

Year: 2014

Vol.: 84

Fasc.: 1-2

Title: (Para)quaternionic geometry, harmonic forms, and stochastical relaxation

Author(s): Julian Ławrynowicz, Stefano Marchiafava, F. L. Castello Alvarado and Agnieszka Niemczynowicz

Both quaternionic and para-quaternionic geometry are important when studying harmonic forms and stochastical relaxation with the help of Fokker–Planck-type or Oguchi-type parabolic equations. In a recent paper the first-named author and H. M. POLATOGLU (2012) have shown that the five-dimensional case is the simplest case that the use of para-quaternions is more convenient than the use of quaternions. Now we discuss that case in some detail.

Address:

Julian Ławrynowicz
University of Łódź
Łódź
Poland
Institute of Mathematics
Polish Academy of Sciences
Warsaw
Poland

Address:

Stefano Marchiafava
Dipartimento di Matematica
“Guido Castelnuovo”
Università di Roma I “La Sapienza”
Piazzale Aldo Moro, 2
I-00185 Roma
Italia

Address:

F. L. Castillo Alvarado
Escuela Superior de Física
y Matemáticas
Instituto Politécnico Nacional
Edificio 9, U. P. “Adolfo López Mateos”
07738 México
D. F. Mexico

Address:

Agnieszka Niemczynowicz
Department of Relativity Physics,
University of Warmia and Mazury,
Słoneczna 54
PL-10-710 Olsztyn,
Poland