

Session Program

22-24 Jun 2022



Siam Physics Congress 2022 (SPC2022)

S1 Physics Innovation

Thursday 23 June

10:45

S1 Physics Innovation: Oral presentation 1

Session | Location: AMETHYST

10:45-11:15

Digitalization of smell: development of chemical sensors from lab to startup business

Speaker

Prof. Teerakiat Kerdcharoen

11:15-11:30

Colorimetric Sensor for Formaldehyde Detection Using Thiol-Functionalized Polydiacetylene and Zinc Oxide Nanocomposites

Speaker

Papaorn Siribunbandal

Location

AMRTHYST

11:30-11:45

Analysis and prediction of vegetation, croplands, and urbanization change in the philippines using data satellite images between 2001-2018

Speaker

Mr Earon Cabasal

Location

AMETHYST

11:45-12:00

UV germicidal rays working with timer and motion sensors

Speaker

Chatpong Kobkam

Location

AMETHYST

12:00

10:45

S1 Physics Innovation: Oral presentation 2

Session | Location: SAPPHIRE

10:45-11:15

How to make important ideas in science learnable? A design case study of an educational robotics toolkit

Speaker

Arnan (Roger) Sipitakiat

11:15-11:30

A baby mobile as a STEM activity for promoting students' learning and interest in a simple harmonic motion

Speaker

Dr Panupon Samaimongkol

11:30-11:45

Using a pre-instruction math test to predict first-year physics exam results**Speaker**

Meta Popanao

11:45-12:00

How Does Student Skill on Interpreting Circular Motion Situation Change in an Online Physics Classroom?**Speaker**

Ms Arunee EAMBAIPREUK

12:00

15:15

S1 Physics Innovation: Oral presentation 8**Session** | **Location:** AMETHYST

15:15-15:30

Simulation Sensitivities Study to the Wind Characteristics over Uttaradit Rajabhat University at Lamrang Thungkalo campus with WRF model**Speakers**

Mr Chainarong Raktham, Ms Jitranud Jitprasert, Mr Thanakit Nanfun

15:30-15:45

Night-time Human Mobility during Pandemic in the Philippines as Observed by VIIRS Satellite**Speaker**

Ryan Manuel Guido

15:45-16:00

Flow dependence of handheld breath analyzer for body fuel utilization monitoring**Speaker**

Chan Sricharoen

16:00

15:15

S1 Physics Innovation: Oral presentation 9**Session** | **Location:** SAPPHIRE

15:15-15:30

ATTITUDES AND MOTIVATION OF INTERNSHIP STUDENTS TOWARDS PHYSICS, ASTRONOMY, AND SPACE SCIENCE SATELLITE TECHNOLOGY VIRTUAL INTERNSHIP PROGRAM**Speaker**

Ryan Manuel Guido

15:30-15:45

Compact and easy-to-use smartphone based experimental set for studying simple and damped harmonic motion patterns.**Speaker**

Dr Somporn Buapraphoom

15:45-16:00

Development of Circular Motion Experiment Set with the Reduction of Friction for High School Physics Students**Speakers**

Mr Anucha Pratumma, Mongkol Sapankaew, Kitisak boonkham

16:00

Friday 24 June

09:00

S1 Physics Innovation: Oral presentation 1

Session | Location: AMETHYST

09:00–09:30

Green energy applications under ANSEE project in Khao Yai National Park

Speaker

Worawat Meevasana

09:30–09:45

An estimation of net radiation from global solar radiation in the main regions of Thailand

Speaker

Korntip Tohsing

09:45–10:00

Carbon electrode for perovskite solar cell

Speaker

Supavidh Burimart

10:00–10:15

The Relationship of Solar Activity to Western North Pacific Tropical Cyclone Frequency

Speaker

Mr Eliezer Caccam

10:15

09:00

S1 Physics Innovation: Oral presentation 2

Session | Location: SAPPHIRE

09:00–09:15

Competition of SARS-CoV-2 Delta and Omicron variants: A modeling study

Speaker

Mr Chatchapat Chaiaiad

09:15–09:30

Mathematical modeling of vaccination strategies for COVID-19 in Thailand

Speaker

Ms Nattawadee Arbsuwan

09:30–09:45

Association of COVID-19 pandemic with meteorological and PM 10 in Thailand using LSTM models

Speaker

Chanidapa Winalai

09:45–10:00

The determination of the effectiveness of mouth covering method while coughing using Background-oriented schlieren technique

10:15

Speakers

Phongthep Chansamphan, Watcharapath Khaiophueng

10:00-10:15

Air convection demonstration via background-oriented schlieren technique**Speakers**

Phongthep Chansamphan, Watcharapath Khaiophueng, Pakorn srirathat

11:30

S1 Physics Innovation: Oral presentation 1**Session** | **Location:** AMRTHYST

11:30-11:45

A model for estimating solar ultraviolet radiation for vitamin D photosynthesis**Speaker**

Ms Pradthana Laiwarin

11:45-12:00

A mathematical study on the effects of fluid density on the impact cavity formation**Speaker**

Mr Sarith Chopara

12:00

11:30

S1 Physics Innovation: Oral presentation 2**Session** | **Location:** SAPPHIRE

11:30-11:45

DEVELOPMENT OF NANOBUBBLES CARRIER IN DRUG DELIVERY SYSTEM OF MELATONIN ENCAPSULATED PARTICLE**Speaker**

Dr Likit Temprom

11:45-12:00

Experimental and theoretical studies of spread factor of swine blood- and deionized water-drop on glass surface.**Speaker**

Ms Suparat Raweenroj

12:00

13:00

S1 Physics Innovation: Oral presentation 8**Session** | **Location:** AMRTHYST

13:00-13:15

A Modification of Newton's Cooling Law with Correlation to Fractional Derivative**Speaker**

Mr Supphanat Anantachaisophon

13:15-13:30

Monte Carlo study of uncertainty propagation in Euler rotational kinematic equation**Speaker**

Mr Chanasorn Nutsathaporn

13:30-13:45

Coordinates transformation method for pointer gauge reading by machine vision

Speaker

Prof. Noparit Jinuntuya

13:45-14:00

The moment of inertia of a Mahogany seed**Speakers**

Bodin Worrasookwanich, Nattanon Chaidet, Kritsada Tadta

14:00-14:15

Assessment of annual effective dose due to inhalation and ingestion of radon from groundwater at Kantharawichai District, Maha Sarakham Province**Speaker**

Mr Vitsanusat Atyotha

14:15-14:30

Experimental Study of Tap Water Activated by Commercial Fruit and Vegetable Purifier**Speakers**

Dr Somsak Dangtip, Dr Wasin Nupangtha

14:30-14:45

The study of ring surface water wave generated by impacting droplets of using Free surface synthetic schlieren (FS-SS) technique.**Speakers**

Pakorn srirathat, Phongthep Chansamphan, Nirut Pussadee

14:45-15:00

A study on optics: Invisibility properties of a lenticular lens**Speakers**

Bangon Prasutham, Tasmee Hayeebeelung, Thanabodi Worakitthamrong

15:15-15:30

The effects of hair-cell polarity on the dynamics of two coupled hair-cell bundles of the inner ear**Speaker**

Tanawat Ngampattrapan

15:30-15:45

Modeling the navigation of a weaver ant in a simple, unfamiliar environment**Speaker**

Lattawat Charoonratana

15:45-16:00

Networks structure and entropy of stocks in the Stock Exchange of Thailand (SET)**Speaker**

Nawee Jaroenchokanan

16:00-16:15

Fabrication of Radiative Cooling Matrix through Low-Cost Scalable Method and High Adaptability**Speaker**

Pongporn Wintakorn

16:30

13:00

S1 Physics Innovation: Oral presentation 9

Session | Location: SAPPHIRE

13:00-13:15

The Python Programming Code on Cloud Computing Service for the Stellar Photometry Astrophysics Teaching

Speaker

Watcharawuth Krittinatham

13:15-13:30

The application of machine learning based on OpenCV for automatic digital dial gauge calibration

Speaker

Sirichanya Thamphet

13:30-13:45

An Approach to The Development of Raman Spectroscopy System for Field Usage

Speaker

Thiti Saeyee

13:45-14:00

DESIGN AND DEVELOPMENT OF THE TRIGGER SYSTEM FOR PROTON COMPUTED TOMOGRAPHY APPLICATIONS

Speakers

Passakorn Phumara, Dr Chinorat Kobdaj

14:00-14:15

An Application of Autocollimator for Surface Profile Measurement

Speaker

Surasak Kaewpho

14:15-14:30

A Design of Laser Triangulation System with Combined Diffuse and Specular Reflection Modes for Dull and Shiny Surface Measurements

Speaker

Mr Chaturaporn Kerdkaew

14:30-14:45

Online Monitoring and Control of 3D Printer with Open Source Software and Embedded Systems

Speaker

Dr PIYACHON KETSUWAN

14:45-15:00

Comparison of an Auto-Regressive with Exogenous Variable (ARX) Model to that of the Artificial Neural Network (ANN) in Simulating a Solar Vapour Compression Refrigeration System

Speaker

Mr Sattra Sirikaew

15:15-15:30

Investigation of plasma activated water in the growth of green microalgae (*Chlorella* spp.)

Speaker

Ms Prangnapat Silapasert

15:30-15:45

Utilization of DBD plasma in shelf-life extension for climacteric fruits**Speaker**

Ms Konkanok Udtachee

15:45-16:00

The study of spin effects on the bouncing trajectory of a ball**Speaker**

Mr Ai Tungsatitchai

16:00-16:15

A model for estimating global spectral solar radiation under all-sky conditions for Nakhon Pathom station Thailand**Speaker**

Sunisa Khakhu

16:15-16:30

Hydrogen sulfide (H₂S) detection system in risky areas with real-time display via smartphone**Speakers**

Mr Wiphu Kitsamret, Mrs Thanyathon Tueanwiradet, Mr Titat Uttawat

16:30