

Swansea, March 30th 2012

Miss Chantal Durant and ESF Review Panel

Dear people at ESF,

This is my final report for my visit to the Particle Physics group of the University of Santiago de Compostela (Spain).

I visited the group between the days March 15th and March 28th 2012. As usual, it is a pleasure to visit this very active and prolific group, with so many people working on holographic aspects of field theories.

I presented a seminar of my recent work. This led to discussions with the colleagues with whom I have worked in the past (Prof. Ramallo and Dr. Conde). The topic of discussion was mainly the possible extensions and concrete applications/calculations that can be done with a set-up we presented recently [papers in collaboration with: Conde, Gaillard, Ramallo and Piai], published in JHEP and Phys. Lett B in 2012, where the phenomena of a cascade of Seiberg dualities and Higgsing take place. Probably we will keep on working on that line. I also discussed quite a bit different aspects of some other work that my host Prof. Alfonso V. Ramallo is working on; dealing with defect field theories. His goal is to apply them to the so-called Kondo model. I find the topic quite interesting and probably, I will give a try to work and collaborate on that topic after we finish our respective present projects.

I have numerous, frequent and interesting discussions with other members of this group: Prof. Javier Mas, Prof. Jose Edelstein, Prof. Sanchez De Santos, Dr. Eduardo Conde and Dr. Xian Camanho. The discussions were basically about their work. I found these discussions quite illustrative for me, because I do not have the opportunity, while in Swansea, of listening to this wide breath of topics.

For the most part, I focused my efforts to wrap-up a paper on holographic models for Cosmology that I am working on with some other members of ESF-related groups (Erdmenger, Halter and Tasinato). Calculations and numerics are quite intensive for that project, so the work will be completed probably one month after my visit is finished. We are finishing final calculations that hopefully will give the results expected by our experience.

I should thank the group in Santiago de Compostela, mainly Profs. Ramallo, Mas and Edelstein for the very warm hospitality, the help with different minor issues arising

in a visit of this sort and the Physics discussions.

Thanking you in advance

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