



## 15<sup>th</sup> Siam Physics Congress

4 – 5 June 2020 · Online Through Hubs

# Scientific Program



The 15th Siam Physics Congress 2020 will be held online via ZOOM. Sessions are given different ZOOM meeting IDs. The password will be sent to you via email.

		ZOOM: <a href="https://us02web.zoom.us/j/87844622319">https://us02web.zoom.us/j/87844622319</a> <b>09.00 - 09.20: Opening remarks</b> Prof. Boonrucksar Soonthornthum <b>09.30 - 10.15: Plenary Talk</b> <b>"Space Plasma Physics and Effects on Cosmic Rays and Human Activity"</b> Prof. Dr. David Ruffolo				
(15 min break)						
Session	Date	Time	Track	Abstract ID	Title	Author
1	Jun-04	ZOOM: <a href="https://us02web.zoom.us/j/85722157125">https://us02web.zoom.us/j/85722157125</a> <b>Topics: High Energy and Particle Physics</b> Chair: Asst. Prof. Dr. Chinorat Kobdaj, Suranaree University of Technology				
1	Jun-04	10.30 - 10.45	07	678	The production of charged particles and kaonic nuclei $K^-p$ , $K^+p^-$ , $K^-pp$ and $K^+p^-p^-$ in Au+Au collision at 130 GeV	Natthaphat Thongyoo et al.
1	Jun-04	10.45 - 11.00	07	626	Collective expansion of $K^+$ mesons in heavy-ion collisions on the effect of in-medium Kaon potential and the nuclear equation of state	Kristiya Tomuang et al.
1	Jun-04	11.00 - 11.15	07	644	Effect of $K^+$ potential and nuclear equation of state on invariant cross section of $K^+$ production in nucleus-nucleus collisions	Panadda Sittiketkorn et al.
1	Jun-04	11.15 - 11.30	07	663	An Interpretation of a Simple Portal Dark Matter Model on Fermi-LAT Gamma-ray Excess	Tanech Klangburam, Chakrit Pongkitivanichkul
1	Jun-04	11.30 - 11.45	07	547	Quasinormal modes of electromagnetic potential in 4 dimensional anti de Sitter Reissner-Nordstrom black hole spacetime with scalar hair	Panapol Kanjanaphomchom, Suphot Musiri
(30 min break)						

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2	Jun-04	ZOOM: <a href="https://us02web.zoom.us/j/89600415706">https://us02web.zoom.us/j/89600415706</a> <b>Topics: Astronomy, Astrophysics and Cosmology</b> Chair: Dr. Supachai Awiphan, NARIT				
2	Jun-04	12.15 - 12.30	02	574	Tracking an electron-positron distribution in the Milky Way galaxy by using gamma ray data from Fermi LAT	<i>Karn Ngermphet et al</i>
2	Jun-04	12.30 - 12.45	02	561	Monte Carlo Simulation of a Satellite-Based Detector of Cosmic Ray Ions with Elemental Separation from Hydrogen to Nickel	<i>Punyaporn Onpeang et al.</i>
2	Jun-04	12.45 - 13.00	02	756	Preliminary measurement of cosmic-ray proton spectrum using $\gamma$ -ray data from <i>Fermi</i> Large Area Telescope	<i>Patomporn Payoungkhamdee et al.</i>
2	Jun-04	13.00 - 13.15	02	571	MRES Reduction Pipeline	<i>Patcharapol Wachiraphan et al.</i>
2	Jun-04	13.15 - 13.30	02	645	A Global View of Stellar Populations in M82	<i>Chutipong Suwannajak, Suphawit Duangphumek</i>
2	Jun-04	13.30 - 13.45	02	723	Measurement of Optical Extinction Coefficient at Thai National Observatory	<i>Sriwong Boonprakom et al.</i>
2	Jun-04	13.45 - 14.00	02	566	Noether Symmetry Approach in Eddington-inspired-Born-Infeld Cosmology	<i>Thanyagamon Kanesom et al.</i>
2	Jun-04	14.00 - 14.15	02	597	Sky Area to Search for Extraterrestrial Intelligence	<i>Tanawan Chatchadanoraset, Supachai Awiphan</i>
(15 min break)						

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3	Jun-04	ZOOM: <a href="https://us02web.zoom.us/j/87613394645">https://us02web.zoom.us/j/87613394645</a> <b>Topics: Atomic Physics, Quantum Physics, Quantum Technology,</b> Chair: Assoc. Prof. Dr. Surachate Limkamnerd, Chulalongkorn University				
3	Jun-04	14.30 - 14.45	03	500	Theoretical calculation of saturation absorption spectroscopy of atomic ytterbium beam	<i>Nakarin Jayjong et al.</i>
3	Jun-04	14.45 - 15.00	17	549	Euler-Milstein Scheme for High-precision Stochastic Simulation of Quantum Trajectories	<i>Nattaphong Wonglakhon et al.</i>
3	Jun-04	15.00 - 15.15	17	647	Maximum a Posteriori Path for Open Quantum Systems	<i>Tanawut Noungneaw et al.</i>
3	Jun-04	15.15 - 15.30	17	586	Quantum Approximate Optimization Algorithm for Data Clustering	<i>Jirawat Saiphet et al.</i>
3	Jun-04	15.30 - 15.45	17	615	Entanglement behavior of two particle quantum random walks	<i>Ibrahim Yahaya Muhammad et al.</i>
(15 min break)						
4	Jun-04	ZOOM: <a href="https://us02web.zoom.us/j/86008198142">https://us02web.zoom.us/j/86008198142</a> <b>Topics: Biological Physics, Biosensors and Chemical Sensors, Physics Innovation</b> Chair: Assoc. Prof. Dr. Wannapong Triampo, Mahidol University				
4	Jun-04	16.00 - 16.15	09	681	Multipole resonance probe measurement in plasma	<i>Natthapong Jampaiboon et al.</i>
4	Jun-04	16.15 - 16.30	15	684	Option pricing for rice by using Feynman path integral	<i>Mr.Panus Sawetpiyakul et al.</i>
4	Jun-04	16.30 - 16.45	04	618	Impact of rainfall on the transmission of leptospirosis in Si Sa Ket, Thailand	<i>Surapa Wichapeng et al.</i>
4	Jun-04	16.45 - 17.00	04	550	Using Integrating Sphere Spectrophotometry in Photosynthetic Research.	<i>Raymond J. Ritchie, Suhailar Ama-air</i>

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(15 min break)						
5	Jun-04	ZOOM: <a href="https://us02web.zoom.us/j/83805830755">https://us02web.zoom.us/j/83805830755</a> <b>Topics: Condensed Matter Physics, Magnetic and Semiconductor Physics, Statistical and Theoretical Physics</b> Chair: Assoc. Prof. Dr. Kittiwit Matan, Mahidol University				
5	Jun-04	17.15 - 17.30	18	736	On a discussion of Bose-Einstein statistics using Rényi entropy	Weerawit Horinouchi et al.
5	Jun-04	17.30 - 17.45	05	740	Effects of Li Deficiency on Small-Hole Polaron Formation in $\text{LiFe}_{1-x}\text{Co}_x\text{PO}_4$	Chanaprom Cholsuk et al.
5	Jun-04	17.45 - 18.00	05	539	Effects of magnesium substitution on electronic properties of calcium difluoride	Natthasart Chintananon et al.
5	Jun-04	18.00 - 18.15	10	650	Preparation low-temperature phase MnBi by sintering in vacuum	Satienrapong Ngamsomrit et al.
5	Jun-04	18.15 - 18.30	10	662	The study of Ni-Cu magnetic nanoparticle and its application on inventing a novel fuse	Suranan Anantachaisilp

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6	Jun-05	ZOOM: <a href="https://us02web.zoom.us/j/84301045645">https://us02web.zoom.us/j/84301045645</a> <b>Topics: Environmental Physics, Atmospheric Physics, Geophysics and Renewable Energy</b> Co-Chair: Dr. Ronald Macatangay, NARIT Co-Chair: Dr. Sutthipong Noisagool, Mahidol University				
6	Jun-05	8.45 - 9.00	06	577	Comparison of solar spectrum from measurements and that from radiative transfer model under overcast sky condition	Sahussa Peengam et al.
6	Jun-05	9.00 - 9.15	06	672	K-Nearest Neighbors Approach to Predict PM2.5 Concentration in Bangkok, Thailand	Thanyawee Thongton et al.
6	Jun-05	9.15 - 9.30	06	725	Influence of meteorological condition on correlation between aerosol and cloud in upper northern Thailand	Yanapa Thananchai, Teerachai Amnuaylojaroen
6	Jun-05	9.30 - 9.45	06	526	Particulate matter (PM2.5, PM10) monitoring low cost sensor data: a case study in Southern Thailand	Titaporn Supasri et al.
6	Jun-05	9.45 - 10.00	06	510	A GPU Implementation of Least-Squares Reverse Time Migration	Phudit Sombutsirinun, Chaiwoot Boonyasiriwat
(15 min break)						
7	Jun-05	ZOOM: <a href="https://us02web.zoom.us/j/81723073514">https://us02web.zoom.us/j/81723073514</a> <b>Topics: Instrumentation, Metrology and Standards</b> Chair: Asst. Prof. Dr. Phichet Kittara, Mahidol University				
7	Jun-05	10.15 - 10.30	08	517	Volume ratio determination in static expansion system	Suwat Phanakulwijit
7	Jun-05	10.30 - 10.45	08	733	Mathematical Model of DBH Uncertainty from the Shape of Wood Cross Section	Pannate Wongsripan et al.
7	Jun-05	10.45 - 11.00	08	754	Uncertainty evaluation of crystallite size measurements of nanoparticle using X-Ray Diffraction analysis (XRD)	Kittisun Mongkolsuttirat, Jariya Buajareern

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7	Jun-05	11.00 - 11.15	08	475	Collaboration between TISTR and NIMT: an application of the pressure metrology in an air speed measurement	<i>Jeerasak Pitakarnnop et al.</i>
7	Jun-05	11.15 - 11.30	08	595	Indicating the deterioration of deep frying oil by using light absorption technique	<i>Ittinun Menon et al.</i>
7	Jun-05	11.30 - 11.45	08	732	Stress Analysis of a 48 kg LPG Cylinder Tank	<i>Siva Sithipong et al.</i>
(30 min break)						
8	Jun-05	ZOOM: <a href="https://us02web.zoom.us/j/83164315389">https://us02web.zoom.us/j/83164315389</a> <b>Topics: Material Physics, Nanoscale Physics, and Nanotechnology</b> Chair: Assoc. Prof. Dr. Worawat Meevasana, Suranaree University of Technology				
8	Jun-05	12.15 - 12.30	11	552	Improving the surface morphology of organic and inorganic thin films for the development of polymer and perovskite solar cells	<i>Anusit Kaewprajak et al.</i>
8	Jun-05	12.30 - 12.45	11	752	Enhancing the supercapacitor performance of NiCo <sub>2</sub> O <sub>4</sub> Microflowers by reduced graphene oxide nano-sheets	<i>Worawee Saei et al.</i>
8	Jun-05	12.45 - 13.00	11	760	Preparation and characterization of nanostructured TiCrN thin films deposited from Ti-Cr mosaic target by reactive DC magnetron sputtering	<i>Siriwat Alaksanasuwan et al.</i>
8	Jun-05	13.00 - 13.15	11	780	Electroresponsive Properties of Graphite Derivative/Styrene-isoprene Block Copolymer Composite	<i>Supanit Chungyampin et al.</i>
8	Jun-05	13.30 - 13.45	11	693	Effect of Angle Distortion on Electronic Properties in Double-layer Graphene Under Stresses	<i>Tanthai Lorhutchawankul et al.</i>
(15 min break)						
9	Jun-05	ZOOM: <a href="https://us02web.zoom.us/j/89152844454">https://us02web.zoom.us/j/89152844454</a> <b>Topics: Optics, Ultrafast Phenomena, and Photonics</b>				

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		Co-Chair: Dr. Pruet Kalasuwan, Prince of Songkla University Co-Chair: Dr. Sitti Buathong, Burapha University				
9	Jun-05	14.00 - 14.15	13	560	A novel vibration sensor based on the near-field Talbot effect	<i>Sitti Buathong et al.</i>
9	Jun-05	14.30 - 14.45	13	590	Rapid identification of material via Raman spectroscopy and deep convolutional neural network	<i>Sirawit Boonsit et al.</i>
9	Jun-05	14.45 - 15.00	13	594	Fabrication of 3D surface-enhanced Raman Scattering (SERS) substrate via solid-state dewetting of sputtered gold on fumed silica surface.	<i>Panuwat Pengphorm, Chalongrat Daengngam</i>
9	Jun-05	15.00 - 15.15	13	604	Resonant Raman Random Lasing from Disorder-Structured Material Pumped by Nanosecond-Pulsed Laser	<i>Panuwat Srisamran et al.</i>
9	Jun-05	15.15 - 15.30	13	569	Development of Cost-Effective Remote Detection System for Explosives Materials based on Raman Spectroscopy	<i>Sukrit Thongrom et al.</i>
(15 min break)						
10	Jun-05	ZOOM: <a href="https://us02web.zoom.us/j/87889661216">https://us02web.zoom.us/j/87889661216</a> Topics: Physics Education Chair: Asst. Prof. Dr. Pornrat Wattanakasiwich, Chaing Mai University				
10	Jun-05	15.45 - 16.00	14	786	Students' Conceptions of DC Circuit Connection, Current Flow, and Direction of an Analog Ammeter's Needle	<i>Suchai Nopparatjamjomras et al.</i>
10	Jun-05	16.15 - 16.30	14	661	Smartphone as monitor of the gravitational acceleration: A classroom demonstration and student experiment	<i>Aungtinee Kittiravechote, Thanida Sujarittam</i>
10	Jun-05	16.45 - 17.00	14	497	Effectiveness of tutorial worksheet for promoting basic vector concepts: dot product and cross product	<i>Umporn Wutchana</i>



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10	Jun-05	17.00 - 17.20	<b>Closing remarks</b> Prof. Boonrucksar Soonthornthum			