

On May spectral sequence and the algebraic transfer

Cho'n P.H., Leminh H.A.

Department of Mathematics, College of Science, Cantho University, 3/2 St, Ninh Kieu, Cantho, Viet Nam;
Department of Mathematics-Mechanics-Informatics, Vietnam National University - Hanoi, 334 Nguyen Trai
St, Thanh Xuan, Hanoi, Viet Nam

Abstract: We give a description of the dual of W. Singer's algebraic transfer in the May spectral sequence and use this description to prove new results on the image of the algebraic transfer in higher homological degrees. © 2010 The Japan Academy.

Author Keywords: Adams spectral sequence; Algebraic transfer; Hit problem; May spectral sequence; Steenrod algebra

Year: 2010

Source title: Proceedings of the Japan Academy Series A: Mathematical Sciences

Volume: 86

Issue: 9

Page : 159-164

Link: Scopus Link

Correspondence Address: Cho'n, P.H.; Department of Mathematics, College of Science, Cantho University, 3/2 St, Ninh Kieu, Cantho, Viet Nam

ISSN: 3862194

DOI: 10.3792/pjaa.86.159

Language of Original Document: English

Abbreviated Source Title: Proceedings of the Japan Academy Series A: Mathematical Sciences

Document Type: Article

Source: Scopus

Authors with affiliations:

- Cho'n, P.H., Department of Mathematics, College of Science, Cantho University, 3/2 St, Ninh Kieu, Cantho, Viet Nam
- Leminh, H.A., Department of Mathematics-Mechanics-Informatics, Vietnam National University - Hanoi, 334 Nguyen Trai St, Thanh Xuan, Hanoi, Viet Nam

References:

- Adams, J.F., On the structure and applications of the Steenrod algebra (1958) Comment. Math. Helv., 32, pp. 180-214
- Adams, J.F., On the non-existence of elements of Hopf invariant one (1960) Ann. of Math., 72 (2), pp. 20-104
- Boardman, J.M., Modular representations on the homology of powers of real projective space (1991) Algebraic topology (Oaxtepec), pp. 49-70. , Contemp. Math., Amer. Math. Soc., Providence, RI 146
- Bruner, R.R., (1997) The cohomology of the mod 2 Steenrod algebra, p. 37. , A computer calculation, WSU Research Report
- Bruner, R.R., Hà, L.M., Hung, N.H.V., On the behavior of the algebraic transfer (2005) Trans. Amer. Math. Soc., 357 (2), pp. 473-487
- Chon, P.H., Hà, L.M., (2000) Lambda algebra and the Singer transfer, , (Preprint)

- Hà, L.M., Sub-Hopf algebras of the Steenrod algebra and the Singer transfer in Proceedings of the School and Conference in Algebraic Topology, 81-105 (2007) Geom. Topol. Monogr., 11, pp. 81-105
- Hung, N.H.V., The cohomology of the Steenrod algebra and representations of the general linear groups (2005) Trans. Amer. Math. Soc., 357 (10), pp. 4065-4089
- Hung, N.H.V., Quỳnh, V.T.N., The image of Singer's fourth transfer C. R. Math (2009) Acad. Sci. Paris, 347, pp. 23-24. , 1415-1418
- Kameko, M., (1990) Products of projective spaces as Steenrod modules, , ProQuest LLC, Ann Arbor, MI
- Lin, W.-H., Ext₄, *A (Z/2, Z/2) and Ext₅, *A (Z/2, Z/2) (2008) Topology Appl., 155 (5), pp. 459-496
- Liulevicius, A., The factorization of cyclic reduced powers by secondary cohomology operations (1962) Mem. Amer. Math. Soc., 42, p. 112
- May, J.P., (1964) The cohomology of restricted Lie algebras and of Hopf algebras: Application to the Steenrod Algebra, , Pro Quest LLC, Ann Arbor, MI
- May, J.P., The cohomology of restricted Lie algebras and -of Hopf algebras (1966) J. Algebra, 3, pp. 123-146
- Milnor, J., The Steenrod algebra and its dual (1958) Ann. of Math., 67 (2), pp. 150-171
- Minami, N., The iterated transfer analogue of the new doomsday conjecture (1999) Trans. Amer. Math. Soc., 351 (6), pp. 2325-2351
- Mitchell, S.A., Splitting B(Z/p)ⁿ and BT_n via modular representation theory (1985) Math. Z., 189 (1), pp. 1-9
- Epstein, D.B.A., (1962) Cohomology operations: Lectures by N.E. Steenrod, Ann. Of Math. Stud., 50. , Princeton Univ. Press, Princeton, NJ
- Nam, T.N., Transfert algébrique et action du groupe linéaire sur les puissances divisées modulo 2 (2008) Ann. Inst. Fourier (Grenoble), 58 (5), pp. 1785-1837
- Priddy, S.B., Koszul resolutions (1970) Trans. Amer. Math. Soc., 152, pp. 39-60
- Quỳnh, V.T.N., On behavior of the fifth algebraic transfer, in Proceedings of the School and Conference in Algebraic Topology (2007) Geom. Topol. Monogr., Coventry, 11, pp. 309-326
- Singer, W.M., The transfer in homological algebra (1989) Math. Z., 202 (4), pp. 493-523
- Tangora, M.C., On the cohomology of the Steenrod algebra (1970) Math. Z., 116, pp. 18-64
- Vakil, R., On the Steenrod length of real projective spaces: finding longest chains in certain directed graphs (1999) Discrete Math, 204 (1-3), pp. 415-425
- Wood, R.M.W., Problems in the Steenrod algebra (1998) Bull. London Math. Soc., 30 (5), pp. 449-517