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My name is Matthew Bailes and I have been interested in Fast Radio Bursts since early 2007, when Duncan Lorimer showed me two apparently simultaneous dispersed pulses in adjacent beams of the Parkes Multibeam receiver while we were observing together in the Parkes telescope. Over the next few days we retrieved the filterbank data of the bursts and displayed their waterfall plots, and saw the unmistakable dispersed pulse of the Lorimer Burst. It became apparent that one of the 13 beams of the receiver had triggered the radio frequency rejection algorithm, and when we retrieved the original data saw that the burst had saturated the receiver and been replaced by fake data! At first the Lorimer Burst seemed too good to be true, but history has shown that it was the first FRB and part of a cosmological population.

In 2009 I helped design the hardware system for the Parkes High Time Resolution Universe survey that eventually discovered the Thornton et al. (2013) bursts that established the cosmological population, and worked to implement GPUs in real-time FRB detection and to dump full Stokes parameter information.

My team built a new backend for the Molonglo radio telescope, and its wide field of view enabled us to detection more FRBs at low frequencies, including a voltage capture mode for the coherent dedispersion of FRBs. This helped detect microstructure in some of the FRBs with timescales down to 30 us. I helped Hyeron Cho develop a high time resolution dedispersion system for ASKAP that was used in the study of one of its first FRBs, revealing a 4-component FRB.

I have an interest in the origin and evolution of binary pulsars, that may be of relevance to FRBs.