



Rio de Janeiro, May 05th, 2019

Re: Letter of Recommendation for Ms. Ingrid Pires Macedo O. dos Santos

Dear Sir or Madam:

This letter is submitted in support of **Ms. Ingrid Pires Macedo O. dos Santos** to participate in the São Paulo School of advanced Sciences on Nonlinear Dynamics.

Currently I am a full emeritus professor at the Pontifical Catholic University of Rio de Janeiro where I still lecture on topics in the fields of Dynamics and advise the research of Master and Doctoral students.

I had the pleasure to have Ms. Ingrid Pires as a regular student in my Dynamics classes: she was outstanding, and I invited her to start a research containing theoretical and practical aspects investigating very flexible systems like drill strings. Ms Ingrid finished successfully her Master Degree in the beginning of April 2019 and is actually enrolled in the Doctor studies. Her work is being presented in two International Conferences.

Ms. Ingrid Pires has a good background in nonlinear dynamics, one further course she attended successfully was based on Strogatz's book in that subject. She had the opportunity to apply these concepts working with dry friction and stick-slip phenomena.

I hope she has the opportunity to receive support as a participant of your meeting.

Yours sincerely,

Hans Ingo Weber

Full Emeritus Professor

Mechanical Engineering Department

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