A topological method in matching theory

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I will survey the developments, over the last 5 years, of a topological method in matching theory that was introduced in a paper by Haxell and myself. This method is based on a topological proof of Hall's theorem, which yields far reaching extensions of the theorem. For example, extensions to hypergraphs. In particular, it yields a proof of the first open case of Ryser's conjecture, that of 3-uniform hypergraphs: in a 3-partite hypergraph the covering number is no larger than 2 times the matching number.