

Lead institution:		Escola Politécnica da USP	
Work Address of the position: Av Professor Mello Moraes, 2231			
Supervisor name: J. R. Simões Moreira		Department: Mechanical Engineering	
Recipient: www.rcgi.poli.usp.br/opportunities https://goo.gl/p4ifHx		Type: PhD Period: Number of months: 48 Application deadline: Oct. 25, 2017	
Position <u>17PDR017</u>			
Project title: (Portuguese and English) Estudo Experimental de Separação Supersonica de Misturas Gasosas - Experimental Study of Supersonic Flow Separation of Gaseous Mixtures			
Research theme area: (Portuguese and English) escoamento compressível – Compressible Flow			
Abstract (Portuguese and English)			
<p>O objetivo é a condução de experimentos de sistemas de separação de CO₂ de misturas gasosas por meio de princípios supersônicos.</p> <p>The objective is to carry out of experiments for CO₂ separation from gas mixtures by means of supersonic principles.</p>			
Description			
<p>The PhD research will conceive an experimental test rig for testing CO₂ 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.</p>			
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.			