1145-35-511 **Jean-Daniel Djida** (jeandaniel.djida@usc.es), Departamento de Estatıstica, Analise, Analise Matematica e Optimizacion, Universidade de Santiago de Compostela, 15782 Santiago de Compost, Spain, **Gisele Mophou** (gisele.mophou@univ-antilles.fr), African Institute for, Mathematical Sciences (AIMS), Limbe, 608, Cameroon, and **Pasquini Fotsing Soh*** (pasquini.soh@aims-cameroon.org), African Institute for, Mathematical Sciences (AIMS), Limbe, 608, Cameroon. *Optimal control of diffusion equation with missing data governed by Dirichlet fractional Laplacian.*

We consider an optimal control problem of diffusion equation with missing data governed by the fractional Laplacian with homogeneous Dirichlet boundary conditions on an arbitrary interaction domain disjoint from the domain of the state equation. We assume that the unknown initial condition belongs to an appropriate space of infinite dimension, the so-called space of uncertainties. The key tools we used in order to characterize the optimal control is the no-regret and low-regret control developed by J.L Lions (Received September 08, 2018)