



THE INSTITUTE FOR ADVANCED PHYSICS

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What is America? Conversations to Understand Our World

^{podcast}



IAP's "Conversations to Understand Our World, Interviews with Dr. Anthony Rizzi," (CUW) first aired on October 22, 2020. These interviews are available at iapweb.org/podcasts. Our

own **Dr. Anthony Rizzi**, who is a world-renowned physicist, gives us profound insights that no one else can into how to think and act in a wide variety of topics using proper physics-based thinking.

The latest CUW, *What is America?*, aired on April 15, 2021 and is now available at iapweb.org and at **YouTube, Spotify, Apple Music, Google Podcast, iHeart, and Stitcher**. Dismayed at the place our Country has fallen to? Listen to this Podcast and see the way back up to the "city on the hill!" In "*What is America?*," Dr. Rizzi reveals the nature of America and the principled problems deeply attacking her! Learn things about America that only someone who has profoundly explored and uncovered the (physics) roots of our thinking can tell you.



In preparation for the America Podcast, Institute for Advanced Physics members vetted the presentation level and choice of content with both IAP members and nonmembers. In one such discussion, Dr. Rizzi and **Fletcher Williams**, IAP Assistant Professor of Practice, met with Mr. and Mrs. Williams and Mr. Scheuer. In addition to pre-production work,




Prof. Williams interviewed Dr. Rizzi during the live show. Associate Members **Anthony DiCarlo** and **James Louviere** assisted in vetting dialog and generated questions to guide Dr. Rizzi in his presentation.

Associate Humanities Member **John Paul Ochoa** assists IAP with social media outreach. He was instrumental in this project providing various feedbacks and technical assistance. Volunteer Member **Ethan Robson** assisted in the vetting discussions. This team continues to work together on future Conversations to Understand Our World.

For a fascinating article on the core issues, see: Dr. Rizzi’s *What is America?* in *Physics & Culture* (published March 23, 2021) at iapweb.org/magazine.

Photos left to right: Anthony DiCarlo, James Louviere, John Paul Ochoa, and Ethan Robson

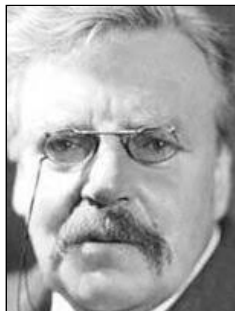




IAP Educational Resource

**Jacques Maritain and G.K. Chesterton
on the State of the World**

<https://www.iapweb.org/maritain-chesterton.htm>



Michael Knowles of the Daily Wire interviews Dr. Rizzi

by Anthony DiCarlo, Membership Director



On March 24th **Dr. Anthony Rizzi** was interviewed by **Michael Knowles** of the Daily Wire! In the interview, Dr. Rizzi explains the true nature of America (and the Founders' thinking) and how America's principles are grounded in nature. He explains the cause of our current deep and many problems and how America's true principles have been twisted and disrupted by Scientism.

Scientism has now infected *all* of our thinking, and it arises from a *false* understanding of the scientific method that is the source of modern civilization's gradual cannibalization of itself.

The interview aired on YouTube on March 28th and now has over 44.5K views! Be sure to check it out to learn how a proper physics is at the core of America! Also share the interview

with your family and friends! You can watch the interview using this link:

<https://youtu.be/NTMq6NeBvZg>

IAP Educational Resource

Learn how to build a Homemade Motor in
A Kid's Introduction to Physics (and Beyond)
Volume 2

Watch IAP's Homemade Motor
demonstration video at
www.iapweb.org/homemade_motor.html

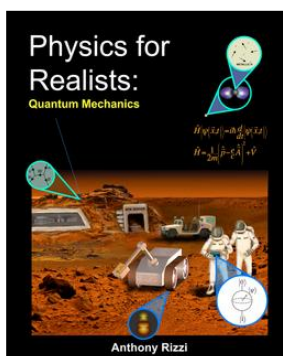
Collapse of the Collapse: Physicists Return to Reality

by Fletcher Williams, Assistant Professor of Practice



Dr. Murray Daw, IAP Faculty and Dean's Distinguished Professor of Physics of Clemson University, gave a colloquium titled *Collapse of the Collapse: Physicists Return to Reality* on February 25, 2021. Due to Covid19 safety concerns, it was held over Zoom and was well-

attended by physicists, teachers, and college students. In his talk, Dr. Daw challenged the way that we are trained to think about quantum mechanics (QM) by presenting some



of the groundbreaking discoveries Dr. Rizzi has made in QM, which can be found in the recently released textbook, *Physics for Realists: Quantum Mechanics* (PFR-QM) as well as in published articles by Dr. Rizzi.

He revealed to the audience how Einstein, during the founding of QM, fought against the "unnatural interpretation," the Copenhagen interpretation, which has long been considered the "orthodox" interpretation of QM. One essential problem with Copenhagen is something called the "Collapse postulate" which posits, among other things, something isn't there until you look at it. To bring out how serious the problem is with the Copenhagen interpretation, Dr. Daw made use of powerful examples of its contradictory and confused nature that are taught as established

fact in standard undergraduate and graduate textbooks.

From Griffiths' textbook:

"the particle isn't anywhere (before it is measured)"

"Experiments have confirmed decisively the Copenhagen interpretation"

"measurement causes collapse of wave function"

Griffiths, D. J. *Introduction to Quantum Mechanics* (Prentice Hall, Englewood Cliffs, NJ, 1995) p. 4, 4, 4.

From Morrison's textbook:

"Until they arrive at the detector, electrons do not have a position."

"Microscopic particles do not have well-defined physical attributes until a human mind perceives that they do."

Morrison, M. *Understanding Quantum Physics: A User's Manual, Vol. 1* (Prentice Hall, NJ, 1990) p.594, 639.

Daw showed how the contradictions and convolutions that plague Copenhagen are easily resolved by the Ensemble interpretation, which is given a fully physical treatment *for the first time ever* in PFR-QM. Finally, with the advent of PFR, we can say we truly understand quantum mechanics; of course, there is more to learn--coming in PFR-QFT. Animated discussion followed the presentation and many attendees commented on how much they appreciated the profound content.

Physics for Realists: Quantum Mechanics

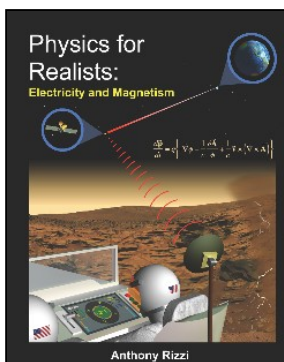
by Anthony Rizzi

"Physics for Realists is a profound new series. It uses the things we know first as children to discover the heights of modern physics. It presents a new and fundamentally deeper understanding of physics in a way that allows the student to fully follow and digest that depth. The series is nothing short of revolutionary." David Welch, Stony Brook University

Order your copy of PFR: QM at

<https://www.iapweb.org/store/>

Students take college course for AP credit



Six ambitious students from various locations throughout the country zoomed into **Dr. Murray Daw's Electricity and Magnetism** course at Clemson University participating as a group

in online lectures, group study, and completion of homework and tests. The group included a homeschool high school student and five college students from Christendom College, University of Tennessee, and Louisiana State University since the material was not available at their colleges. Students received AP credit from College Board testing and maintain contact with their "classmates" as they continue their studies of the physical world, the ground of all of our knowing.

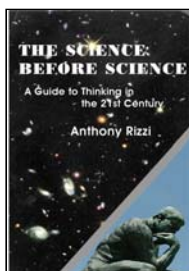
*Last Semester I took **Mechanics** [at a university that did not use the Physics for Realists textbook], and I felt the instruction and content was not understandable so much so (I had D's on the first 2 exams) I had to drop the course. This semester I retook the course under the tutelage of the Institute for Advanced Physics with Mr. Fletcher Williams using the **Physics for Realists: Mechanics** textbook by Dr. Anthony Rizzi, and I received an A this time! This is all because IAP taught me the proper content that made the concepts accessible and made physics real for me. I see clearly the difference between understanding and not understanding now. It even shows up in your grade!* Mandy, LSU class of 2022

IAP Educational Resource
Physics for Realists: E&M lectures
 by Prof. Murray Daw
<https://www.iapweb.org/resources.htm>

Physics leads high school atheist back to his senses

Ethan Robson's sat down for an interview with Dr. Rizzi. Ethan recounted his fascinating high school journey as he desperately searched for answers to basic questions about the meaning of life and the Faith. Answers like "This is what the Church teaches" and "You have to have faith" did not satisfy this intelligent student's need to really understand as well as explain it to others.

On March 20, 2021, Ethan talked candidly with Dr. Anthony Rizzi about the deep despair and loss of faith he experienced in a Catholic high school and how his physics teacher, IAP Assistant Professor of Practice Fletcher Williams, and Dr. Rizzi's book *The Science Before Science* changed his life as he learned that man can know things through his senses



and get real answers through rational thinking. Ethan shares hope with his audience as we see him move from emptiness to seeing that truth exists and man is made to know truth.

The interview radiates how physics renewed this young man's hope and led him to truth. Learn why the Institute for Advanced Physics is the only place to get the answers that release you from being trapped by the subjective world (which exists when one starts in one's head) to experiencing the objective world by starting with the physical world which we learn about through our senses.

The Science Before Science
 Available online, including on Amazon

New Associate Members: Howard, Luna, Montes, Roach



Ed Howard received a B. S. and an M. S. degree in pure mathematics from Auburn University. He then continued his graduate studies in mathematics by completing additional graduate work at Auburn University and the University of Georgia. He is currently working to finish the M. A. degree in Systematic Theology from the Notre Dame Graduate School of Theology at Christendom College. He has been involved in the teaching of college mathematics for the past twenty-five years. As a college mathematics instructor he has focused on teaching the Calculus sequence as well as Linear Algebra and Differential equations. He has also done considerable work in the area of intersection between computer algebra systems such as Maple, Mathematica and MATLAB and the correct use of these systems in the teaching of mathematics.

As an undergraduate mathematics major, he developed an interest in the area of higher algebra. He went on to write his graduate thesis in higher algebra giving necessary and sufficient conditions for certain Abelian groups called Lie groups to be strongly decomposable, as well as a thorough description of how a Lie group splits into strongly indecomposable quasi-summands, and a complete set of quasi-invariants for co-Lie groups. After reading about the important role that symmetry plays in modern physics, he became interested in understanding the representation theory of groups and Lie Algebras, and had the opportunity to explore these ideas as a graduate student. He studied the representation of finite groups as well as the extension of these ideas to continuous groups, and then the representation of Lie Algebras.

Ed is honored to have been selected to be an associate member of the Institute for Advanced Physics, and looks forward to continuing to learn as an IAP member. He is excited to have the opportunity to learn more about physics through the institute so that he can understand precisely and correctly the manner in which mathematics is used in physics.

Over the last decade, he has also devoted time to coaching the Enterprise High School Wildcat men's varsity and junior varsity soccer teams as head coach and as an assistant coach. He has truly enjoyed every minute of it and is proud to have had this opportunity. Ed is married to Laura, a high school mathematics teacher, and they have two sons. Conner is twenty-three and a graduate student in economics at Troy University. Tyler is twenty and a finance major at Auburn University.

IAP has taught me the importance of precision with regards to thinking, writing and speaking of truth. It has taught me that the truth demands not only that we learn how to rightly pursue it, but that we should also do so in the company of others that have agreed to search for it and also themselves rightly pursue it. I am honored to be an Associate Member and look forward to meeting others that are part of IAP. Ed Howard

The Institute for Advanced Physics (IAP) is established to advance modern science in a balanced fashion that does not leave behind the correct philosophical foundations, nor the proper moral and spiritual components. Read our **mission statement FAQ** at <https://www.iapweb.org/mission.htm>



BEN LUNA, 22 years old, is a Master's student in Physics at the University of Tennessee in Knoxville, TN. He received bachelor's degrees in Physics and Mathematics from Tennessee Technological University in Cookeville, TN. While at Tennessee Tech, he completed his bachelor's research project on the gamma-ray transitions between nuclear states of Aluminum-34 populated by the beta-decay of Magnesium-34. The data for the project was collected with the GRIFFIN HPGe detectors housed at TRIUMF Lab in Vancouver, BC. He assisted with experiment runs on GRIFFIN as well as other nuclear physics experiments at TRIUMF. He also co-authored a paper

published in Physical Review C on low-energy bound states, resonances, and scattering of light ions while working for the Joint Institute for Nuclear Physics and Applications in Oak Ridge, TN. He plans to graduate from UT in the spring of 2022 and enter Clemson University as a PhD student in Physics in the fall of 2022.

While at Tennessee Tech, Benjamin converted to the Catholic Church. Through connections at a parish in Knoxville, he learned about the work of the Institute for Advanced Physics and was admitted to the Associate Member program in the fall of 2020. He is very grateful to Dr. Rizzi, Dr. Daw, Fletcher Williams, and the IAP for the

I want to thank the IAP for teaching me how to think for the first time in my life. I almost quit the member course several times due to an erroneous understanding of the IAP that misled acquaintances had given me, but I'm very glad I stuck it through. I cannot sufficiently thank the IAP and its members for the essential work they are doing to restore the culture by regrounding our thinking in the first physics. Ben Luna

work to restore right thinking to the community of physicists and to the whole culture, since [physics comes first](#). He hopes to be able to learn and contribute much to the essential work of the IAP.



Kevin Montes is a physicist and data scientist originally from central Florida. In 2016, he earned a B.S. in physics and mathematics from the University of Florida, where he participated in nuclear magnetic resonance research. During his time as an undergraduate, Kevin also contributed to physics research through summer programs at the University of North Carolina at Chapel Hill and the University of Michigan. He then continued with graduate studies in physics at MIT, where he conducted his thesis work at the Plasma Science and Fusion Center. His research focused on predicting instabilities in fusion grade plasmas using machine learning methods, and he contributed to multiple publications on existing tokamak experiments and to the validation of the design of the SPARC tokamak. Kevin graduated from MIT in June 2021 with a Ph.D. in physics.

Currently, Kevin lives in south Florida with his wife, Megan, where he is applying his experience with machine learning as a data scientist for NextEra Energy. Kevin learned about the IAP during a lecture given by Dr. Anthony Rizzi at MIT. He now looks forward to working with the IAP as a new associate member, and continuing to ground physics in sound thinking.

He found it alarming that he could have a Doctor of Philosophy degree without knowing any philosophy. As IAP members know, physics is the first philosophy, the first thing we know, for

everything we know comes through the senses. He now realizes that the empirical nature of modern science (virtually unknown outside IAP) makes us feel as if philosophy and science are two separate subjects. He is seeing his understanding of physics, as well as the cultural consequences of not understanding physics properly, grow more every day.



Brandon Roach is a physics PhD Candidate at the Massachusetts Institute of Technology. He was born and raised in Southeast Michigan, before moving to South Bend, Indiana, to earn his B.S. in Physics at the University of Notre Dame. At ND, his senior thesis research focused on the computational modeling of nuclear reaction rates in the cores of exploding stars, for which he was awarded the College of Science Dean's Research Award in 2017. In 2016, he participated in a study-abroad program at the University of Geneva (Switzerland) and performed research at the European Organization for Nuclear Research (CERN). He was also a member of the Sigma Pi Sigma and Phi Beta Kappa honors societies, and was a finalist for valedictorian.

At MIT, Brandon's research has focused on searches for dark matter (the invisible and as-yet-undetected matter thought to comprise ~80 percent of the matter in the universe) using a variety of astronomical telescopes and detectors. He has been one of the primary authors on several articles in the journal *Physical Review D* describing searches for dark matter decaying into x-rays in the halo of the Milky Way galaxy, and currently leads the MIT silicon detector calibration effort for an upcoming balloon-borne cosmic-ray detector.

He was left unsatisfied by his previous attempts to understand the place of physics, and is now gratified to learn through the IAP that physics, properly understood, is the ground of all of our thinking and is looking forward to growing further in it. He is especially appreciative of the conversations and discussions with other IAP members. He plans to attend the Annual Summer Conference for 2021.

IAP Educational Resource

Common Sense Principles of Discussion

Effective and civil discussion is absolutely essential in reestablishing science on its firm foundation. Since discussion has in recent times become less and less clearly centered on its purpose – which is to get to the truth – we find we have developed bad habits of discussion. Indeed, it often happens that, despite our good intentions, discussions degenerate into incivility. It is our hope that the following thoughts will help restore the right emphasis and civility in conversation.

https://www.iapweb.org/Principles_of_conversation5-web.pdf

<https://www.iapweb.org/iapmagazine.htm> (see Vol 1) **audio**

IAP Educational Resource

Gravity Waves Detected!

Gravity waves have been detected for the first time! Einstein's theory of general relativity predicted these waves. This is the first time the direct action of gravity waves on earth instruments has been measured. But, what are gravity waves? Why is it important? We will tackle these two key questions and in the process learn about how they are detected.

https://www.iapweb.org/gravity_waves.html **article**

[View gravity wave effect on man animation](#)

New Volunteer Members: K. Rizzi, N. Rizzi, Stapleton



Kateri Rizzi is a rising Junior Nursing Student attending LSU Health Science Center in New Orleans. Last semester, she worked her clinical rotation at the Ochsner Multi-Organ Transplant Institute. She was named *Institute for Advanced Physics "Outstanding Physics Student"* while taking *Physics for Realists: Mechanics* at the Algebra level and then again at the Calculus level her senior year of high school. She has participated in multiple *Science Before Science* Study Groups including leading a women's study at Christ the King Catholic Church on the LSU main campus in Baton Rouge as a freshman. She has volunteered numerous hours for the Institute... providing textbook review, secretarial support, flood document recovery, event logistics, and digitizing hard copy research notes. This past semester along with a SBS study group, she relished small group discussions on *Physics and Culture* articles from the IAP magazine.

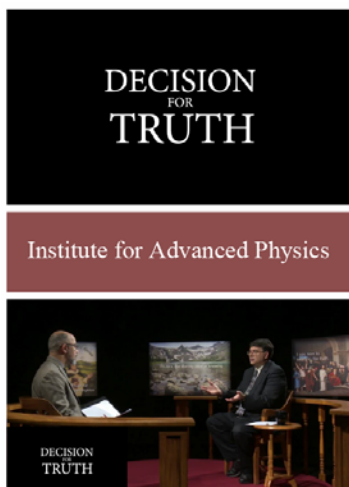


Nicolo Rizzi is the son of Dr. Anthony Rizzi and Mrs. Rizzi. He graduated from high school in May and will be at Texas A&M University in the fall studying Aerospace Engineering with a minor in physics. During high school, Nicolo audited the *Physics for Realists Mechanics* course and the *Physics for Realists Electricity and Magnetism* course at Clemson University both taught by IAP's faculty Dr. Murray Daw. He is currently in a *Science Before Science* study group. He helps at the IAP with the maintenance on printers and computers, formatting journal articles and books, and a variety of other tasks. Nicolo is very excited to be an IAP Volunteer Member. Nicolo has been learning from the IAP since his birth. He says, *"The IAP has taught me to start with the first principles of physics and work my knowledge up from there. The IAP is teaching me to be a true man, one who searches for the truth, finds it, and stands by it."* He looks forward to learning and growing more in truth through the IAP and helping the IAP to further its much needed mission.



Michael Stapleton is currently a sophomore majoring in Mathematics at **Christendom College** in Front Royal, VA. He first learned about the Institute for Advanced Physics through his high school physics and calculus teacher, IAP Associate Member **Fletcher Williams**. Inspired by discussions with his teacher, Michael joined a *Science Before Science (SBS)* study group. Seeing the importance of the fundamental principles, he helped to lead a college study group with students from Christendom, LSU, and UT Knoxville during his freshman year. Michael says, *"Many people, especially Catholics, have heard at some point that "the end of man is to know the truth," or something very similar. Precious few ever stop to think about what that means and fewer still realize that they simply do not know, and that no one can tell them. I came to this crucial recognition when I was exposed to the work of the Institute for Advanced Physics (IAP)—the only organization with the answers to the questions "what does it mean to know," and "what is truth?" In my first study group, I learned that to answer these questions requires one to start with the first things one knows; that is, what he knows through the senses [physics!]. I was astounded to realize my ignorance of realities which are literally right in front of my face, but once I had begun to rectify my deficiency through studying the SBS, I was eager to share what I had learned."*

Decision for Truth: An IAP TV series



Have you ever noticed how little modern man cares about truth? We seem so concerned with what we feel we have to do right now, not its long term consequences nor even its meaning. So many fires to put out, so little

time to think about what any of it is or means! This series will slow us down to contemplate, to think, to see that truth is first. It reveals the primacy of truth and draws us to make a full commitment to it. Why would we want to continue doing without knowing what we are doing and why?

In this 5-episode series, truth is put on trial. Dr. Rizzi, Director of the Institute for Advanced Physics, who is a renowned physicist and philosopher and author of *The Science Before Science: A Guide to Thinking in the 21st Century*, is interviewed by Noah Lett of EWTN. Throughout the interviews, Dr. Rizzi captures our attention with the surprising and deep ramifications for our lives of the fundamental

truths about physical nature that we get through the senses, the basic kid's level physics. The interview will raise unasked questions and unknown answers that are essential to living an intelligent, integrated, and happy life. You will be both inspired and equipped to begin fighting back against the anti-truth mindset of our modern culture. You will be surprised to find the size and number of logs we have to take out of our own eyes! Inspire and grow yourself and your family to be who you and they are meant to be.

Runtime: ~ 150 min **DVD**

Episode I: Truth on Trial:

What is truth? We don't care! Why?

Episode II: Family on Trial:

Do we care if our family knows the truth?

Episode III: Our Lives on Trial:

Fix your life by committing to truth

Episode IV: The Culture on Trial:

Confronting the culture

Episode V: Truth is Worth Living!

Grow your life in truth

[Click here](#) to purchase *Decision for Truth* or go to this link: <https://www.iapweb.org/store/>

Read Dr. Rizzi's articles in

The Latin Mass Magazine

How a Neglect of Physics Has Turned Christianity into a Myth for Modern Man:

Part I - Recovering Christianity by Returning to First Physics

Winter-Spring 2021

Part II – The Redemption of Man Requires the Redemption of Science

Summer 2021

IAP Educational Resource

Grab That Word is an **online game app**

based off the game show "Pyramid." Try to get your teammate to say as many words on-screen as you can before time runs out. It's a great game to play with the whole family. This IAP version of the game contains many special features including a mode to practice the IAP vocabulary. It also includes a custom mode which can be used to practice your child's vocabulary for grade school as well as SAT or ACT words. \$5

<https://www.iapweb.org/store/kids.html#grab-word>

IAP Member Notes



Requiescat in Pace: Jude P. Dougherty

1930-2021

*IAP Advisory Board
Member since 2003*

It is with deep sadness that the Institute for Advanced Physics on March 6, 2021 bid a final farewell to our colleague and friend

Dr. Jude Dougherty, Dean Emeritus and Professor Emeritus of the School of Philosophy, Catholic University of America.

Jude recognized the need for grounding our thinking in physics and became a strong supporter and student of the IAP from its inception. He was one of the first people to publish a review on *The Science Before Science: A Guide to Thinking in the 21st Century* by Dr. Anthony Rizzi (which appeared in *Review of Metaphysics* of which Dougherty was editor). His advice and insights will be greatly missed. Dr. Rizzi will miss his friend. [obituary](#)



Jian He, IAP Certified Member, was promoted to Full Professor at Clemson University. He earned his PhD in condensed matter physics from the University of Tennessee,

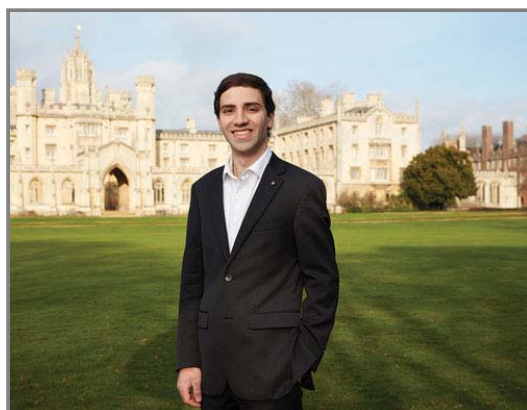
Knoxville. He uses diverse technical tools of material synthesis, single crystal growth, electrical, magnetic and thermal characterization to address the problems in fundamental and applied sciences.

Rama Podila, IAP Certified Member, was promoted to Associate Professor and granted tenure at Clemson University. Additionally, Dr.



Podila has been recognized with the **Rising Star in Discovery Award** for 2021. Podila has been extremely productive working on projects spanning battery research to wireless sensors to nano-bio. Podila

is excited to be growing in and teaching IAP material. Please join us in congratulating Rama for this well-deserved recognition.



Anthony Coniglio, IAP Associate Member, was featured in a multi-page article in the Knights of Columbus magazine [link](#) (June 1, 2021) *Renaissance Knight: A Knight with a knack for math, science and music puts his talents to use for the love of God and neighbor*. Read about Anthony's many gifts, including his journey as a concert pianist, his studies at Cambridge, and his current work as a Ph.D. mathematics student. In the interview, Anthony speaks of the importance of what he has learned from the Institute for Advanced Physics:

As he pursues teaching and doctoral research, Coniglio recognizes that he will encounter many in his field who reject the existence of God. However, studying materials from the Institute for Advanced Physics, founded by Catholic physicist Anthony Rizzi, has helped Coniglio deepen his understanding of the relationship between faith and science.

“The work of the Institute for Advanced Physics has truly been life-changing,” Coniglio said. “It has opened my eyes I plan on continuing to deepen my understanding of the truths I have learned through the IAP, and by doing so I hope to make a mark for Christ in the world.”



Frank Camacho, IAP Associate Member Level II, employment correction:

IAP staff made a mistake when they added my employer’s name in the short write-up about me at the end of the article I wrote in *The*

Institute News, fall 2020, page 10. My current employer is **Leidos** (a large defense contractor based in Virginia), and I work for them at the Air Force Research Lab (AFRL). AFRL happens to be located at the same facility (Kirtland Air Force Base) as Sandia National Laboratories, so we're neighbors, but they are two distinct organizations. I do not work for Sandia. Sandia Labs is in Albuquerque, where I live, and I have been assigned to do some work there in the past, but I have never been officially employed by them. *IAP newsletter staff apologizes for this error.*



Murray Daw Faculty, **Anthony DiCarlo** Membership Director, and **Fletcher Williams** Assistant Professor of Practice, assisted Anthony Rizzi in developing the content for this year’s annual conference, Quantum Field Theory, in July. Securing the facilities at LSU was challenging because of COVID19 safety concerns which resulted in the campus remaining closed until June. Members are very happy to be able to see each other in

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person this year after the Zoom conference COVID imposed last year. Additionally, DiCarlo led a *Science Before Science* study group and Williams taught an Associate Member course.



Giuseppe Rizzi Associate Member, **Ethan Robson** Volunteer Member, and **Michael Stapleton** Volunteer Member, continued leading their joint college student *Science Before Science* (SBS) study group via Zoom. During the spring semester, participants gathered weekly from Christendom College, Louisiana State University, Texas A&M (TAMU), and the University of Tennessee (Knoxville). Giuseppe, a recent engineering graduate of TAMU, mentored the group. Giuseppe (with help from Ethan) coordinated and ran the planning meetings, setting the direction; Ethan did an outstanding job leading each meeting with the backing of Giuseppe and Michael. In addition to growing in knowledge about SBS, the students are grateful for the friendship and support they experienced as members of the study group during the difficult isolation resulting from the pandemic.

New membership classes are starting soon. [Click here](#) to learn more about how you can become an IAP Certified, Associate, Associate Humanities, or Volunteer Member at the Institute for Advanced Physics. We are a supportive community of active individuals seeking to solve our cultural downfall by grounding our thinking in physics thereby leading people to grounded rational thinking.

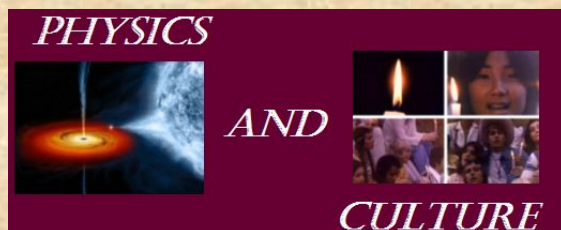
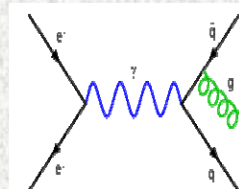
IAP members please send your newsletter announcements to info@iapweb.org

The Institute for Advanced Physics presents its 19th annual conference

Quantum Field Theory III

Louisiana State University
by invitation only

July 21 – July 24, 2021



Check out resources at IAP's online magazine

What is America? **NEW**

What is the One Ring that Rules them all? (print or audio)

Is Temperature Real?

What is Science?

The World Just Got More Empirical Today

Death of Justice?

What is the Difference Between a Lab and a Border Collie?

Physics and "Judge not that you might not be Judged"

Is there in Truth, Beauty?

Is Your Computer Real?

How to Learn in Four Steps (print or audio)

A Brief History of Nothing

How Do I Know My Hand Causes Movement?

The Problem of Our Failing Culture and its Solution

Answering Dawkins on Simplicity of God

How to Have Productive

Enjoyable Conversations (print or audio)

Historic Discovery: Gravity Waves!

View "gravity wave effect on man" animation

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Does Grace Help You Think Better?

by Anthony Rizzi

published in two sources:

Divinitas

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Pontifical Academy of Theology

Vatican City, Rome

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What is the One Ring that Rules them all?

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!

One Ring to rule them all, One Ring to find them, One Ring to bring them all and in the darkness bind them.

There is in our world a ring that rules all other dark powers in our world, but few know that it exists or what it is. I speak for the Institute for Advanced Physics which, in this telling, is represented by the hobbits: Frodo and Sam. You, the good reader, will be represented by noble Faramir at the time of his intercepting the hobbits on their way to Mordor. Like Faramir, you are (hopefully) aware that a deep darkness is upon the land of our fathers, these United States of America and our world. Indeed, if you are very aware you will know, like Faramir, that the battle *appears* to be hopelessly lost. "What hope have we?" says Faramir. "It is long since we had any hope. The sword of Elendil, if it returns indeed, may rekindle it, but I do not think that it will do more than put off the evil day, unless other help unlooked-for also comes... For the Enemy increases and we decrease. We are a failing people, a springless autumn."¹

You and the Ring

I will count the reader, like Faramir, as **unaware of the true problem** that faces our

culture, but **aware of the dire evil attack** that increases in strength everyday, while we weaken and divide, fighting among ourselves. We are happy to repeat old failed remedies, even those that have failed many times, thinking enthusiasm and/or compassion is sufficient substitute for understanding.

Like Faramir's skepticism of Frodo, you cannot fathom that someone might have profound truth and a mission essentially relevant to your life that might call you to a life-changing decision.

Indeed, like Faramir, you are skeptical of all travelers in the dark regions and are under orders to suspect all you see. Though, unlike Faramir, you are largely unaware of those orders, given as they are deep in your education. Nonetheless, it makes no difference, as you naturally suspect everything claiming to be too smart and too good anyway. The ring has begun to bind you more than you know. You have been deprived in your education of any clear principle-based understanding and the . . .

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Anthony Rizzi, Ph.D., founder and Director of *The Institute for Advanced Physics* (a 18 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 Two Towers, J.R.R. Tolkien, Ballantine Books, New York, 1966, p.321