

Curriculum Vitae

Asst. Prof. Teeraparb Chantavat

Institute for Fundamental Study, Naresuan University
Muang, Phitsanulok, 65000, THAILAND

Mobile: +66 (0) 86 918 3484
E-mail: teeraparb@nu.ac.th

Personal Information

Date of Birth : 1st March 1983
Place of Birth : Chiang Mai, Thailand
Nationality : Thai
Language : Thai (Native), English (Fluent)

Education

University of Oxford

DPhil Astrophysics

Oxford, UK

Oct 2006 - Jan 2011

In my DPhil, I was working on utilizing statistical properties of cluster of galaxies to probe and constrain cosmology especially the matter power spectrum and some cosmological parameters.

Supervisor: Prof. Joseph Silk

University of Manchester

MPhys Physics (Hons), 1st Class

Manchester, UK

Sep 2002 - Jun 2006

In my undergraduate, I started with a general physics program which gives me free choices of optional courses to choose. However, I mainly focused on theoretical physics and astrophysics courses. For my MPhys projects, I did two projects on theoretical particle physics and observational astrophysics.

Supervisor: Prof. Graham Shaw, Dr. Tim O'Brien

Working Experience

The Institute for Fundamental Study, Naresuan University

Lecturer and Researcher

Phitsanulok, THAILAND

Jan 2011 - present

I am working at the Institute for Fundamental Study (IF) as a lecturer in theoretical physics at a graduate level and a researcher at the same time. As a lecturer, I have been teaching General Relativity, Cosmology, Numerical Methods in Physics and a few other Master courses in physics. The lectures are delivered in English. My research is studying how we could use an empty space in the Universe, called voids, to probe the initial conditions of the early Universe.

Website: <http://www.if.nu.ac.th>

Teaching Experiences

The Institute for Fundamental Study, Naresuan University

Here are some of the selected graduate courses that I taught or have been teaching at the Institute for Fundamental Study (IF).

- **Numerical Methods in Physics** *2015 - present*
I am currently teaching a master course on Numerical Methods in Physics using C programming language. The course covers many aspects of numerical computations such as interpolations, numerical integrations, spectral analysis and the Markov Chain Monte Carlo method.
- **General Relativity** *2012 - 2016*
I taught General Relativity for Higher Graduate Diploma course. The course covers tensor algebra, Einstein field equations, Schwarzschild metric etc.
- **Cosmology** *2013 - present*
I am teaching Cosmology from the very introductory level to advanced, research-oriented level.

Others

- **POSN Astronomy** *2011 - present*
I am heavily involved in many of POSN astronomy related activities. For example, I have been training astronomy and astrophysics for students in POSN camps at Naresuan university (since 2011) and Chiang Mai university (since 2016). In addition, I have been an academic committee for Thailand Astronomy Olympiad (TAO) since 2013. Recently, I am delegated to become a leader for the coming International Astronomy Olympiad 2017 (IAO 2017).
- **L^AT_EX program for academic documents** *2014 - present*
I have been training L^AT_EX program for academic documents since 2014. I am also teach an online course on L^AT_EX program at Thai Massive Online Open Course (Thai MOOC; <https://www.thaimooc.org>) which will be available from mid-June 2017.
- **Python for scientific computations** *2016 - present*
I have been using Python for various computational works since 2006. Hence, I decided to give some trainings in Python programming language starting from 2016. I am planning for more courses in Python programming and probably more specialized courses.

Research Skills

General Computing Skills

I am familiar with Macintosh OS X (advanced), as well as most Linux (advanced) and MS Window distributions (moderate). I am familiar with many of the office software such as Microsoft Office, Open Office, Pages, Number, Keynote etc. However, for a document preparation software, I prefer \LaTeX .

Programming Languages

Advanced level : C, Fortran 90/95, Python, Mathematica

Intermediate level : C++, Maple, Matlab

Beginner level : Java, Web Development

Publications

- Chongchitnan, S., **Chantavat, T.**, Zunder, J., “*Extreme Primordial Black Holes*”, in press.
- Kaeonikhom C. and **Chantavat, T.**, “*Redshift-space distortion from dynamical dark energy with time-dependent Lagrangian perturbation theory*”, 2018, Physical Review D, 98, 083534.
Journal Impact Factor: 4.394 (2017)
- **Chantavat, T.**, “*Time-dependent Lagrangian Perturbation Theory with The Dynamical Dark Energy*”, 2017, Journal of Physics: Conference Series, 883, 012003.
- **Chantavat, T.**, Sawangwit, U., Wandelt, B. D., “*Void Profile from Planck Lensing Potential Map*”, 2017, Astrophysical Journal, 836, 156.
Journal Impact Factor: 5.909 (2015)
- Sangka, A., Sawangwit, U., Sanguansak, N., **Chantavat, T.**, “*HSW Void as the Origin of the Cold Spot*”, 2016, Suranaree Journal of Science and Technology, 23(4):435-441.
- **Chantavat, T.**, Sawangwit, U., Sutter, P. M., Wandelt, B. D., “*Cosmological Parameters Constraints for CMB Lensing with Cosmic Voids*”, 2016, Physical Review D, 93, 043523.
Journal Impact Factor: 4.506 (2015/2016)
- **Chantavat, T.**, Sawangwit, U., “*CMB Lensing with Stacked Voids*”, 2014, Thai Journal of Physics, 10.
- **Chantavat, T.**, Gordon, C., Silk, J., “*Large Scale Structure Forecast Constraints on Particle Production During Inflation*”, 2011, Physical Review D, 81, 043523.
Journal Impact Factor: 4.506 (2015/2016)
- **Chantavat, T.**, Gordon, C., Silk, J., “*Probing the Primordial Power Spectrum with Cluster Number Counts*”, 2008, Physical Review D, 79, 083508.
Journal Impact Factor: 4.506 (2015/2016)

Hobbies and Interests

Mathematical Problem Solving

- I occasionally find changing mathematical problems on net and make attempts to solve them.

Sport Activities

- I usually go the gym in to do some exercises in the evening.

Web Development

- I am recently gain interest in web development and learn a lot of web programming languages such HTML, CSS, JavaScript.
-