Zeitschrift: L'Enseignement Mathématique
Band: 35 (1989)
Heft: 1-2: L'ENSEIGNEMENT MATHÉMATIQUE

Artikel: KNOTTING CODIMENSION 2 SUBMANIFOLDS LOCALLY
Bibliographie
Autor: Masuda, Mikiya / Sakuma, Makoto
DOI: https://doi.org/10.5169/seals-57360

Case 3. The case where $n \equiv 0\,(4)$ and p is even. In this case $L_{n+3}(\mathbf{Z}_p, 1) \simeq \mathbf{Z}_2$. Since the value $\gamma_* \sigma(h) \in L_{n+3}(\mathbf{Z}_p, 1)$ is additive with respect to connected sum, it necessarily vanishes for $(S^{n+2}, K) \sharp (S^{n+2}, K)$.

The rest of the argument is the same as that in Step 5. This proves the theorem. Q.E.D.

REFERENCES

[AS] ATIYAH, M. F. and I. M. SINGER. The index of elliptic operators III. *Ann. of Math. 87* (1968), 546-604.

[Ba] BAK, A. Odd dimensional surgery groups of odd torsion groups vanish. *Topology 14* (1975), 367-374.

[Br] BROWDER, W. The Kervaire invariant of framed manifolds and its generalization. *Ann. of Math. 90* (1969), 157-186.

[DF] DUNWOODY, M. J. and R. A. FENN. On the finiteness of higher dimensional knot sums. *Topology 26* (1987), 337-343.

[K] KERVAIRE, M. Les nœuds de dimension supérieure. *Bull. Soc. Math. de France 93* (1965), 225-271.

[KW] KERVAIRE, M. and C. WEBER. A survey of multidimensional knots. *Knot theory*, Lect. Notes in Math. 685, Springer, pp. 61-134, 1978.

[La] LAWSON, T. Detecting the standard embedding of $\mathbf{RP}^2$ in S^4. *Math. Ann. 267* (1984), 439-448.

[Le1] LEVINE, J. Unknotting spheres in codimension two. *Topology 4* (1965), 9-16.

[Le2] —— Knot cobordism in codimension two. *Comment. Math. Helv. 44* (1969), 229-244.

[Le3] —— Knot modules I. *Trans. A.M.S. 229* (1977), 1-50.

[Li] LITHERLAND, R. A generalization of the lightbulb theorem and *PL I*-equivalence of links. *Proc. A.M.S. 98* (1985), 353-358.

[Ma] MAEDA, T. Star decompositions along splitting groups. In preparation.

[Ms] MASUDA, M. An invariant of manifold pairs and its applications. *J. Math. Soc. of Japan.* To appear.

[Ml] MILNOR, J. W. Whitehead torsion. *Bull. A.M.S. 72* (1966), 358-426.

[MS] MILNOR, J. W. and J. D. STASHEFF. *Characteristic classes.* Ann. of Math. Studies 76, Princeton, 1974.

[My] MIYAZAKI, K. Conjugation and the prime decomposition of knots in closed, oriented 3-manifolds. Preprint.

[MB] MORGAN, J. and H. BASS. *The Smith conjecture.* Pure Appl. Math. 112, Academic Press, 1984.

[R] ROLFSEN, D. *Knots and links.* Math. Lect. Series 7, Publish or Perish Inc. 1976.

[Sc] SCHULTZ, R. Smooth structures on $S^p \times S^q$. *Ann. of Math. 90* (1969), 187-198.

[Sm1] SUMNERS, D. W. On the homology of finite cyclic coverings of higher-dimensional links. *Proc. A.M.S. 46* (1974), 143-149.

[Sm2] —— Smooth Z_p-actions on spheres which have knots pointwise fixed. *Trans. A.M.S. 205* (1975), 193-203.

[T] TROTTER, H. On S-equivalence of Seifert matrices. *Inv. Math. 20* (1973), 173-207.
[V] VIRO, O. Ja. Local knotting of submanifolds. *Math. USSR. Sbornik 19* (1973), 166-176.
[Wl1] WALL, C. T. C. *Surgery on compact manifolds.* Academic Press, 1970.
[Wl2] —— Classification of Hermitian forms VI. *Ann. of Math. 103* (1976), 1-80.
[Wg] WAGNER, D. H. On free products of groups. *Trans. A.M.S. 84* (1957), 352-378.

(Reçu le 18 février 1988)

Mikiya Masuda
Department of Mathematics
Osaka City University
Sumiyoshi, Osaka 558
(Japan)

Makoto Sakuma
Department of Mathematics
College of General Education
Osaka University
Toyonaka, Osaka 560
(Japan)