

Lead institution: Escola Politécnica da USP	
Work Address of the position:	
Supervisor name: J. R. Simões Moreira	Department: Mechl. Eng.
Position 17PHD012	Application deadline: Aug. 27, 2017
APPLY AT: www.rcgi.poli.usp.br/opportunities https://goo.gl/p4ifHx Position 17PHD012	Type: PhD Period: Number of months: 48
Project title: (Portuguese and English) Estudo Experimental de Separação Supersonic de de Misturas Gasosas - Experimental Study of Supersonic Flow Separation of Gaseous Mixtures	
Research theme area: (Portuguese and English) Escoamento Compressivel – Compressible Flow	
Abstract (Portuguese and English) O objetivo é a condução de experimentos de sistemas de separação de CO ₂ de misturas gasosas por meio de princípios supersônicos. The objective is to carry out of experiments for CO ₂ separation from gas mixtures by means of supersonic principles.	
Description The PhD research will conceive an experimental test rig for testing CO ₂ separation from gaseous mixtures using supersonic flow devices, such as Laval nozzle and other configurations. The phenomenon will be documented by means of instrumentation to obtain pressure profile along with still and moving photography documentation. Advanced photographic techniques such as the Schlieren method will also be employed.	
Requirements to fill the position. (Ex: specific experience, minimum or maximum years after concluding the course) A previous Master degree in Mechanical or Aeronautical Engineering.	