ALICE LACAZE-MASMONTEIL, University of Regina

Completing the solution of the directed Oberwolfach problem with two tables

A $(\vec{C}_{m_1}, \vec{C}_{m_2})$-factor of a directed graph G is a spanning subdigraph of G comprised of two disjoint directed cycles of lengths m_1 and m_2. In this talk, we show that the complete symmetric digraph K_n^* can be decomposed into $(\vec{C}_{m_1}, \vec{C}_{m_2})$-factors when $m_1 + m_2 = n$, $m_1 \in \{4, 6\}$, and $m_2 \geqslant 8$ is even. In conjunction with recent results of Kadri and Šajna (2024+), this result completes the solution of the two-table case of the directed Oberwolfach problem. This work was done in collaboration with Daniel Horsley.