MORSE INDEX OF HARMONIC MAPS INTO HP^n

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Abstract. In this paper, the index and the nullities of harmonic maps into HP^n are calculated.

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Key words. Riemannian manifolds, Morse index, harmonic maps, $HP^n(c)$.

REFERENCES

[1] Burns, D., Burstall, F., De Bartolomeis, P. and Rawnsley, J., *Stability of harmonic maps of Kahler manifolds*, J. Differential Geometry, **30** (1989), 579–594.

[2] El Soufi, A., *Applications harmoniques, immersions minimales et transformations conformes de la sphere*, Compositio Math., **85** (1993), 281–298.

[3] El Soufi, A., *Indice de Morse des applications harmoniques de la sphere*, Compositio Math., **95** (1995), 343–362.

[4] El Soufi, A. and Jeune, A., *Indice de Morse des applications p-harmoniques*, C. R. Acad. Sci., **315** (1992), 1189–1192.

[5] Eells, J. and Lemaire, L., *A report on harmonic maps*, Bull. London Math. Soc., **10** (1978), 1–68.

[6] Iwasaki, I. and Katase, K., *On the spectra of Laplace operator on $\wedge^*(S^n)$*, Proc. Japan Acad., **55A** (1979), 141–145.

[7] Leung, P.F., *On the stability of harmonic maps*, Lect. Notes in Math., **949** (1982), pp. 122–129.

[8] Nayatani, S. and Urakawa, H., *Morse indices of Yang-Mils connections over the unit sphere*, Compositio Math., **98** (1995), 177–192.

[9] Xin, Y., *Some results on stable harmonic maps*, Duke Math. J., **47** (1980), 609–613.

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