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Dear Dr. Alex Pomarol,

I am writing to inquire about the possibility of obtaining a postdoctoral position in your laboratory. I am currently a Ph.D student in Physics at Nagoya university, Japan. I completed my dissertation in this December and I will receive my Ph.D at Nagoya university in March, 2017. My supervisor is Professor Junji Hisano, and my general area of interest is understanding symmetries and unification of fundamental interactions of elementary particles. My recent research focuses on phenomenology of the supersymmetric models, especially on high-intensity observables in the supersymmetric standard models and supersymmetric grand unified theories (SUSY GUTs).

Recently, I explored the possibility of model discrimination by using low-energy observables such as electric dipole moments and proton lifetime. Various models are proposed after the Higgs discovery. Since the low-energy observables would be different among proposed models due to the underlying physics, the difference could be probed by the measurements of high-intensity observables. Furthermore, I performed the next-to-leading order (NLO) calculations for the proton lifetime in the context of the SUSY GUTs and achieved to reduce the theoretical uncertainty.

Although my recent work concentrated on the intensity frontier, such as the proton decay and electric dipole moments, I also have interests in collider signals, cosmology, and model building of the supersymmetric models. I recently have constructed the supersymmetric model which predicts a light stop and heavy gluinos.

Please let me know if any other materials or information that will assist you in processing my application is required.

Sincerely yours,

Takumi Kuwahara