daniel to have found a solution to such a famous problem whilst studying for his PhD is an amazing achievement.

"Daniel is one of several extremely talented Queensland-educated mathematics students undertaking world-class research at The University of Queensland, where combinatorial mathematics has been an area of strength for many years."

The study of Steiner triple systems dates back to the mid 1800s

following the publication of a landmark paper by church rector Reverend Thomas P. Kirkman. They are used in scientific areas such as biological screening and computer error correction.

Daniel Horsley is in the second year of his PhD degree at The University of Queensland. He attended Brisbane Boys' College in Toowong and lives with his family in the Brisbane suburb of Corinda.

Source: University of Queensland

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