

# WEIGHTED SOLUTION OF THE DIRAC BELTRAMI EQUATION WITH COEFFICIENT IN VMO

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We will show some results about of regularity of the Dirac-Beltrami equation  $\mathcal{D}f = \mu(x)\overline{\mathcal{D}}f + h$ , where  $\mathcal{D}$  is the left Dirac operator in  $\mathbb{R}^{n+1}$  acting on functions in  $\mathbb{R}^{n+1}$  and with values in the complex Clifford algebra  $\mathcal{C}\ell_n$ ,  $\overline{\mathcal{D}}$  is its conjugate, and  $\mu$  is a  $\mathcal{C}\ell_n$ -valued function with compact support, with vanishing mean oscillation, satisfying  $\|\mu\|_{1,\infty} = \sum \|\mu_\alpha\|_\infty < 1$ , where  $(\mu_\alpha)$  are the coordinates of  $\mu$  in  $\mathcal{C}\ell_n$ .

*Joint work with Emilio Marmolejo-Olea (Instituto de Matemáticas-Cuernavaca, UNAM) and Salvador Perez-Esteva (Instituto de Matemáticas-Cuernavaca, UNAM).*