ICM 1998, Berlin, Aug. 18–27

Abstracts of Short Communications and Posters

Section:

6. Topology

1991 MS Classification: 57

Bozeman, James R., Lyndon State College, Vermont, USA

Unique Prime Decompositions of Pairs of Solid Tori

Extending results of H. Schubert, the presenter and E. M. Brown proved, respectively, that monotonic pairs of solid tori (pairs in which the inner solid torus is braided in the outer solid torus) and unknotted pairs of solid tori admit unique decompositions into prime monotonic pairs and prime unknotted pairs, respectively, including the ordering of the factors. In this presentation we give necessary and sufficient conditions for when a pair of solid tori admits a unique prime decomposition. We then apply these results to both braid theory and to Whitehead manifold theory.

Reference: J. R. Bozeman, On Monotonic Pairs of Solid Tori, Ph. D. Thesis, Dartmouth College and UMI Publications, 1993.