



THE INSTITUTE FOR ADVANCED PHYSICS

The Institute News

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Dr. Anthony Rizzi leads an invaluable Sub-CUW for IAP Members on “Love and Friendship”!

By: John Paul Ochoa, Associate Humanities Member

In the trailblazing IAP series, “Conversations to Understand Our World” (CUW), **Dr. Anthony Rizzi**, IAP Director, shares powerful insights on a wide variety of topics using proper physics-based thinking.

On January 7th, 2025, Dr. Rizzi led an illuminating “sub-CUW” for a targeted group of **IAP members** on his groundbreaking article “Love and Friendship.” It was not a full CUW (hence the name “sub-CUW”), which involves a more formal interview of Dr. Rizzi that ends up getting turned into a podcast; rather, this was a more informal discussion intended to deepen the members’ understanding of the content of the article. It was especially appropriate, this being during the traditional octave of the season of Epiphany, to talk about how we have to seek wisdom and seek the people who can grow us in wisdom, like the wise men did! This sub-CUW was also held in preparation for Dr. Rizzi’s special guest appearance on *EWTN Live* where he would discuss the same topic with Fr. Mitch Pacwa S.J. on January 15th, 2025 (see later article in this newsletter).

During this sub-CUW, Dr. Rizzi reviewed and delved deeper into the true meaning of love and friendship discussed in the article and why this deep meaning can only be properly understood and incarnated into our being through a proper understanding of the foundational first-physics. Throughout the sub-CUW, participants were invited to ask Dr. Rizzi any questions they had on the topic of love and friendship, and they received profound answers that benefited all! Conversations ranged from what it means to love our enemies to the proper understanding of the common good to much more. **Dr. Ken Klenk**, IAP certified member, shared that Dr. Rizzi’s deep explanation of love allows one to be able to really understand St. Paul’s well-known treatise in Scripture on love (1 Corinthians 13:4-8) against the intellectual corruption that the scientism has caused in our understanding of this core and integral virtue. **Frank Camacho**, IAP associate member, very fittingly and humorously commented that Dr. Rizzi’s article could also have been entitled, “How a Neglect of Physics Has Caused Love and Friendship to become a Myth for Modern

Man!” (a reference to another of Dr. Rizzi’s articles, see “[How a Neglect of Physics has Caused Christianity to Become a Myth for Modern Man](#)”). How true!

All attendees expressed deep gratitude to Dr. Rizzi for the many new truths learned, as well as for growing and cultivating the IAP community over the last 22 years. As explained in the article, real friendship is only possible when truth is at its center; the IAP community is especially unique because of the foundational nature of the truths at the core of

its mission, and, as a result, the friendships that those in the IAP community enjoy are especially deep and satisfying. Thank you Dr. Rizzi, for another great article and more profound insights to help us live thoughtful, happy lives!



For more information on “Love and Friendship”, please see: IAPweb.org/friendship.

Author: John Paul Ochoa,
Associate Humanities Member



**The
New Oxford
Review**

Love and Friendship interview published in

The New Oxford Review

<https://www.newoxfordreview.org/documents/on-love-friendship/>



Want to know the meaning of Fideism or Scientism? Do you have seven minutes to learn about the Christian symbolism in the Star Trek episode “The Empath”? EWTN’s youtube programming has over ten discussions featuring Dr. Rizzi on *Faith Matters*. Dr. Rizzi handles each topic within 2 to 7 minutes. Here are just a few of the topics you can choose from **including new topics in 2025**:

Thanksgiving

Justice: I am my brother’s keeper

Prayer

The Scientific Revolution

Teaching Children

Newtonian Physics and the

Faith

Television

Artificial Intelligence

Offering It Up

St. Thomas Aquinas

First Things First

Theotokos & Science

The Home of Science

**Raising a New Family
Eating**

Fideism

Scientism

Star Trek III

Star Trek “The Empath”

EWTN is posting new discussions each week. Find the programs at:

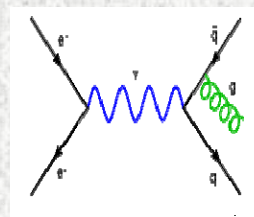
https://www.youtube.com/results?search_query=EWTN+Faith+Matters+Rizzi

***The Institute for Advanced Physics presents its
23rd annual conference***

Quantum Field Theory VII

*Louisiana State University
by invitation only*

July 15 – July 19, 2025



Dr. Rizzi on *EWTN Live* discussing Love and Friendship

By: Brendan D'Amato, Associate Humanities Member

On January 15th, 2025 Dr. Rizzi, IAP Director, was hosted by EWTN's Fr. Mitch Pacwa, S.J. to discuss his recent article "Love and Friendship: What is Love? What is a Friend?", in which Dr. Rizzi asks and answers, for the first time in a full and principled way, the important and age-old questions: "What is love? What is a friend?". In the interview, Dr. Rizzi explained that while this might be an unexpected topic for a physicist to address, his work as the Director of the Institute for Advanced Physics (IAP) actually makes him uniquely qualified to talk about it. His experience has provided him countless opportunities to talk with other people, working with them and helping them to better understand the world around us in a grounded manner—and therefore better understand ourselves as well! These truth-focused interactions invite, and ultimately require, a real friendship to exist. "When you're helping someone to understand something, you have to be [his] friend. You can't just lecture. You have to be [his] friend." Truth is best communicated through friendships! Recognizing this respects a fact of our physical nature: we depend upon others to live and to learn. Simply put, we need community. A proper understanding of our human nature, and therefore of human love and friendship, begins with physics, as Dr. Rizzi reminds us.

In addition to discussing the definitions of both love and friendship, Dr. Rizzi touched upon the often-recognized problem that people today struggle to make friends and form deep friendships. He also pointed to the widely-unrecognized cause: we don't even

know that friendship is about growing together in truth. Truth is an essential part of love! By explaining this, Dr. Rizzi revealed why the classic definition of love being to "will the good of the other" is incomplete, because it leaves off the intellectual nature of man. In order to be a good friend, Dr. Rizzi explained, we have to begin with our senses and follow through to our intellect. He drove home the interconnectedness of love and truth with a beautiful quote from St. Augustine: "Nothing conquers but truth, and the victory of truth is love."

A highlight of the interview for many was the discussion regarding the types of friends. No, not based on the different Greek words for love or other things you've heard, but the first division based on the definitions of man and woman, moving from generic understanding of man to specific. Dr. Rizzi uniquely (although this would be obvious in a non-scientized world) observes that our friendships are determined by our sexuality. Every action of a man or woman is *as* a man or woman! Thus, there are male/male friendships, female/female friendships, and male/female friendships. Within this third kind, there is a dichotomy between non-procreational and procreational friendships. Each type of friendship is very important, but each is different. The callers towards the end of the show asked really good questions that allowed Dr. Rizzi to explain this further. He explained that friendships today between men and women are especially difficult because we're ignorant of the rich understanding of human sexuality. We have reduced sexuality to the

procreative act, to bodily organs (or, even worse, to chromosomes). But it is really something much more profound.

Many viewers commented how much they enjoyed and benefited from listening to this fascinating conversation between Dr. Rizzi and Fr. Pacwa. It is very timely, as we see the world struggle—and we ourselves struggle—to understand love and are increasingly unable to form and enjoy real friendships. Love and friendship is of ultimate importance and core to our lives and thus essentially important to understand properly, as Dr. Rizzi pointed out in the interview.

To learn more about love and friendship, and to learn how to make better friends and be a better friend, be sure to read the article “Love and Friendship: What is Love? What is a Friend?” available in the IAP *Physics and Culture* magazine (Vol. III) found here: IAPweb.org/magazine#vol3, and check out the

EWTN interview here:

<https://www.youtube.com/watch?v=rmmtPOJKIJ8>.



Author: Brendan D'Amato,
Associate Humanities Member



*Some people, in order to discover God, read books.
But there is a great book: the very appearance of created things.
Look above you! Look below you! Note it. Read it.
God, whom you want to discover, never wrote that book with ink.
Instead He set before your eyes the things that He had made.*

St. Augustine

IAP Celebrates St. Thomas Aquinas's 800th Birthday

By: Anthony DiCarlo, Membership Director

On Saturday, April 12th, at 6:30 pm CT, the Institute for Advanced Physics (IAP) held a Birthday Bash for St. Thomas Aquinas's 800th birthday (St. Thomas is the patron saint of the IAP). IAP centers around the U.S. hosted IAP members and friends, and all the groups connected via Zoom, along with other members and friends who were not able to meet physically at one of the IAP locations. Some of the cities involved were Baton Rouge LA, Knoxville TN, Anderson SC, Birmingham AL, and Piscataway, NJ.

The Bash got kicked off with a welcome from IAP Director **Dr. Anthony Rizzi**, and then IAP Spiritual Director and Associate Member, **Fr. Neal Nichols**, led all the participants in a prayer (*For the Attainment of Heaven*) written by St. Thomas. Next, all sang "Happy Birthday" to St. Thomas, and **Thomasina Rizzi** (who is named after St. Thomas) blew out a candle in his honor at the Baton Rouge house (there was also a virtual candle blowing out thanks to an animation created by **Dominique Williams** and IAP Associate Member **Fletcher Williams**). The



candle blown out by Thomasina was sticking out of a cannoli, the Italian dessert chosen for the event in honor of St. Thomas (who is

Italian). The Bash participants at the various houses also had cannoli to help celebrate the occasion, and, after the singing concluded, cannoli were served and enjoyed as Dr. Rizzi began a very interesting presentation on the life of St. Thomas Aquinas. The talk highlighted the unique place of St. Thomas played by being the first in history to bring the fully scientific understanding of the generic physics base into Western culture. Dr. Rizzi also discussed, among other things, St. Thomas's true humility and his zeal for the truth and willingness to fight for it, even against his own family members.

After the talk concluded, there was a Q&A session with Dr. Rizzi, and then the groups broke off to fellowship with those at their physical locations while staying connected via Zoom so as to be able to talk with those at another location if desired. IAP Associate Member **Brendan D'Amato** hosted a special Zoom "room" for those not able to meet physically at one of the IAP locations. At several of the IAP locations, the festivities lasted late into the evening, with lots of good conversation and merriment. All the participants expressed gratitude for IAP hosting the event, especially for Dr. Rizzi's presentation and the Q&A session.

IAP will continue its recognition of St. Thomas and his tremendous contributions to the Church and the world at the IAP Annual Conference in July, including a special dinner being held on Friday July 18th which, providentially, is also the anniversary of St. Thomas's canonization!

May we all see IAP's parallel role of establishing modern physics (grounded in the generic physics) at the base of our culture in a sound way and recommit to helping ourselves and others see and live it as St. Thomas did with the generic physics. And, may we draw inspiration and encouragement from the life of this great man and seek his intercession for our own growth in truth, especially



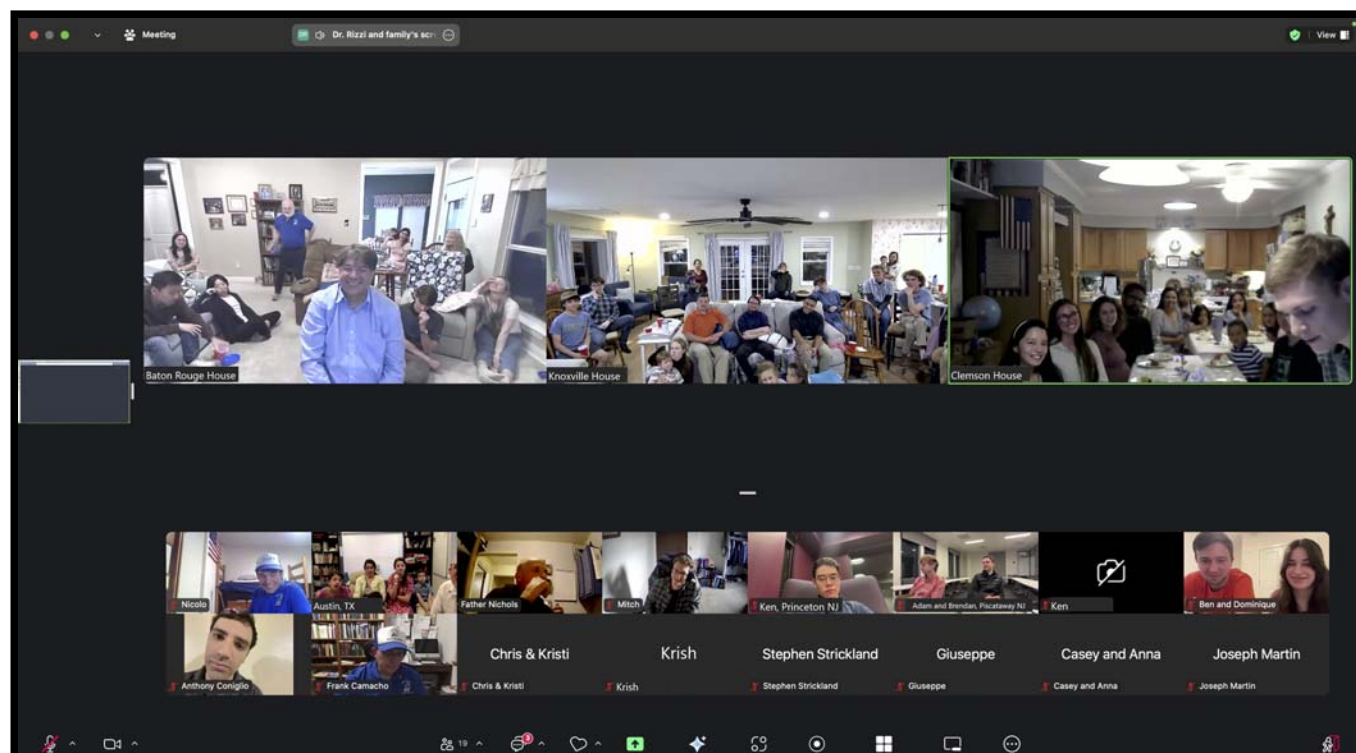
Author: Anthony DiCarlo, Membership Director

in truths of physics, each day. Saint Thomas Aquinas, pray for us!

*On November 18, 2024,
a prestigious Vatican journal
commissioned Dr. Rizzi
to write an article on
St. Thomas for his 800th birthday!*



RIVISTA INTERNAZIONALE DI RICERCA E DI CRITICA TEOLOGICA



Special *PFR: Mechanics* course a success!

By: Christian Captain, Associate Member

Starting in the Spring semester of 2025, IAP Associate Member **Mr. Frank Camacho** led a special mechanics course using *Physics for Realists: Mechanics (PFR:M)* by Dr. Anthony Rizzi. The course was offered remotely and consisted of live lectures, recorded lectures, recitations, homework, and exams. Each week, the class had one live lecture given by Mr. Camacho, two recorded lectures, and a live recitation via Zoom with IAP Certified Member **Dr. Stephen Strickland**, who assisted Mr. Camacho in leading the course. The recitation sessions were especially helpful as they provided students with an opportunity to work extra problems, see physics demonstrations, and ask questions. Mr. Camacho was also assisted by IAP Certified Member **Dr. Ken Klenk** who helped in grading homework assignments and exams.

The recorded lectures, homework assignments, and exams from this course followed the undergraduate freshman mechanics course taught by IAP Certified Member **Dr. Murray Daw** at Clemson University using *PFR:M*. See <https://www.youtube.com/@instituteforadvancedphysics/playlists> for access to these lectures and many others. Thanks to the common-sense approach of the *PFR* series, students in this course and other *PFR* courses get to learn physics in a grounded way that makes it simple, clear, and fun!

This special mechanics course ended in June 2025, and the students all offered their thanks and gratitude to Dr. Strickland, Mr. Camacho, and Dr. Klenk for all the time and effort they put into helping them learn physics!

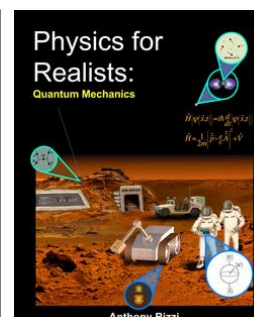
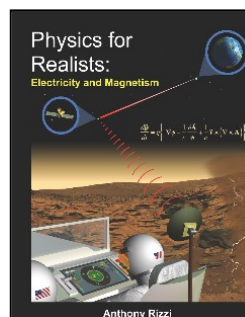
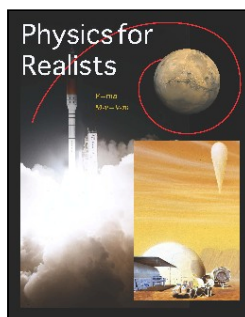
Author: Christian Captain, Associate Member



Photos left
to right:
Camacho,
Strickland,
Klenk, Daw



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Fletcher Williams talk at Chesterton Academy

By: Isaac Vaughn, Associate Member

Fletcher Williams, IAP Assistant Professor of Practice, gave a talk at the Chesterton Academy of St. Margaret Clitherow, the young Knoxville campus of the quickly growing nationwide Chesterton Schools Network of Catholic high schools. The talk was titled “The Physics You Didn’t Know You Learned is Emptying Your Life,” and it fleshed out the Central Theorem of the Institute for Advanced Physics (IAP), concluding with the need for us all to have a sound foundational physics, including devout Catholics. The Chesterton Academy states their mission is to prepare students to triumph over the materialism and despair that pervade our culture through a broad liberal arts education and Catholic virtues. Within his presentation and answers to questions asked by the audience, Mr. Williams showed how their mission needs

grounded physics that the IAP alone has discovered and made available to the modern world, because, without these principles, the classical library and pious teachings are empty of any meaning for us. Mr. Williams invoked the patron of the academy, G.K. Chesterton, to challenge the audience to recognize that the problems that are hollowing out the culture are within each one of us. He emphasized that, without the pursuit of truth being primary in our lives, things will keep getting worse. He directed them to the materials and support of



the IAP and charged them to begin learning the basic physics and grounding their lives in it.

Author: Isaac Vaughn, Associate Member

IAP Virtues App

Now available for members on both Android and i-Phone! (v1.0)

Members, start your day with a brief meditation on one of the 14 IAP Virtues.



Why do We Think so Poorly article is now available on audio

IAPweb.org/magazine#vol3

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Can we Trust Experts, especially in Psychology and Humanities?

by Anthony Rizzi

As you know, IAP is tackling the core of our deep cultural problems, which is our science not being clearly grounded in the principles that every child knows. IAP is repairing the core of our culture by grounding its core thinking, modern science, in our knowledge of the physical things that we know directly through our senses. To give people insight into this deep need (which is currently only addressed by IAP), IAP magazine and now IAP Journal of Physics and Math have been initiated.

In Physics and Culture articles (complete articles located on the IAP web site at the below link), Dr. Rizzi shows us how the basic physics teaches us the meaning of something that we probably think we already know, but actually don't!

We live in a world driven by expert opinion. I can have my opinion and you can have yours, but for an opinion that everyone will believe we should go to experts. Why should we listen to a plumber expound on electricity or a physicist on politics or an engineer on human behavior or psychology, unless he has the appropriate degrees and approved training? In a more positive vein, we will listen to the engineer because he's trained in engineering, so (it is said), we should also listen to the psychologist, for he has studied psychology.

This all sounds so natural and reasonable to us. After all, doesn't one need to be successfully educated in a given field to know it? Indeed, all this would be true if the state of science were the way it subtly assumes. Unfortunately, it is not! And, thus, such an analysis of experts is unwarranted in fundamental ways. We cannot judge who to listen to on such a simple basis.

In this article, we will discuss what we can trust and what we cannot, and how to access informed opinion, because at this moment in history the knowledge-authority-chain is in a sad, disordered state, especially the high part of the knowledge chain. To do this, we will explore that chain, starting with the bottom and moving up. We will use the field of psychology as an example of a field which is high up the knowledge chain and explore

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its current state to help show the overall state of "experts" in the humanities and what can be done to rectify the state of that high part of our knowledge.¹

How We Know More Than Ever But Understand Less Than Ever!

More knowledge is available than ever before in history! Much lauded, and appropriately so, modern science, especially at its core awe-inspiring equation-based physics, has discovered marvels (which have led to our incredible inventions) that few if any could imagine. Still, never before in history have less people known basic things essential for life and happiness. Never before have people believed so many obviously false things with unquestioning certainty than today.

[Click here](#) for a print version or go to Vol. III at: IAPweb.org/magazine#vol3

To support IAP's research that leads to the understanding and writing of these articles, **we ask for a donation of \$2 per article that you read or download.** There are more articles at IAPweb.org/magazine



Anthony Rizzi, Ph.D., founder and Director of The Institute for Advanced Physics (a 22 year old non-profit organization with Vatican backing), gained worldwide recognition in theoretical physics by solving an 80-year old problem in Einstein's theory. He has physics degrees from MIT and

Princeton University. Prior to IAP, he was senior scientist at Cal-Tech's Louisiana LIGO and taught at LSU. LIGO won the 2017 Nobel Prize in Physics.

¹ The top of the chain of sciences is the science of natural theology, and at the very top is the science of theology based in revelation. These, though being at the top and thus most affected by the bad base, will not be discussed here as our focus is on the sciences of man and what is needed to understand them from below.