




Bhuvan Kumar GUNESSEE

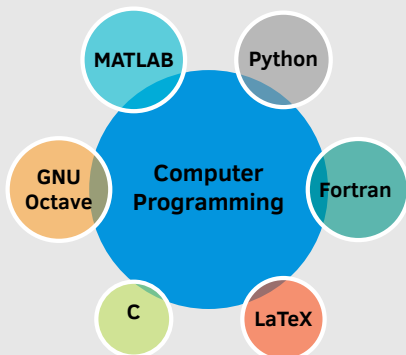
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 Echo327

Skills



Familiar OS

- Linux, Windows, Android, and iOS.

Language Proficiency Tests

June 2019 - Cambridge (CAE)

English Language
Proficiency Test

Score: 203/210 (C2 Level)

July 2017 - TOEFL iBT

English Language
Proficiency Test

Score: 100/120 (C1 Level)

Jun 2012 - DELF B2

French Language
Proficiency Test

Score: 64/100 (B2 Level)

Interests

Core Gamer.
Computer Hardware.
Computer Programming.
New Technology.

Work Experience

Feb 2018 - **Cartography of Asphaltene Systems: Physico-Chemical Properties and Reactivity** IPREM-UPPA, Pau

Aug 2021

- Atomic Static Polarisability and C_6 approximation.
- ReaxFF Force Field Parameterisation
- Ab Initio Calculations and MD Simulations
- **Custom Python Codes for Data Processing and Analysis**

Sep 2018 - **Teaching Assistant**

UPPA, Pau

Aug 2020

- Chemistry Department : Tutorials and Practicals

Feb 2017 - **Internship: Atomic Scale Modelling of Ru on Au** LAAS-CNRS, Toulouse

Jul 2017

- Atomic scale modelling of the deposition of ruthenium (Ru) on gold (Au) surfaces for use in supercapacitors
- First principles study (Density Functional Theory, DFT) of the deposition of Ru on Au surfaces either directly (Evaporation, Sputtering, ...) or using Ru-based precursors (Atomic Layer Deposition, ALD).

Jun 2016 **Internship: Production of photovoltaic cells**

AIME, Toulouse

- Production and test of photovoltaic cells starting from Si wafers.

Mar 2016 - **Internship: Model of the reflectivity of 2D Surfaces**

CEMES-CNRS,

Toulouse

May 2016

- Modelling using MATLAB and GNU Octave of the reflectivity of thin films to allow rapid mapping of thickness at the atomic scale using spectroscopy. Fresnel equations and Transfer Matrix Method (TMM).
- A **GUI** was developed in **MATLAB** to allow an end user to dynamically modify the thickness and refractive index (different materials) of the thin films.

Education

Ongoing **Online Courses**

Full List (with description) on [LinkedIn](#)

2015 - 2017 **Masters in Physics**

Paul Sabatier University(France)

2012 - 2015 **Bachelor in Fundamental Physics**

Paul Sabatier University (France)

2010 - 2011 **HSC Cambridge 'A' Level (CIE)**

Adolphe de Plevitz SSS (Mauritius)

Main: Physics, Chemistry, Mathematics; Subsidiaries: Biology, General Paper

2008 - 2009 **SC Cambridge 'O' Level (CIE)**

Adolphe de Plevitz SSS (Mauritius)

Physics, Chemistry, Biology, English, French, Mathematics, Additional Mathematics

Projects

2016 **2nd Year of Masters**

Paul Sabatier University

Thesis: Hysteresis in Ising Model (Monte Carlo). Modelling and study of magnetic hysteresis cycles using the 2D Ising model (**programmed in Fortran**).

2015 **1st Year of Masters**

Paul Sabatier University

Thesis: Giant Magneto-Resistance, GMR (Case Study). Case study of GMR under simulated laboratory conditions.

2015 **1st Year of Masters**

Paul Sabatier University

Thesis: Planetary Orbit (Sun to Pluto: 10-body system). Modelling of planetary orbits by resolution of differential equations (**programmed in C**).

2014 **3rd year of Bachelor**

Paul Sabatier University

Thesis: Re-Entry of a space shuttle in earth atmosphere. Modelling and study of the re-entry of a space shuttle in earth's atmosphere using **MATLAB**