

THE PHILIPPINE PHYSICS SOCIETY (PPS): INFORMATION AND TRADITIONS

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I. NATURE AND COMPOSITION

The Philippine Physics Society (PPS) is an organization of physicists, physics professionals, physics teachers, physics students and physics enthusiasts. It is a national organization originally based in the southern part of the Philippines and focused to the south. Thus, its activities have been initially concentrated in the Visayas and Mindanao.

During the International Conference on Physics Education for Development held in Manila on December 1-5, 1992, about 150 conference participants coming from Luzon sought membership in PPS. They were consequently admitted to the society.

After a decade of having initial activities in Northern Luzon (Physics regional seminars in Vigan City in 1990 and Bangued, Abra in 1999), the PPS, in 2002, has extended its service to underserved areas in Luzon, as well. The main concern of the PPS is the improvement of its members in their respective fields of research and teaching and the advancement of Physics and Physics Education. Thus, PPS hopes that the members, having learned more, can serve better

II. BRIEF HISTORY

The Philippine Physics Society (PPS) was born in Cebu City in 1974 from an awareness of a need for an organization of physics people as a vehicle for pooled resources, efforts and concerns by a group of less than 10 young physics graduates from the University of San Carlos. It had its initial meetings at the National Science Development Board (NSDB) Regional Office. It was subsequently admitted as a member of the Science and Technology Forum, an association of scientific and technological organizations in Cebu and Region VII. Professor Gerardo Maxino, its founder, was designated as the Chairman of the Society.

Later on, in 1979, the word “Southern” in parentheses was attached to its name to underline the focus of its interest. In 1987, the members voted to remove “(Southern)” and return the original name: Philippine Physics Society.

Although the founding members originally intended the PPS to be exclusively for physics professionals, it was decided during the First Convention in 1979 to open the membership to all those interested in physics. The PPS was admitted as member of the Philippine Science and Mathematics Council in the 1980s.

The PPS intended originally to focus its attention to the Visayas and Mindanao, which it considered as underserved areas. This explains why its activities were mainly in these two geographical divisions during its first 25 years of existence. At the closing years of the Millennium, however, incontrovertible evidence convinced the PPS that there were many areas in Luzon, even sectors in MetroManila, that were underserved too. Thus, PPS has taken since the Year 2000 the entire Philippines as its area of service. For the Philippine Physics Society is an embodiment of the ideal of service to physics and peoples. The Luzon Conference was started in 2002. This conference is held only if the venue of the subsequent annual national convention is in Mindanao or the Visayas. The Luzon Conference hosts have been Adamson University (Manila, 2002), Mapua Institute of Technology (Manila, 2003), Technological University of the

Philippines (Manila, 2005) and Colegio de San Juan de Letran - Calamba (Calamba City, Laguna, 2007).

III. MEMBERSHIP

The members of PPS are grouped into:

- A - College physics teachers
- B - Graduates of professional physics degrees like BS (Physics), BS Physics, MS Physics, PhD Physics
- C - High School physics teachers
- D - Physics enthusiasts
- E - Physics students
- F – Research and development practitioners in industry

These groupings are mainly due to interests and members may belong to several groupings if they qualify for them. All the members, regardless of their groups, have the same rights and privileges in the Society. Certain qualifications, however, are required for election to some offices in the Society. For instance, members of the Governing Board should preferably be graduates of professional degrees in Physics.

To become a member of PPS, a person simply applies for membership through any member or officer of the Society. Also, for this purpose, an interested person may contact the PPS President through the society's official email address. The second PPS convention in 1980 decided to collect yearly membership fees starting 1980.

PPS is also organized by areas. This is a grouping on the basis of geographical proximity and accessibility of transportation. The aim here is to keep the members in close contact with each other. The first area to be formally organized was the Negros - Siquijor area. Some of the chapters that have been formed are: (1) Bacolod, (2) Bukidnon, (3) Butuan, (4) Cebu, (5) Iloilo province, (6) Iloilo City, (7) Negros Oriental, (8) Southern Negros, (9) Tacloban, (10) Tagbilaran, (11) Cagayan de Oro-Camiguin, (12) Iligan City, (13) Agusan del Norte, (14) Surigao del Norte, (15) Northern Samar, (16) Samar, (17) Siquijor, (18) Region I, (19) Region II, (20) Region III, (21) Region IV, (22) Bicol, (23) NCR, (24) Aklan, (25) Boracay, and (26) South Central Mindanao (2011).

IV. GOVERNING BODY

PPS is governed by a National Board and a National Assembly. All members who have previously attended at least one PPS National Convention are entitled to attend the National Assembly. The National Assembly is held at the start of the annual PPS convention. It is the National Assembly that elects the members of the National Board from among themselves and decides on the major policies that govern the society. The 1991 National Assembly decided that Prof. Dr. Gerardo Maxino, Prof. Dr. Vicenta Maxino and Prof. Dr. Fr. Herman van Engelen, SVD, shall be permanent members of the National Board to provide continuity and that seven members from the National Assembly shall be elected to the Board to serve a one-year term. Subsequently, the National Assembly allowed expansion of membership to accommodate representatives from the different regions.

The members of the National Board should have the widest geographical distribution possible and should preferably be physics degree holders. Initially the members of the National Board elected from among themselves a President, Secretary-Treasurer, and Auditor. They continue to serve in office until replaced by majority vote of the National Board and such action

ratified by the National Assembly of the subsequent National Convention. This arrangement provides continuity and reliability.

From 1974 to 1979, Professor Gerardo Maxino served as Chairman of PPS. Fr. Francisco Glover, PhD, SJ, was the Chairman of (S) PPS from 1979-1980. The present PPS President is Prof. Gerardo Maxino, the Secretary-Treasurer is Prof. Vicenta Maxino and the Auditor is Ms. Judith Dianson.

The different PPS chapters elect their own sets of officers. The members of the National Board are disqualified from holding positions at the chapter or group level.

The Philippine Physics Society follows a flat structure and avoids as much as possible unnecessary layering. Thus, a chapter should encompass not more than a province. In some cases, a region may organize into a chapter; however, as soon as conditions allow, the regional chapter should break up into provincial/city chapters. Neighboring towns/cities may also form a chapter. This structure is more responsive to local needs.

The PPS adheres to and encourages the practice of servant-leadership among its officers and members.

PPS observes and honors the traditions of the society while it continues to evolve the best possible structures and processes as it moves along in time. Only the National Assembly on a majority vote may decide to change the observed traditions of the society.

V. ACTIVITIES

PPS holds yearly its national convention. The first one was held in Dumaguete City on March 31 to April 1, 1979. It was attended by 96 participants including almost all the PhD Physics degree holders in the country. The themes and hosts of the national conventions are:

YEAR	THEME	HOST(S)
1979	Physics Research and Teaching in the Context of National Development	Silliman University Foundation University Dumaguete City
1980	Redirecting Physics for the Filipino	University of San Carlos Cebu City
1981	Physics in the Classroom and Industry	MSU-Iligan Institute of Technology Iligan City
1982	Physics and Energy	Silliman University Foundation University Dumaguete City
1983	Physics and Rural Development	Xavier University Cagayan de Oro City
1984	Physics and the Environment	University of Negros Occidental-Recoletos Bacolod City
1985	Communicating Physics	St. Paul University – Dumaguete Dumaguete City
1986	Physics and Social Responsibility	Central Philippines University Iloilo City
1987	Physics and Total Human Development	Fr Saturnino Urios University Butuan City
1988	Physics in the Classroom and Community	Divine Word University

		Tacloban City
1989	Physics, Ecology and the Development of Community	Central Mindanao University Musuan, Bukidnon
1990	Physics and Agricultural Technology	Visayas State University Baybay, Leyte
1991	Physics and Information Technology	University of San Carlos Cebu City
1992	Physics and Education	Holy Name University Tagbilaran City
1993	Physics Literacy for People Empowerment	University of Negros Occidental – Recoletos Bacolod City
1994	Physics, Ecology and Sustainable Development	University of Eastern Philippines Cataraman, Samar
1995	Physics in the Philippines in the Year 2000	Central Philippine University Iloilo City
1996	NICHood through Quality Physics Education	Ateneo de Davao University Davao City
1997	Quality Physics Education through Networking	Silliman University Dumaguete City
1998	20 Years of Shared Service	University of San Carlos Cebu City
1999	PPS Silver Jubilee: Revisiting our Roots	Liceo de Cagayan University Cagayan de Oro City
2000	Physics Para sa Mahirap	Fr Saturnino Urios University Butuan City
2001	Physics and Culture	Holy Name University Tagbilaran City
2002	Becoming a Physics Community of Competence and Service	Silliman University Dumaguete City
2003	A Silver Jubilee Celebration of Community and Mission	Samar State University Catbalogan, Samar
2004	PPS Pearl Anniversary: A Tribute to Fr. Francisco “Kiko” Glover, SJ	Ateneo de Davao University Davao City
2005	Physics, Appropriate Technology and the Development of Peoples	University of Baguio Baguio City
2006	Physics, Tourism and Ecology	Aklan State University Banga, Aklan (with Boracoy as 2 nd venue)
2007	Physics and Indigenous Technology	Fr. Saturnino Urios University (lead host), Butuan City

2008	Physics and Magic, Mystics and Wizardry	Siquijor State College Larena, Siquijor
2009	Physics and Natural Disasters	Central Bicol State University of Agriculture Pili, Camarines Sur
2010	Physics and Climate Change	Xavier University Cagayan de Oro City
2011	Physics and Environmental Well-Being	Silliman University Dumaguete City
2012	Physics, Nationalism, and Development	Colegio de San Juan de Letran -- Calamba Calamba City, Laguna
2013	Physics and Caring for the Earth in the Specter of Climate Change	Ateneo de Davao University Davao City
2014	PPS @ 40 : Physics and Servant Leadership	Maxino College Bagacay, Dumaguete City
2015	Physics, Light, Culture, and Life	University of Northern Philippines Vigan City, Ilocos Sur
2016	Physics and Indigenous Culture and Development	Central Mindanao University Musuan, Bukidnon
2017	Physics, Urbanization and Inclusive Growth	University of San Carlos Talamban, Cebu City
2018	Physics and the Development of Indigenous Communities	Ateneo de Davao University Davao City
2019	PPS@45 : Physics and Social Transformation	Maxino College Bagacay, Dumaguete City

During the annual convention, papers on physics research and teaching are presented by the members of the Society and by invited scientists and educators. Short courses which treat a particular topic in physics in depth, along with shorter lectures and workshops on a variety of topics, are also conducted during the convention to meet the needs of the members. The PPS National Convention incorporates the National Physics Olympics and the National Physics Fair. During the group meetings, the members discuss their concerns, elect their officers and share their expertise on particular topics in physics. Merit awards are given for exemplary commitment to physics education through active participation in the PPS annual conventions, according to the following category:

- ORDER OF GALILEO* - at least 5 PPS annual conventions
- ORDER OF NEWTON* - at least 10 PPS annual conventions
- ORDER OF MAXWELL* - at least 15 PPS annual conventions
- ORDER OF EINSTEIN* - at least 20 PPS annual conventions

The members of the National Board are also elected during this time and recognition is given to deserving physicists. The *Golden Service Award* is the highest honor and distinction given by the PPS. It is conferred on one who has spent a lifetime of commitment and passion for service and community towards the development of physics and physics education in the country,

as an offering to the Filipino people. Those who have made significant contributions in Physics are conferred the Outstanding Achievement Award. Those who have served the society and the struggle to improve physics and physics education in the Philippines for many years through lectures, workshops, and other worthy activities are given the Outstanding Service Award. Those who for years painstakingly labor in physics education – caring for, nurturing, and mentoring the youth – even at times, or always in the case of some, bring their students to attend the PPS conventions are given the National Physics Educator Award. Administrators who faithfully support and allow their teachers and students to attend the activities of the society are conferred the Outstanding Administrative Service Award. Through the years, the PPS awardees have been:

Golden Service Awardees:

- 2004 Fr. Francisco “Kiko” Glover, PhD, SJ
- 2006 Fr. Herman van Engelen, PhD, SVD
- 2011 Mr. Narciso F. Mefragata
- 2013 Fr. Daniel J. McNamara, PhD, SJ
- 2015 Br. Joseph Scheiter, PhD, FSC

Outstanding Achievement Awardees:

- 1980....Casimiro del Rosario, PhD
- 1981....Fr. Francisco Glover, PhD, SJ
- 1982....Zoilo M. Bartolome, PhD
- 1983....Posthumous awards to:
 - Fr. Philip van Engelen, SVD
 - Fr. Hubert Lorbach
 - Fr. Franz Oster, SVD
 - Fr. Michael Richartz, PhD, SVD
- 1984....Venancio Alcantara, Jr., PhD
- 1985....Jack John Brennan, PhD
- 1986....Robert Wild, PhD
- 1988....Fr. Herman van Engelen, PhD, SVD
- 1989....Manuel Eugenio, PhD

Outstanding Service Awardees:

- 1989 Gerardo C. Maxino, PhD
Vicenta C. Maxino, PhD
- 1993 John D. Brule, PhD
- 1995 Aida D. Eugenio
- 1998 Nila Sabal
Judith Dianson
- 2000 Dr. Pelagia Joven
- 2001 John L. Holdsworth, PhD
Ed van den Berg, PhD
Christopher Bernido, PhD
Victoria Bernido, PhD
- 2002 Remedios Cardino
Josefina Clarete
Leopoldo Millamena
Ms. Teresita Taganahan
- 2003 Dr. Remigio G. Tee

- Narciso F. Mefragata
 2005 Dr. Perla Funa
 Dr. Raymund Vizcarra
 2007 Dr. Hope M. Bandal
 Dr. Loreto B. Feril, Jr.
 Dr. Asonita Parmisana
 2010 Dr. Gil Nonato C. Santos
 2014 Dr. Angela Kho Payongayong

National Physics Educator Awardees

- 2005 Jose Caberte
 Jose Luna
 Vicente Simplicio Villegas
 2006 Lottie Dingding
 Esperanza Caballero
 2007 Myrna Genandoy
 Romulo Sopena
 Dr. Roel Taroc
 2008 Dr. Veneranda Rizon
 2009 Rene B. Cabrera
 Susana C. Cahig
 2010 Jaime H. Rillorta
 Marlyn G. Jover
 Dr. Mario P. Obrero
 2011 Grethel A. Mende
 Felix L. Nistal
 Roberto A. U. Dangkulos
 2012 Shirley T. Palisoc, PhD
 Severino C. Cupida
 2014 Michelle T. Natividad, PhD
 2016 Elmer E. Galang
 Nestor Sienes
 2018 Emil C. Alcantara
 Thresa O. Corcoro

Outstanding Administrative Service Award

- 2007 Dr. Saturnina Chenfoo
 Dr. Dominador. Cabanganan
 Supt. Ponciano Joven

PPS publishes the *Philippine Physics Journal* [formerly *The (S)PPS Proceedings*], for articles on physics research and teaching. From the manually typed paper-bound mimeographed sheets of manuscripts in 1979, the *Philippine Physics Journal* is now a better-looking journal, electronically processed, and stitch-bound with a printed cover. In her study in 2000 in Central Visayas, Dr. Asonita J. Parmisana found that in the period 1989 to 1999, of the physics articles published in the national level, 60 percent were in the *Philippine Physics Journal*. This is

indicative of the important role of the *PPJ* in physics education in the country. The *PPJ*, by tradition, is published by the labor of love of its faithful staff. Starting with the 2008 issue, the *Philippine Physics Journal* has been processed at Maxino College, Dumaguete City with the assistance of its BS Physics students and those of its other physics-related courses.

PPS also publishes the *PPS Newsletter*, as need arises, to keep contact with its members. Originally a printed newsheet, it has been electronically incorporated in the PPS official website. Since January 2006 PPS has maintained a website (<http://philippinephysicsociety.com> or <http://philippinephysicsociety.org>) where news and information can be shared readily with all members who have access to the internet. There is also a Facebook account: Philippine Physics Society.

PPS also holds Physics Summer Institutes for upgrading physics education. The first Physics Summer Institute was conducted free of charge in cooperation with Foundation University which granted the bureau credits for the given courses during the summer of 1980. The teachers taught without compensation.

In Summer 1981, STEP in Physics (Southern Teachers Enrichment Program in Physics) replaced the Physics Summer Institute. STEP in Physics was funded by FAPE (Fund for Assistance to Private Education) and offered scholarships for a Bachelor of Science in Physics degree or a Master of Science in Physics degree at the University of San Carlos for three consecutive summers to qualified physics teachers. More than 50 physics teachers enrolled in the BS Physics program and more than ten took the MS Physics program. None of the teachers, however, decided to finish the BS Physics degree, it being a second degree for them at the baccalaureate level. Many of those who participated in the program, both at the undergraduate and graduate levels, eventually finished masteral and doctoral degrees.

In Summer 1986, PPS, as a member of the Philippine Science and Math Council, was one of the organizations that conducted the FAPE-sponsored Physics Summer Science Institute at the University of San Carlos.

In October 1986 to March 1988, PPS cooperated with Silliman University in conducting the Certification Program for Physics Teachers in Secondary Schools sponsored by the Science Education Institute of the Department of Science and Technology.

In Summer 2003, a cooperative program among Siquijor State College, the Philippine Physics Society, the Silliman University Center of Development in Physics and Ateneo de Davao University Physics Department was initiated. The program offered a three-summer course leading to Master of Arts in Science Teaching (Physics) which required thesis. About 20 Physics teachers participated in the program. In June 2005, a special graduation ceremony held at Siquijor State College granted the degree Master of Arts in Science Teaching (Physics) to ten of the participants and the degree Master in Teaching (Physics) to three of the participants. A second run of the program, this time with the inclusion of the Master of Science in Science Education (Physics) was held in Summers 2011-2013 through the collaboration of Siquijor State College, the Philippine Physics Society, and Maxino College, with the latter as instructional venue. Eight graduated with the degree Master of Science in Science Education (Physics) and one with the degree Master in Teaching (Physics). The former requires a thesis. Both require 26 graduate units of Physics content courses, four units of research, and six units of thesis. Teaching methodology is integrated into the courses. The third and final run of the Tri-Summer Graduate Physics Program was conducted from 2015 to 2017. Of the six initial enrollees, four graduated with the degree of Master of Science in Science Education (Physics Teaching).

The year 1986 illustrates the vitality of PPS: upgrading seminars on various topics in Physics held in Cebu City (2); Binalbagan, Negros Occidental; Dumaguete City; Iloilo City; Butuan City; Musuan, Bukidnon; Bacolod City; Sta. Catalina, Negros Oriental; and Kabankalan,

Negros Occidental. At present, with many active PPS chapters, upgrading seminars have become regular yearly activities in many provinces and cities of the Visayas and Mindanao areas. In 1990, PPS held the very first Physics Seminar in Vigan City at the Divine Word College of Vigan under the sponsorship of the UNESCO University Physics Project in the Philippines.

To cite another example, from the renewed vitality of community life emerging from the 24th PPS Convention at Silliman University in April 2002, a Regional Upgrading Seminar On Electricity, Optics and Modern Physics was held for the first time in Siquijor in August 2002. This resulted in the formation of the PPS -- Siquijor Chapter. In October 2002, at the invitation of Adamson University, PPS held its first upgrading Physics seminar in Electricity, Optics and Modern Physics in Metro Manila, indeed, the First Luzon Conference. The seminar was well attended by physics teachers from schools all-over Luzon and resulted in the formation of six new chapters. Not to be outdone, the Negros Oriental Chapter had its own Physics upgrading seminar on Electricity and Optics in Tanjay City in November 2002. In July 2005, a similar physics upgrading seminar was conducted at Aklan State University resulting in the establishment of the Aklan PPS Chapter and Boracay PPS Chapter.

Although many PPS conventions and seminar-workshops had been conducted in Region VIII, the first PPS seminar-workshop cum regional convention in Southern Leyte was held on October 22, 2013 at St. Joseph College, Maasin City. This was the Region VIII Convention and Seminar-Workshop on Physics Laboratory Instrumentation for All. This was also the maiden public presentation of some apparatus from the Technology Incubation Unit of Maxino College.

In 1980, PPS started its Laboratory Extension Assistance Program (LEAP) in the Negros-Siquijor Area. In LEAP, any Physics teacher who has difficulties in his laboratory may request for assistance from PPS. Requests for such assistance must be made in writing to the PPS National President. A LEAP team will then visit the physics teacher. The LEAP team repairs equipment when possible and shows the teacher how to use the equipment found in the school's laboratory. LEAP services are free. The expenses of the LEAP team are supported by the PPS membership fees. A physics teacher of Sacred Heart Academy of Bais City was the first to avail of this service. The LEAP is now being reinvigorated with the support of the Physics Education Center of Maxino College, Bagacay, Dumaguete City. On account of financial limitations, however, services are restricted at the moment to areas near the serving station, unless of course travel expenses will be shouldered by a sponsor. An example of this was the seminar-workshop conducted by PPS and Maxino College at Trinity Christian Academy, Bacolod City. The workshop involved experiments using pieces of apparatus produced by the Technology Incubation Unit of Maxino College. These laboratory equipment enhanced the Physics Laboratory of the host schools.

Since many schools have poorly equipped physics laboratories, PPS encourages capable physics teachers to make low cost physics equipment to be sold at cost to their fellow PPS members after they have undergone a short course using the equipment. PPS provides seed money for this construction but requires that no teacher will be allowed to buy unless he has undergone the short course associated with this equipment.

In 2017, PPS and Maxino College worked with the Schools Division of Negros Oriental in conducting the Physics Teachers Enhancement Program of Negros Oriental Division which was held for six Saturdays or a total of 48 hours. PPS and Maxino College provided the trainers, resource persons, and training materials. Participants went back to their schools with a number of free physics laboratory equipment.

PPS has initiated and propagated the Physics Olympics in the Philippines, if not in Asia. The first Physics Olympics was held in Dumaguete City in December 1983. Now, the Physics Olympics is held in many places in the Philippines. The first National Physics Olympics for

teachers was held during the 10th PPS Convention at the Divine Word University of Tacloban in Tacloban City on April 6-9, 1988. Since then, the National Physics Olympics has been a regular feature of the annual PPS Convention. PPS conducts training in organizing the Physics Olympics. For example, a well attended Physics Olympics Congress was held on September 19, 2007 at La Consolacion College in Bacolod City.

In 1997, PPS handled the technical aspects of the First TRITECH Inter-Regional Physics Olympics sponsored by the Tri-Sectoral Forum for Technology Excellence (TRITECH) at SM, Cebu City. The 2nd TRITECH Inter-Regional Physics Olympics was held on July 26, 2000 under the sponsorship of TRITECH and DOST-Visayas Cluster (led by Region VII).

The Physics Olympics has really taken roots in the country. Now, during this annual national event, three categories are kept: high school students, college students, and professionals/teachers.

Since 1993, at the University of Negros Occidental - Recoletos, Bacolod City, PPS has conducted the National Physics Fair during the annual PPS Convention. Here, investigatory projects, inventions, and exhibits are presented by teachers and students in all levels. Mentoring in research is done during the Physics Fair.

Through the efforts of Dr. Robert Wild, PhD, PPS received a donation of about 3600 volumes of books and journals which were shipped to the Philippines free of charge from the United States of America through the Operation Handclasp of the U.S. Navy. These books and journals were turned over to requesting schools, among which was Silliman University, on a first come-first served basis after sharing the costs of transporting the books from Subic Bay to the recipient's place.

VI. PHILOSOPHY

The Philippine Physics Society was born out of the following convictions:

- self-reliance - the improvement of physics research and teaching in the Philippines will primarily come from our own resources and efforts; that no matter how poor we are, there is always some significant thing we can do.
- sharing - talents and resources must be shared by individuals, among physics departments, between schools and community and among groups; that when each brings the little s/he has, the sum can be a very potent force.
- indigenization - physics and physics education, as we encounter it in the Philippines, must be grown from Philippine soil, should be understood by the Filipino and must be responsive to the country's needs
- hominization - physics research and teaching must be reflective of endeavors that are truly human (matter and spirit) rather than purely materialistic pursuits; that doing physics is a participation in God's work of creation
- socialization/ community-building - the Philippine Physics Society must bring all those involved in physics into a truly human community, a loving, caring, and struggling community that is fruitful of growth and progress.

This philosophy has nourished and sustained the growth and vitality of the Philippine Physics Society, which dared to be different, which took the courage of developing from below.

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