

To whom it may concern,

this is a recommendation letter to support the application of Dr. Miguel Nebot for a postdoctoral position in your group.

I know Miguel since his undergraduate studies at the University of Valencia, where he got maximal marks. He followed the Ph. D. under the advice of Professor Francisco Botella and the formation in several demanding Ph.D. courses, including mine on ElectroWeak Theory. I was already impressed by his capabilities. Later we collaborated in several research works related to the demise of flavour tagging for CPT violation in the entanglement of states. We have kept many scientific discussions together and I have followed his career along his stays in Lisbon, Rome and Valencia. I am then in good condition to formulate a definite opinion about him and his work.

Dr. Nebot is a physicist with a recognized research activity in the area of Flavour Physics. In the collaborations with him, Miguel plays a leading role, providing new concepts as well as new methodologies. I remember, for example, the discussions we had in connection with the breaking of the symmetry properties of the entangled states for neutral mesons that could be originated either by ill-defined CPT connection between particle and antiparticle or by a violation of rotational invariance. It was him who clarified the issue in this "confusion". In addition, he developed a phenomenological analysis for equal sign dilepton events in order to obtain limits on the so called w -effect parameterizing this breaking. In my opinion, his studies on new physics and implications on CP-violation for models with a fourth family with vector-like interactions have been very interesting, including effects of flavour changing neutral currents (FCNC). The presence of FCNC has been studied by him for quark and lepton sectors in models of two Higgs doublets with Minimal Flavour Violation. Once the γ -angle was measured independent of β , his model independent analysis of new physics contributing to an extra CP-phase has been influential and is being followed by the experimental groups.

His contributions to physics are not limited to B-physics. They also include an invariant approach to flavour-dependent CP-violating phases in the MSSM, for example. The implications of a Zee-Babu model for neutrinos have been investigated by him, finding appropriate observables for LHC and for low energy experiments. And his contributions to science are not limited to physics. He keeps an activity in biology which is a consequence of having an interest open to new problems that trigger his mind.

I do know that during his stays as a postdoctoral researcher, Miguel has left a very important imprint on the scientific activity of the groups he has collaborated with. The fact that in all of them he has been actively involved shows both his integration into a good scientific environment and his independence as a researcher, that allows him to face new challenges and problems.

I would also like to comment on his activity at Valencia as student mentoring. He is giving courses to undergraduates with a complete success of efficiency and rigour, with very positive results.

Miguel is excellent both in conceptual and calculational issues. I do not have any doubt about the high level of his scientific merits and I recommend very strongly, without any reservations, his application for a postdoctoral position in your group.

Yours sincerely,

Jose Bernabeu
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