

Spring 2013



THE INSTITUTE FOR ADVANCED PHYSICS

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IAP Celebrates Ten Year Anniversary

On March 14, 2013, the Institute for Advanced Physics celebrated ten years of service toward our fellow man by following our mission of rooting out the misunderstanding and misapplication of modern science. In particular, we have answered many, many profound questions which that misunderstanding appears to raise against the very foundation of knowledge. In this way, we are building a culture that puts man's ultimate goal of Truth back in center place. We are doing this from the only place one can, from the ground of our thinking. Each one of our benefactors, especially our foundational ones, is an essential cornerstone of all of IAP's achievements and we remain grateful for their support. The backbone of our organization is our faculty and members. Under the guidance of our founder and Director, Dr. Anthony Rizzi, **IAP has grown to include over 80 faculty, members, volunteers** and others. All of them contribute their time, talent and expertise *pro bono*. These individuals further IAP's mission as researchers and teachers (Ph.D. physicists and philosophers), Associate & Adjunct Faculty teachers/researchers;

accountants, lawyers, audio-visual technicians, network administrators, web developers, editors, videographers, film producers, administrative assistant support and artists to name just a few. The fruits of our mission are our publications, trained teachers and enthusiastic students

Read more about the people who shape this mission and our work over these past ten years in our special ten year anniversary edition [newsletter](#).

AAPT Continues to Support the *Physics for Realists* Series

The American Association of Physics Teachers in its journal *The Physics Teacher* (Vol. 51, Jan 2013, page 62) **recommends IAP's *Physics for Realists: Electricity and Magnetism*** in a micro-review written by John Hubisz, Column Editor, Department of Physics, North Carolina State University. Micro review gives a very positive review by tying it the full length review of *Physics for Realists Mechanics* in a previous issue (Vol. 47, May 2009).

Institute for Advanced Physics Loses a Dear Friend

Fr. Benedict Ashley, O.P., Associate Faculty



IAP's mission directly addresses the most important intellectual problem of the last 400 years, without which the Church cannot truly evangelize modern man.

IAP is the first and only institution addressing this problem at its core by integrating the proper philosophical depth into the heart of modern science.

Fr. Benedict Ashley, O.P., Renowned Thomist philosopher and theologian, IAP Associate Faculty (May 3, 1915 – February 23, 2013)

Our dear friend passed away on February 23, 2013. The great Dominican philosopher and theologian, **Benedict Ashley**, passed away in Chicago at the age of 97 (DOB May 3, 1915). Fr. Ashley was an atheist and a communist who converted to Catholicism after learning the sound philosophy of Thomas Aquinas through his teacher the great Mortimer Adler. Fr. Ashley was working hard for the Institute till his health failed a couple months before he died. Fr. Ashley, a philosophy faculty of the IAP was a part of the IAP's work from IAP's beginning, participating in our first conference.

Fr. Ashley was part of a little known, but extremely important, group of Thomists who, responding to Pope Leo XIII (1879), finally (1950's) and first fully appropriated the grounded physical thinking of St. Thomas Aquinas in a way that left a trail in modern scholarship. That trail, however, was weak because it did not connect in any real way with modern science. Still, Fr. Ashley's work with this group, later called the Albertus Magnus Lyceum, along with his own work fostered his many insights in Thomism. To cut a long story short, Dr. Rizzi, without awareness of their previous work, started the IAP that for the first time both *recognized* the grounded thinking *and understood* the real nature of modern science and, moreover, proceeded to explicitly ground

the modern sciences in this "science before science." Fr. Ashley followed Dr. Rizzi's lead in this, as it requires modern physicists who know Thomism to do this monumental, essential task.

Fr. Ashley was a very important part of IAP's work and life, especially in his friendship with Dr. Rizzi. Fr. Ashley was in contact, working with Dr. Rizzi nearly daily until the few weeks near the end of his 97 years. Fr. Ashley was a tireless intellectual warrior promoting and working on IAP's essential work, which is replacing our root cultural thinking (that is leading us ever deeper into a hard, cold culture of death) with fully human thinking, leading back to Truth Himself and thus to a culture of life. He contributed among other things to the IAP's journals and to the mechanics and E&M texts.

He was truly a brilliant and good man, and he will be sorely missed by all of us at IAP. Fr. Ashley's long life reveals his deep overriding commitment to getting the truth and giving it to others.

Eternal rest grant unto your servant, Benedict, O Lord, and let perpetual light shine upon him. May his soul and the souls of all the faithful departed through the mercy of God rest in peace. Amen. We ask for Fr. Ashley's intercession for the Institute for Advanced Physics.

Read more about his work in ***The Chicago Tribune***, March 24, 2013 written by **Bob Goldsborough** at http://articles.chicagotribune.com/2013-03-24/news/ct-met-benedict-ashley-obit-20130324_1_science-and-religion-dominican-province-dominican-order

Maikel Garcia, New Associate Member Level II



Maikel D. Garcia has a degree in Electrical Engineering from Florida International University with academic research experience in medical instrumentation and international Industry experience as former

Systems Engineer for some of the world's leading technology innovators in the field of optical fiber communications. He has been teaching math, physics and engineering for over 10 years, currently at a public high school. During the summers he has worked on different projects at the University of Houston pertaining to the particle collider at CERN and in 2009 he was awarded a CERN HST Summer Research Fellowships in Geneva, Switzerland.

Mr. Garcia also has trained physics teachers in a model-based inquiry method that has garnered wide national recognition and was an instructor of the Rice Engineering Design Experience (REDE), a 3-year program at Rice University designed to immerse high school science teachers into all aspects of engineering education, most prominently the engineering

design process. Mr. Garcia is also a homeschool parent, leading one of the most successful high school science education institutes in the nation for local homeschoolers. He is continually amazed at how little our culture, including himself before IAP training, understands even the basics of thinking, let alone the core problem of our culture. He is now an Associate Member Level II of the Institute for Advanced Physics hoping to help with all educational outreach efforts at the pre-college level.

With [Dr. Rizzi's] Physics for Realists [textbook] ..., my students and I found much more than we had bargained for. The common sense grounding approach pioneered by [Dr. Rizzi] makes this a truly unique, one-of-a-kind textbook; one which has had a tremendous impact in our teaching and learning experience. I can neither recall as much enthusiasm for reading nor greater depth of discussion and understanding than I have been able to achieve on the sole merits of the textbook alone. It is no exaggeration to say that adopting PFR [IAP's text] has been the most significant and rewarding decision thus far in my entire teaching career.

Sr. Mary Gasparski, New Associate Member Level II

Sr. Mary Albert Gasparski received a B.S. in Chemistry (Wayne State University), a M.S. in Organic Chemistry (U of Chicago), and a Ph.D. in Organic Chemistry (Notre Dame University). After postdoctoral studies at the U of CA, Irvine, she worked at Procter and Gamble Pharmaceuticals in Cincinnati as a medicinal chemist. Here she met the Dominican Sisters of St. Cecilia. God confirmed her suspicion of having a religious vocation when she entered that community and made final vows.

With her vocation realized in a teaching apostolate, Sr. Mary Albert, whose patron is the patron saint of scientists, sought to properly bring together her scientific interests with her faith. This study began with her studies for a

M.S. in Catholic Studies (U of St. Thomas, St. Paul, MN). And continued at IAP in taking the membership course based on the *Science Before Science*. Her studies at IAP have given her, for the first time, a foundational



understanding of science and the faith. She is currently the Director of Curriculum Development at Frassati Catholic High School in the city of Houston, TX.

Rick Hedstrom, New Associate Member Level II



Rick Hedstrom earned his BS in mathematics at Purdue University in 1988. Rick, a native of Long Island, NY, has been teaching mathematics at public high

schools in the Houston, Texas area since then. During his 25-year career, Mr. Hedstrom has had the privilege of doing many different things including coaching soccer, working with many outstanding students who participated in the

AMC-10/12, AIME and USAMO math contests as well as taking several different math teams to the Texas state math championships. Rick currently teaches calculus and statistics at Carl Wunsche Sr. High School in Spring, Texas. Mr. Hedstrom, who originally planned to study chemistry in college, was intrigued by the title but had no idea what he was in for! Mr. Hedstrom is very thankful to Mr. Garcia, Dr. Murray Daw (who taught the course) and Dr. Rizzi for taking the time to help him begin, for the first time, to truly understand what science is all about.

Omaira Pacheco, New Associate Member Level I



Omaira Pacheco is a former Chemical engineer with a master degree in Industrial Engineering from The Polytechnic University of Barquisimeto, Venezuela. She worked in different types of industries and also taught thermodynamics, physics and chemical engineering at a college in her native country. In 1995, she migrated to the USA with the purpose of opening better opportunities for her family. She became a high school science teacher in 1997. After 11 years of teaching chemistry and physics at a Miami high school, she moved to Spring Texas in 2008. She continued teaching chemistry and physics until the present day.

Omaira is a science teacher committed to improving the science literacy in America. In her sixteen years as an educator in the USA, she has dedicated herself to motivate and inspire

students to appreciate science by using innovative teaching methods which include the modeling pedagogy in both areas of physics and chemistry. She has now become an Associate Member of the Institute for Advanced Physics, and she is looking forward to incorporate the insights from the IAP *Science Before Science* course in her own classroom.

*The Institute for Advanced Physics presents its
11th annual conference*

Physics for Realists X

**Modern Physics with a
Common Sense Grounding**

Vol. III Quantum Mechanics

A conference for IAP members

July 24 - July 27, 2013

Louisiana State University

Baton Rouge, LA

In the news.....

In February, **Dr. Murray Daw, IAP Adjunct Prof and Bowen Professor of Physics** at **Clemson University**, gave a colloquium on the *Physics for Realists* textbook series at **Wake Forrest College, North Carolina**. Daw says the text is unique in that it starts with simple observations and analysis of the world around us, making physics much more accessible to students. This approach brings out first principles, which leads to a *substantially* better understanding of mechanics and ultimately of all of physics. Dr. Daw has been invited to present PFR at 10 universities and to physicists at the American Association of Physics Teachers. In May, Dr. Daw taught a PFR Mechanics course for IAP associate members and he also participates in programs for K-12 teachers.

In April, **Dr. Anthony Rizzi, IAP founder and Director**, was a guest lecturer for **Dr. Jim Stoner's Aristotle and Aquinas course at Louisiana State University**. The textbook for the LSU course is Dr. Rizzi's *Science Before Science: A Guide to Thinking in the 21st Century*. LSU undergrad students receive 3 general education credits for Humanities.

Al Kresta radio April 25, 2013 4:30-5pm Eastern: God and Physics go together. Dr. Rizzi talks about IAP's new book *A Kid's Introduction to Physics (and Beyond)* and IAP's work of re-integrating the teachings of St. Thomas Aquinas back into the very starting point of our thinking which begins with physics – the study of the world around us!

Ave Maria radio host Al Kresta

interviews Dr. Anthony Rizzi:

http://avemariaradio.net/wp-content/themes/AveMaria/audioarchive/archiveListen.php?file=kpm_20130425_1

IAP extends a sincere thank you to **Fr. Cliff Hill** and all those who have donated books to the IAP library and research support at the LSU library. IAP is grateful to **Louisiana State University** for granting annual library privileges to our physicists.

The *New Oxford Review* published a two part article by **Dr. Anthony Rizzi** titled *How a Neglect of Physics Has Turned Christianity into a Myth for Modern Man*. The first part appeared in the April issue: cover title *"Neglect of Physics is Strangling Christianity."* The April article is available online at <http://www.newoxfordreview.org/article.jsp?did=0413-rizzi>

The second part appears in the May issue: cover title *"Is Physics Necessary for Salvation?"* The article is available online at <http://www.newoxfordreview.org/article.jsp?did=0513-rizzi>

The magazine is very excited about the article, which is receiving very positive feedback.

IAP Associate Member Maikel Garcia represented IAP at the **Immaculate Heart of Mary Houston Home School Conference** held at the **University of St. Thomas** Jerabek Athletic Center in Houston, TX on April 19th and 20th. The most popular item on IAP's book table was IAP's newest book *A Kid's Introduction to Physics (and Beyond)*.

Catholic Answers Live radio May 20, 2013 7-8pm Eastern: Faith and Science Dr. Rizzi talks about IAP's new book *A Kid's Introduction to Physics (and Beyond)* and IAP's work of re-integrating the teachings of St. Thomas Aquinas back into the very starting point of our thinking which begins with physics – the study of the world around us!
<http://www.catholic.com/radio/shows/faith-in-science-8411>

IAP Associate Member Maikel Garcia has been appointed an **IAP Teacher Mentor**. Mr. Garcia will be working with teachers in the Archdioceses of San Francisco as well as assisting home school curriculum development staff members with integrating *A Kid's Introduction to Physics (and Beyond)* in their classroom curriculum. Read more about Mr. Garcia in this newsletter on page 3.

Purchase *A Kid's Introduction to Physics (and Beyond)* at <http://www.iapweb.org/store/kids.html>