GRANT FORM
Cosmic Flows (July 03-09)

(Form to be printed, signed, scanned and e-mailed
to J. Trân Thanh Vân jtrantv@gmail.com and Aimie Fong rencontres.vietnam@gmail.com)

Personal Data

M Hernandez Charpak Sergio Daniel
b. **9 February 1991 , Colombia France , Other**
tel. **+57 3214680774** , email **sd.hernandez204@uniandes.edu.co**
Institution: **Universidad de los Andes (UNIANDES)**
Address: Carrera 7 # 46 - 20 Apt 2001, 110231, BOGOTA, COLOMBIA

Brief CV

Date of first university (or equivalent) graduation: **Expected: 04/2017**
Discipline: **Physics**
Place of graduation: **(Expected) Universidad de los Andes (UNIANDES)**
Brief CV:

Education
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- Universidad de los Andes, Bogotá (Colombia)

Physics, Bachelor of Science
Expected graduation, September 2016
GPA 4.25/5.00

Computing Engineering, Bachelor of Engineering
Expected graduation, April 2017
GPA 4.25/5.00

Japanese Language and Culture, Minor

- Tokyo University of Marine Science and Technology, Tokyo (Japan)

Visiting Student May 2014-June 2014
Control and Robotics Laboratory

- Kyoto Institute of Culture and Language, Kyoto (Japan)

Intermediate Japanese Student October 2013-March 2014

- Lycée Français Louis Pasteur Bogotá (Colombia)

Student Graduated, July 2011
Scientific Bachalauréat, Mention Bien

Research Experience
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- Universidad de los Andes Bogotá (Colombia)

-January 2016 - May 2016 / Undergraduate Thesis
Laniakea in a Cosmological Context (or Detection of Galaxies Superclusters
in Simulated Cosmological Structures) under the direction of professor
Jaime E. Forero.

-August 2015 June 2016 / Undergraduate Research Assistant
Astronomical Image Processing from Large All-Sky Photometric Surveys for the detection and measurement of transients under the mentorship of PhD student Juan Pablo Reyes and the direction of professor Marcela Hernandez.

- Fermi National Laboratory Neutrino Division, Batavia (U.S.A.)

June July August 2015 / IPM Intern Muon G-2 Experiment
Part of the team for the Test Beam of a Straw Detector Prototype, was in charge of the High Voltage and assisted with the analysis of the data taken under the mentorship of scientist Brendan C Casey.

-Tokyo University of Marine Science and Technology, Tokyo (Japan)

May - June 2014 / Visiting Student - Control and Robotics Laboratory
Assisted with the integration and control of a helicopter with Arduino under the supervision of professors Sho and Ito.

Teaching Experience
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- Universidad de los Andes, Bogotá (Colombia)

2011,2012,2013,2014,2015 Undergraduate Teaching Assistant
Undergraduate Teaching Assistant for sections of Object Oriented Programming 1, Data Structures, Modeling, Simulation and Optimization, and Computational Methods courses.

- Mariño Math, Bogotá (Colombia)

Sept 2011-Present Tutor
High School Physics, Chemistry, Math and Biology Tutoring in both French and Spanish.

Skills
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- Play the Piano since 6 years old

Software and programming

- Java, Python, IPython, C, MATLAB, Processing, Arduino, Assembler, UML, Git, PHP.
- Familiar with Linux, Windows and MAC OS.

Techniques

- Familiar with group work techniques: TSP, XP.
- Basic electronic circuits skills (design and fabrication of prototypes).

Languages

- French (fluent)
- English (fluent)
- Spanish (fluent)
- Japanese (Upper Intermediate, JLPT level 3)

Research activities

Current or projected research activities and motives for wishing to attend the conference:

I am currently working on my undergraduate physics thesis at Los Andes University in Bogota, Colombia. The title of my project is Laniakea in a Cosmological Context. I approach this subject from the computational perspective, running N-body simulations and developing algorithms to detect super-clusters from the peculiar velocity information. I am doing this work under the advice of Prof. Jaime Forero-Romero.

I find numerical cosmology fascinating. I am thrilled to be tackling a real research project on the topic. Your Vietnam Conference is the best chance to meet the leading scientific community on my research topic. I am eager to learn from them while I get the opportunity to share my work.

Besides my undergraduate thesis, I am also doing image processing research for the Large Synoptic Survey Telescope (LSST) with in the Computing Engineering Department. This work will be the foundation of my computing engineering senior thesis and is also related to this conference.

The Large Scale Structures and Galaxy Flows conference is clearly a great opportunity to interact and learn from leading researchers in the field. This will help me to find a focus of interest for my future research and guide my choice for a subject to chose a Graduate School next year.

I submitted the abstract of my work to your conference and got it accepted as a Poster presentation. I am really looking forward to this life experience opportunity.

Nevertheless, Vietnam is quite far from Colombia (17,916 km from Bogota to Quy Nhon according to Google). I am therefore applying for financial support to help me cover either the travel expenses (tickets are around 1500 USD), the conference fee or my accommodation.

Thank you very much for your time and help.

Yours,

Sergio Daniel Hernández Charpak

publications

Scientific publications of the applicant (no more than 5):
As I am an currently Undergraduate Student I haven't got any published work yet.

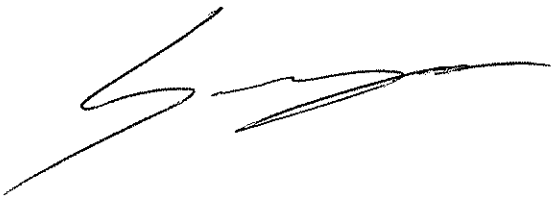
Recommandation

If the applicant is a doctorant then this form should be commented by the doctorant supervisor ()
Institution:
Relation with the applicant:

Comments:

Applicant signature

March 14, 2016



Sergio Daniel HERNANDEZ CHARPAK