

SCIENTIFIC PROGRAMME

10/21/10	12th Samahang Pisika ng Visayas at Mindanao National Physics Conference Central Philippine University, Iloilo City, Philippines				
07:30-09:00	REGISTRATION				Venue: Educational Media Center
09:00-10:00	OPENING CEREMONIES				Venue: Educational Media Center
10:00-10:15	HEALTH BREAK				
PLENARY SESSION I					
10:15-11:15	The Learning Physics as One Nation Project: Assessment, Analysis and Prospects Dr. Maria Victoria Carpio- Bernido (Research Center for Theoretical Physics, Philippines)				Moderator: Dr. Jinky Bornaes
11:15-11:30	CONFERENCE PHOTO				
11:30-12:00	Ceremonial Ribbon Cutting – Scientific Poster Session				Venue: CPU Alumni Promenade Park
12:00-01:00 LUNCH BREAK					
PLENARY SESSION II					
01:00-02:00	On Hydroxyapatite Production, Properties Optimization and Thermal Spray Deposition Dr. Jan Cizek (Nanyang Technological University, Singapore)				Moderator: Engr. Ermie Bacarra
02:00-03:00	Understanding by Design and Enduring Issues: New Secondary Physics Curriculum Dr. Vivien Talisayon (University of the Philippines-Diliman/Philippine Women's University, Philippines)				Moderator: Prof. Rosario Reserva
03:00-03:15 COFFEE BREAK					
SUB-PLENARY SESSION I					
Time and Venue	ROOM A Materials Science Moderator: Dr. Florencio Recoletó	ROOM B Theoretical Physics Moderator: Prof. Hermogenes Gooç, Jr	ROOM C Physics Concepts Moderator: Prof. Merlita Garcia	ROOM D Physics Demonstration Moderator: Prof. Lolita Ungui	ROOM E Exhibits and Displays Moderator: Prof. Jingle Magallanes
03:15-03:45	Synthesis of calcium nitrate via sequential heat and chemical route Rommel J. Jagus, Reynaldo M. Vequizo, Jess E. Gambe, Rolando T. Candidato, Jr., Ermie M. Bacarra	A charged polymer in an electric field: A white noise functional approach Brice P. Serquina, Jinky B. Bornaes	Teaching power generation through debate Herman M. Lagon	Fun with water Margarito S. Reyes Jr., Irene A. Sanoy, Swidin S. Husin	NV 304 AdDU 03:00-03:45
03:45-04:15	Synthesis of water adsorbing apatite Eric M. Alcantara, Reynaldo M. Vequizo, Jess E. Gambe, Rolando T. Candidato Jr., Ermie M. Bacarra	The white noise functional for the linear Fokker - Planck process Michelle C. Maghanoy, Jinky B. Bornaes	Baseline exploration of the viability of constructivist learning environment on Philippine high school and college physics classrooms Sotero O. Malayao, Jr., Myrna E. Lahoylahoy		

04:15-04:45	Spectroscopic analyses and morphology of synthesized zinc silicate and Mn-doped zinc silicate Tender P. Ferolin, Ancelle C. Rosales, Reynaldo M. Vequizo, Arnold C. Alguno	A Hida-Streit formulation approach in evaluating the quantum mechanical propagator of a particle moving in a constant force field with constant friction Roel N. Baybayon, Jinky B. Bornaes, Ryan John A. Cubero	Students' alternative conceptions regarding image formation by plane and concave mirrors Swidin S. Husin, Roxanne C. Timosa	The colored disgustoscope: A new way of introducing color addition via reflection Aubrey May V. Flores, Jocarm John Balignot, Karla V. Belisario Rivero	Sigmatech 03:45-04:30
04:45-05:15	Effects of acid and heat treatments to the morphology of rice husk ash for silica production John Paul J. Aseniero, Reynaldo M. Vequizo, Roberto M. Malaluan, Mary Jean O. Apor, Gerardo P. Apor, Glenn B. Paclijan, Jonas B. Guinto, Melchor M. Famisen	The construction of the Feynman integrand of the damped harmonic oscillator as a white noise functional Ryan John A. Cubero, Jinky B. Bornaes	Describing projectile motion using a spring-loaded toy cannon Agueda T. Castillo		Philab Scientific 04:30-05:15
03:30-05:00	PHYSICS CLINIC I with Dr. Remigio Tee and Dr. Ryan Balili for High School Students at NV302 ROOM F				
06:30-10:00	CONFERENCE BANQUET				

10/22/10	PLENARY SESSION III				
08:00-09:00	The Era of Complexity: New Challenges to the Physics Community Dr. Ludwig Streit (University of Bielefeld, Germany/Universidade da Madeira, Portugal)			Moderator: Dr. Florencio Recoleta	
09:00-10:00	On the Entropy and Chirality of Helical Polypeptides in Solvents Dr. Christopher Bemido (Research Center for Theoretical Physics, Philippines)			Moderator: Dr. Arnold Alguno	

SUB-PLENARY SESSION II AND WORKING COFFEE BREAK					
Time and Venue	ROOM A Materials Science Moderator: Prof. Johann Philip Ignacio	ROOM B Theoretical Physics Moderator: Prof. Dennis Arogancia	ROOM C Physics concepts and demonstration Moderator: Prof. Majvell Odarve	ROOM D Physics Demonstration Moderator: Prof. Catherine Leelian	ROOM E Show Room Moderator: Prof. Jingle Magallanes
10:00-10:30	Morphological and optical characteristics of chemically-deposited ZnO nanocrystals on platinum-coated glass substrate Michael J. Jabines, Jess E. Gambe, Reynaldo M. Vequizo	Modeling of amorphous silicon nitride microcavities Christine Marie T. Cebalano, Ryan B. Balili	Determining the speed of light in various liquids Ebenezer M. Velasco, Edward Aris D. Fajardo, Eduardo N. Fajardo	3-D modeling in mechanics using VPython in a collaborative learning environment Ryan B. Balili, Editha P. Jacosalem, Rosario L. Reserva Note: Participants are advised to bring their own laptop.	NV 304 Krypton Resources 10:00-10:45
10:30-11:00	The effect of NH₄OH concentration on the growth and surface morphology of zinc oxide nanostructures grown on SiO₂/Si(100) substrate via chemical bath deposition method Hazel Marie D. Paculba, Arnold C. Alguno, Jess E. Gambe, Reynaldo M. Vequizo	Surface modification of PTFE by ion-implanted nitrogen gas treatment Rea Divina C. Mero, Leonarine S. Molin, Hamdi Muhyiddin D. Barra	Utilization of bleach as a source of electrical energy to power light emitting diodes Wesley M. Perez, Analiza P. Abon, Claire S. Saavedra, Meracel G. Estrosas, Melchor J. Potestas		
11:00-11:30	Controlling the growth of zinc oxide nanostructures on silicon substrates by varying the NH₄OH concentration	Quantifying superhydrophobicity of unstructured surfaces Mark Gino E. Aliperio, Wheskie N. Membreve,	Determination of the frequency of a motor-driven rotator using Savart's toothed-wheel	Construction of a spacewheel: A proposed learning tool in teaching astronomy	PASCO 10:45-11:30

	Sandra L.Manulat, Arnold C. Alguno, Reynaldo M. Vequizo	Ryan B. Balili	Mitchie Bern C. Beniga, Edward Aris D. Fajardo, Eduardo N. Fajardo	Anatoly Karpov Pajunar Buss	Phillab Scientific 11:30-12:15
11:30-12:00	Effects of SiO₂ powder on the morphology of ZnO Edmar G. Pantohan, Ancelie C. Rosales, Rolando T. Candidato, Jr., Reynaldo M. Vequizo, Arnold C. Alguno	Acoustic absorption profile of Helmholtz resonator array Marichu T. Miscala, Ryan B. Balili, Renante Violanda, Marian B. Salumbides	Realization of simple over-temperature structure in CMOS technology compatibility Jefferson A. Hora, Wane-Rone Liou, Mardeliez T. Cuajotor		
10:30-12:00	PHYSICS CLINIC II with Remigio Tee and Ryan Balili for College Students at NV302 ROOM F				

12:00-01:00	LUNCH BREAK
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	PLENARY SESSION IV	
01:00-01:30	Spontaneous Coherence of Excitons and Microcavity Polaritons Dr. Ryan Balili (Mindanao State University – Iligan Institute of Technology, Philippines)	Moderator: Prof. Jingle Magallanes
01:30-02:00	New CHED Policies and Guidelines of Graduate Programs in Physics Dr. Felizardo Francisco (Commission on Higher Education, Philippines)	Moderator: Dr. Reynaldo Vequizo

	SUB-PLENARY SESSION III				
	ROOM A Materials Science Moderator: Prof. Anatoly Karpov Buss	ROOM B Computational Physics and Materials Science Moderator: Prof. Christine Joy Aban	ROOM C Computational Physics Moderator: Prof. Alviu Rey Nasir	ROOM D Physics Demonstration Moderator: Prof. Swidin Husin	ROOM E Exhibits and Displays Moderator: Prof. Jingle Magallanes
02:00-02:30	Effect of the surface morphology of chemical-bath deposited ZnO thin films on their ammonia gas sensing capabilities Johann Philip T. Ignacio, Mariel Grace Dimamay, Reynaldo M. Vequizo	Transfer entropy of alpha signals in human EEG data under eyes closed and eyes open conditions Lotis R. Racines, Dennis C. Arogancia, Salasa A. Nawang, Alfonso M. Albano, Paul E. Rapp	Simulation of wave propagation through different slopes of an 8-step stepped-faced breakwater (Theory) Wilfredjhon T. Mirasol, Hermogenes C. Goo, Jr.	Interactive physics software for classroom activities Marlon F. Sacedon Note: Participants are advised to bring their own laptop.	NV 302
02:30-03:00	Growth of highly ordered zinc sulphide spheres on SiO₂/Si(100) substrate under acidic solution Euprime B. Regalado, Arnold C. Alguno, Reynaldo M. Vequizo, Rolando T. Candidato, Jr.	Alkaline anisotropic surface texturing of Si(100) substrate for solar cell application Kayrol Ann B. Vacalares, Arnold C. Alguno, Reynaldo M. Vequizo	Simulation of wave propagation through different slopes of an 8-step stepped-faced breakwater (Applications) Wilfredjhon T. Mirasol, Hermogenes C. Goo, Jr. Note: Participants are advised to bring their own laptop.		AdDU 02:00-02:45
02:00-03:00	PHYSICS CLINIC III with Dr. Remigio Tee and Dr. Ryan Balili for Teachers at NV302 ROOM F				

03:00-03:15	COFFEE BREAK
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SUB-PLENARY SESSION IV					
	ROOM A Materials Science Moderator: Prof. Mariel Grace Dimamay	ROOM B High Energy Physics Moderator: Prof. Jan Mickelle Maratas	ROOM C Computational / Theoretical Physics Moderator: Prof. Ryan John Cubero	ROOM D Physics Demonstration Moderator: Prof. Rolando Candidato	ROOM E Exhibits and Displays Moderator: Prof. Jingle Magallanes
03:15-03:45	Effect of ZnCl₂ concentrations and substrate orientations on the structure of zinc sulfide grown on Si(100) and Si(111) substrates Hananish Joy G. Odarve, Arnold C. Alguno, Reynaldo M. Vequizo, Rolando T. Candidato, Jr.	Comparative study of the gamma attenuation coefficient measurement using natural clay and lead absorbers at E = 0.662 MeV Liza Marie T. Dangkulos, Salasa A. Nawang	Analytical modelling of electric motors with permanent magnets Normie Jean B. Sajor, Ryan B. Balili, Rosario L. Reserva	Application of ImageJ on a modified current balance experiment Mergebelle V. Durato, Eduardo N. Fajardo <i>Note: Participants are advised to bring their own laptop.</i>	NV 302 AdDU 02:00-02:45 Krypton Resources 02:45-03:30 Sigmattech 03:30-04:15 PASCO 04:15-05:00
03:45-04:15	Electromagnetic interference shielding effectiveness of polyaniline/polystyrene composite films Edison M. Rivera, Felicidad Christina Ramirez, Fortunato B. Sevilla III	Dosimetric parameters of IsoAid ADVANTAGE™ model IAI-125A^{125I} seed: a simulation study using distributed computing Jun Rey S. Lincuna, Jan Mickelle V. Maratas	Relative length extension of a worm-like chain molecule: A white noise functional approach Lutchie Dyan S. Mendoza and Jinky B. Bornaes		
04:15-04:45	Ammonia gas sensing capability of HCl doped polyaniline pellets Bianca Rae B. Sambo, Filchito Renee G. Bagsican, Editha P. Jacosalem, Reynaldo M. Vequizo	Nuclear fragmentations of ¹²C and proton irradiation in water: A Monte Carlo simulation Carlo Paul P. Morente, Salasa A. Nawang, Jan Mickelle V. Maratas	Application of white noise analysis to the modified worm-like chain: Fixman and Kovac model Karl Patrick S. Casas, Jinky B. Bornaes, Beverly V. Gemao	Measurements of speed of sound as a function of temperature via resonance and normal modes method Alwielland Q. Bello, Samuel C. Garcia	
04:45-05:15	Enhancement of the electronic properties of chemically prepared emeraldine polyaniline by Cl-doping Majivell Kay G. Odarve, Reynaldo M. Vequizo	Angular and lateral resolution study in a proton computed tomography Catherine Therese J. Quinones, Salasa A. Nawang, Jan Mickelle V. Maratas	Partition function evaluation of the dsDNA under an external constant force using white noise functional approach Gibson T. Maglasang, Beverly V. Gemao, Jinky B. Bornaes		
03:30-05:00	PHYSICS CLINIC IV with Dr. Remigio Tee and Dr. Ryan Balili by Request at NV302 ROOM F				

10/23/10	
08:00-09:00	CLOSING CEREMONIES Venue: Educational Media Center
09:00-12:00	CONFERENCE TOUR
12:00-01:00	LUNCH

POSTER PRESENTATIONS	
Experimental and Computational High Energy Physics	<p>#1. Food irradiation in the Philippines: An emerging solution to the global food crisis Authors: Liza Marie Tandura Dangkulos and Anatoly Karpov Pajunar Buss</p> <p>#2. Study on the radioactivity from ²³⁸U using GEANT4 toolkit Authors: Sim P. Bantayan and Salasa A. Nawang</p> <p>#3. Simulation studies on the gas properties of Ar-Xe CO₂ in a cylindrical gas electron multiplier (GEM) Authors: Hope Earl R. Borongan and Louie T. Murcia</p> <p>#4. Simulation studies on the transport properties of gas mixture in a triple-Gas Electron Multiplier (GEM) Authors: Yvette Marie A. Sabellona, Louie T. Murcia and Rosario L. Reserva</p>

	Computational and Theoretical Physics	<p>#5. Numerov method in solving the Schrodinger equation Authors: Edward Aris D. Fajardo and Hamdi Muhyuddin D. Barra</p> <p>#6. B cell density behaviour with various activation functions Authors: Rhenan O. Bacolod and Christine Joy G. Aban</p> <p>#7. The partition function of the worm-like chain model under the influence of a stretching force Authors: Sheila L. Corazon, Beverly V. Gemao and Ryan John A. Cubero</p> <p>#8. An expository study on the white noise functional approach to path integrals for boundaries and topological constraints Authors: Analou P. Laid, Ryan John A. Cubero and Alviu Rey B. Nasir</p> <p>#9. Extension of the T-transform of the harmonic oscillator Feynman integrand as a white noise distribution Authors: Karen Crystal C. Lasta, Alviu Rey B. Nasir and Ryan John A. Cubero</p> <p>#10. Partition function of a twisting semi-flexible polymers Authors: Emmanuel D. Monterola, Beverly V. Gemao and Ryan John A. Cubero</p> <p>#11. Extension of free Feynman integrand to include hyperbolic sine potential as a white noise distribution Authors: Michelle I. Salinas, Alviu Rey B. Nasir and Jinky B. Bornales</p>
	Materials Science and Photonics	<p>#12. Vibrational modes of water in IR region: theoretical and experimental Authors: Eric M. Alcantara, John Paul J. Aseniero, Rommel J. Jagus, Michael J. Jabines, Sandra L. Manulat, Hananish Joy G. Odarve, Majivell Kay G. Odarve, Edmar G. Pantohan, Reynaldo M. Vequizo, Editha P. Jacosalem</p> <p>#13. Reflectivity measurements of zinc oxide (ZnO) thin films and silicon germanium (SiGe) substrate Authors: Patrick Alvin M. Alcantara and Ryan B. Balili</p> <p>#14. Fabrication and characterization of hydrochloric acid-doped polyaniline thin films for ammonia sensing Authors: Rowena S. Dulos, Filchito Renee G. Bagsican and Bianca Rae B. Sambo</p> <p>#15. Preliminary investigation on a cement-bonded particleboard made from <i>Terminalia catappa</i> (talisyay) seed husks and wood shavings Authors: Chryzel Angelica B. Gonzales and Maria Natalia R. Dimaano</p> <p>#16. Crystallographic properties of hydroxyapatite using space-group theory and X-ray powder diffraction Authors: Junald M. Jiyara, Reynaldo M. Vequizo, Jess E. Gambe, Rolando T. Candidato, Jr. and Ermie M. Baccara</p> <p>#17. Energy band gap and electrical properties of zinc oxide thin film for ammonia gas sensing Authors: Maria Teresa S. Morales, Jess E. Gambe and Reynaldo M. Vequizo</p> <p>#18. Characteristic line spectra of hydrogen, neon and mercury gas discharge tubes using HR4000 spectrometer Authors: Charmiene Jennifer P. Zafra, Kristine Bernadeth H. Hamol-awon, Mergabelle V. Durato, Edward Aris D. Fajardo, Rea Divina C. Mero, Kristine L. Norbe and Florencio D. Recoleta, Jr.</p> <p>#19. Applying digital shearography for the detection of induced defects on a sandpaper surface Authors: Nole Kristoffer L. Laganga and Mariel Grace S. Dimamay</p> <p>#20. Determination of Contact Angle Through Fitting Authors: Wheskie N. Membreve, Mark Gino E. Aliperio and Ryan B. Balili</p>
	Physics Concepts and Demonstration	<p>#21. Maryland Physics Expectations Survey (MPEX): Expectations and beliefs among university physics students Authors: Anatoly Karpov P. Bussa, Jonathan Andro P. Tan, Baltazar G. Catipay, Zarujo C. Girasol, Giselle Ann A. Alvarez, Blesilda Rachel V. Esterioso and Nelvin R. Quaimbao</p> <p>#22. Performance of students in service-learning activities: pedagogy in teaching earth science Author: Anatoly Karpov P. Buss</p> <p>#23. Dialogue-card method: Remediating alternative conceptions related to geometrical optics Author: Swidin S. Husin</p> <p>#24. Comparison on the sophistication of epistemological beliefs between BS and BSE physics students Authors: Sotero O. Malayao, Jr. and Myrna E. Lahoylahoy</p> <p>#25. Learning physics through MI pedagogy Authors: Irene A. Sanoy, Margarito S. Reyes, Jr. and Swidin S. Husin</p> <p>#26. Improvised vertical axis wind turbine Authors: Wilmer A. Agustin and Joel G. Fernando</p> <p>#27. The Gough-Joule effect in rubber band Authors: John Andrew C. Albay, Ariel C. Alvarez and Joel G. Fernando</p> <p>#28. Fabrication of sugar lens for optical experiments Authors: Ahmerzon R. Ali, Ariel C. Alvarez and Joel G. Fernando</p> <p>#29. Fabrication of a Van de Graaff generator Authors: Munir J. Baldomero and Joel G. Fernando</p> <p>#30. An introduction to electromagnetic pulse</p>

		<p>Authors: Munir J. Baldomero, Leo Jess Baya and Karla V. Belisario-Rivero</p> <p>#31. Piezoelectric effect in sugarcanes Authors: Leo Jess G. Baya and Joel G. Fernando</p> <p>#32. Kundt's tube: an apparatus to measure the speed of sound and Young's modulus Authors: Baltazar G. Catipay</p> <p>#33. Demonstration of electromagnetism in electrical appliances through improvised impulse electric motor Authors: Star Marie Apple T. Doliente, Lierne V. Banaan, MARRISA F. CANDIDO, Mark Anthony Fermin, Mary Grace E. Miras and Melchor J. Potestas</p> <p>#34. Pyroelectricity Authors: Rodel L. Inclan and Joel G. Fernando</p> <p>#35. Can hot water freeze faster than cold water? Authors: Nipar K. Langa, Roxanne C. Timosa and Reynan L. Toledo</p> <p>#36 The physics of the dropped slinky spring Authors: Lilanie B. Olmedo and Karla V. Belisario-Rivero</p> <p>#37 Fabricating a handy device for mixing colored lights Authors: Lilanie B. Olmedo and Joel G. Fernando</p> <p>#38 Teaching basic concepts in electrostatics using Physics Education Technology (PhET) simulation: an introduction Authors: Alwielland Q. Bello</p>
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