

# Patipan Saengduean

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## Education:

- 2017-present** PhD program in Geophysics, Colorado School of Mines, USA  
**2013-2017** MSci Geology and Geophysics, The University of Liverpool, UK  
*Degree:* 1<sup>st</sup> Class Honours.
- 2011-2013** GCE Advanced Levels, Cambridge Tutors College, UK  
Pure Mathematics (A\*), Further Mathematics (A\*), Physics (A) and Chemistry (B).
- 2004-2009** Secondary-Level Education, Samsenwittayalai School, Thailand  
*Average Grade:* 3.89/4.00.

## Scientific Experience:

### *Geophysical Project, Colorado School of Mines, USA*

- 2017-present** I am currently working with Professor Roel Snieder on the applications of Virtual Seismometer Method (VSM). I hope to obtain the wave responses (Green's functions) and to hopefully obtain geo-mechanical properties within different source scenarios (e.g., subduction earthquakes and micro-earthquakes induced by fluid injections).

### *Geophysical Project and Dissertation, The University of Liverpool, UK*

- 2016-2017** A senior project "Tracking hurricanes and tropical cyclones with seismic noise" being supervised by Dr Silvio De Angelis. I track and locate storms with the numerical simulations of the frequency spectrum, power and slowness of microseisms.

### *Geomagnetic Research Project, The University of Liverpool, UK*

- 2016** A summer project "A Better Understanding of Phanerozoic Geomagnetic Field Variation" was supervised by Dr Andy Biggin. I found a very weak paleomagnetic fields in Devonian-Early Carboniferous samples using thermal demagnetisations of a 2G Thellier machine, preceding a very strong field of Permo-Carboniferous Reversed Superchron. The result strengthens a current paleomagnetic record and shows a similar variation to a weak field in Jurassic before a strong field of Cretaceous Normal Superchron. (Article in preparation).

### *Geological Field Project and Dissertation, The University of Liverpool, UK*

- 2015-2016** A geological mapping project "The Geological History of Coniston, Cumbria" under the supervision of Prof Richard Worden. The mapping was undertaken in Coniston, Lake District, the UK. The result shows that Ordovician volcanoclastics and Silurian non-volcanoclastics were separated by an unconformity. The sediments were also deposited with different depositional environments and experienced multiple deformations in the area.

### *Seismological Research Project, Mahidol University, Thailand*

- 2014** A summer project on video-modelling progressions of 2014 earthquakes on faults in northern Thailand was supervised by Assoc Prof Weerachai Siripunvaraporn. I model the progressions and changes in b-values of the earthquakes. The result shows that the earthquakes progressed from a fault to the adjacent 2 faults similar to a Y shape.

### ***Computational Work Placement, Mahidol University, Thailand***

**2012** A summer internship in computer programming of Unix system, MATLAB and Generic Mapping Tools (GMT) was under the supervision of Assoc Prof Weerachai Siripunvaraporn.

### ***Laser Project, Mahidol University, Thailand***

**2008-2009** A project “The Application of the Polarization Principle in Making of Two Optical Transmission Channels of Red and Green Laser Beams by a Liquid Crystal” was supervised by Asst Prof Ratchapak Chitaree. The result shows that it is possible to transmit simultaneously 2 optical channels by lasers with different colours and polarizations.

### **Geological and Geophysical Field Trip Experiences:**

**2016** *Tenerife, Spain (Geophysics)*  
**2015** *Coniston, Lake District, UK (3<sup>rd</sup>-year Mapping Project).*  
*Almeria, Spain (Geology). Donegal, Ireland (Geology).*  
**2013-2014** *Pembrokeshire, UK (Geology).*

### **Awards:**

**2006-present** Fully funded for an entire PhD by Royal Thai Scholarship for studying abroad “the Development and Promotion of Sciences and Technology Talents Project (DPST)”.

**2013** Subject Prize Winner 2013 in Further Mathematics.

**2012-2013** Bronze Certificate of British Physics Olympiad Round 1.

**2012** Bronze Certificate of UK Senior Mathematical Challenge 2012.

**2007-2008** Participation Certificates of Thailand Physics Olympiad Round 2.

### **Extracurricular Activities:**

**2017** A participant of I’s day as a food retailer, Colorado, USA.

**2014-2015** A secretary of Liverpool Thai Society Committee, Liverpool, UK.

**2004-2006** A treasurer of the School Committee, Thailand.

### **Additional Skills:**

***IT skills*** Pascal and C/C++ Programming Languages. MATLAB, Python, GMT and Unix System. Adobe Photoshop, Adobe Flash Animation, ArcGis and Microsoft Offices.

***Languages*** English and Thai. Basic Japanese.

***Teaching*** Experienced in tutoring Mathematics and Physics in the secondary school.

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<b>Referees</b>	Professor Roel Snieder <i>Current Academic Advisor</i> Colorado School of Mines, USA <a href="mailto:rsnieder@mines.edu">rsnieder@mines.edu</a>	Dr Silvio De Angelis <i>Past Academic Advisor</i> University of Liverpool, UK <a href="mailto:S.De-Angelis@liverpool.ac.uk">S.De-Angelis@liverpool.ac.uk</a>
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