

## Roger G. Newton

November 30, 1924 - April 14, 2018

Roger G. Newton, Distinguished Professor Emeritus, Physics at Indiana University died peacefully in his home on April 14th at the age of 93.

From his long list of academic and professional accomplishments in the field of mathematical physics one might conclude that Roger Newton spent his life doggedly pursuing a set of narrowly defined interests.

But those who knew him best, recognized that even as he studied, taught, and published in his field, he avidly pursued his expansive curiosity and appreciation for everything from art and literature to music, photography, architecture, gardening, travel, fashion, food and wine, interior design to history and politics.

The seeds of his passion for science and physics were sown in Nazi Germany. Born in Landsberg an der Warthe in 1924, he pursued his lifelong interest in physics from an early age. As a boy in Berlin, he showed signs of broader curiosities. At 14 he made his own short wave transistor radio in order to listen to the epic Joe Louis /Max Schmeling prize fight in 1938.

After 1942, Roger and his brother endured years of forced labor while his mother spent the war imprisoned, having been caught by the Gestapo with plans to take the family to South America. As a Jew, his father was no longer

able to practice dentistry. Spending the final months of the war hiding in the basement of their bombed apartment complex, Roger and his family were captives, in daily fear for their lives. After the war The United Jewish Appeal facilitated their exit from Germany to Buffalo, NY.

Eventually changing his name from Neuweg to Newton (claiming to his last day that this had nothing to do with his passion for physics) he joined the US Army and was stationed in Japan. In the army he rapidly learned English and began planning his future. Applying to Harvard, thanks to the GI Bill, he matriculated as a Junior in 1947. While continuing his physics studies he audited courses in music, fine arts and literature and won the prestigious Bowdoin Prize for an essay on the philosophy of science. He remained at Harvard as a graduate student studying under the future Nobel Laureate, Julian Schwinger. The breadth of his intellectual curiosity paid off with lifetime dividends when he enrolled in Harry Levin's famous Proust Joyce and Mann class and met his wife to be, Ruth Gordon.

They married in 1953 and Roger accepted an appointment by J. Robert Oppenheimer to join The Institute for Advanced Study in Princeton where he occupied an office down the hall from Albert Einstein. In 1955, he and Ruth moved to Bloomington accepting a position at Indiana University where he eventually chaired and helped build the department of physics. In 1966 he published *Scattering Theory of Waves and Particles* which is still being used as a fundamental text for physics students today.

As his career as a physicist flourished, he designed and helped build a house for his family in 1963 where his wife still lives today. With a fully equipped workshop in the basement, he built a tree house for his children and many pieces of thoughtfully designed furniture.

Given his history with Fascism, it surprised many when in 1968, Roger

vociferously supported the right of the Ku Klux Klan to march and debate on the IU campus, upholding the first amendment over his personal disgust. To those who knew him well, this was consistent with his unfailing intellectual honesty.

On his multiple sabbaticals in Europe where he held visiting appointments at various universities including University of Rome, International School of Physics, University of Montpellier, France, and University of Geneva, he not only focused on specific physics problems, working with foreign colleagues, but explored his passion (and exposed his family) to Michelin starred restaurants, galleries and museums, challenging hiking trails in Switzerland, all lovingly (and maddeningly) captured by his ubiquitous Nikon cameras.

In 1981, along with a group of prominent IU faculty, Roger founded and became the first Director of IU's Institute for Advanced Study, with the mission of promoting collaborative intellectual exchange and nurturing innovative creative ideas. For many years he was also the Editor-in-Chief of the Journal of Mathematical Physics. His publications in the field of physics were numerous, and after his retirement in the mid-nineties he continued to write, publishing many books for a broader audience on subjects ranging from the nature of time to what makes nature tick.

Meanwhile, as engaged members of the Bloomington community, he and his wife were avid attendees of music, opera and film. Many local denizens will remember seeing Roger walking four times a day to and from home, nattily dressed from his New York-tailored suits and fedoras to his European shoes. For years, his walks included the beloved family Schnauzer, William Jefferson, with whom he discussed, "Some of my deepest thoughts."

To his final days, he was reading a book a week on his kindle, from historical

biographies to fiction to the latest John Grisham mysteries.

Roger is survived by his wife Ruth, his three children, Julie (NJ), Rachel (NYC), Paul (CA), five grandchildren, one great grandchild and his beloved dog, Annie. His death leaves a hole both deep and broad.

Allen Funeral Home and Crematory 4155 South Old State Road 37 is handling the arrangements and online condolences, photos and memories may be shared with family and friends at [www.allencares.com](http://www.allencares.com)

# Tribute Wall

SK

“ I was his student in Quantum Mechanics I and II , Group Theory and Scattering Theory during 1979-1982. Once, he was writing on blackboard on which there was a deep hole. He remarked, "Someone has been writing very hard". We all miss him so much. May his soul rest in eternal peace!

*Meritorious Professor Dr. Syed Arif Kamal  
PhD; MA, Johns Hopkins; MS, Indiana, Bloomington*

*Ex-Acting Vice Chancellor  
and  
Ex-Dean, Faculties of Science and Engineerig  
Ex-Chairman, Department of Mathematics (for 2 full terms of 3-year  
each)  
University of Karachi*

*Convner, National Curriculum Revision Committee (Mathematics),  
2004-2012, Higher Education Commission, Government of Pakistan*

*Convener, Subject Committee (Mathematics), 2009-2012  
NTS Pakistan*

*Convener, Sub-Committee (Academics), the Education Committee  
Transparency International Pakistan*

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**Syed Arif Kamal** - September 17, 2025 at 01:17 AM

SL

“ Thanks for letting me know what vitality is.

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**Shufan Lu** - July 04, 2018 at 04:27 PM



“ *Healing Tears - All White* was purchased for the family of Roger G. Newton.



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April 19, 2018 at 11:04 AM

MC

“ I’m so sorry to hear that Roger Newton is gone. He had an enormous beneficial impact on my life and my career, by agreeing from a distance to take me on as a PhD student without previously having met me. If I could have worked with anyone in the world, I would have chosen to work with him, because I was very interested in his papers on multidimensional inverse scattering. After I arrived, he was kind and helpful to me in many ways, giving me a copy of his book on scattering, and meeting with me weekly to discuss technical problems and approaches. He also provided financial support in the form of a research assistantship, and helped navigate the university bureaucracy to allow me transfer from my previous university. And then when I finished, he wrote letters of recommendation for me for later jobs.

I enjoyed our weekly meetings very much. He generally seemed to be in good humor, and in addition to learning a lot from him about technical matters, I eventually learned that he had escaped from Nazi Germany as a young man and had served in the US military. I was amazed at the near perfection of his American accent in spite of the fact that he learned English at a relatively late age. He also mentioned having been at Princeton, summer vacations on Martha’s Vineyard, and a recent summer hiking vacation in England.

A few months before I finished, he and Ruth invited me to a dinner party with a few other couples at their house. The dinnertable discussion was lively and fast-paced, mostly about philosophy and literature, and was way over my head. I was in awe. Once he gave me an opera ticket that he couldn’t use; it turned out to be in the center of the orchestra section, a much better seat than the student tickets I normally got. It was clear that his scientific and cultural interests were very wide-ranging.

After I left Indiana I saw him only a few times, once at a conference in the Bay Area, and then I visited him in Indiana two or three times. During one visit he gave me copies of his popular books about the nature of science, which struck me as important to counteract some of the popular misunderstandings.

I’m very grateful to him for taking me on as a student, for guiding my dissertation work, and for setting an example of scientific integrity

*and broad cultural and intellectual awareness. I'm so sorry he's gone.*

*-- Margaret Cheney, Colorado State University*

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**Margaret Cheney** - April 19, 2018 at 10:09 AM

DG

“ *Dee & Gary lit a candle in memory of Roger G. Newton*

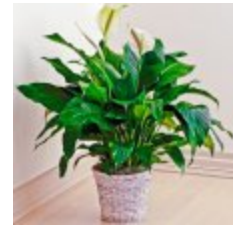


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**Dee & Gary** - April 19, 2018 at 07:54 AM



“ *Floor Plant for Sympathy was purchased for the family of Roger G. Newton.*



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April 18, 2018 at 10:10 PM

AD

“ Dear Ruth, Julie, Rachel, and Paul

*My deepest sympathies for your loss. In the Spring of 1973 I was a research fellow at Caltech and applied for a faculty position with the particle physics group at IU. I visited the university for my interview in April, when Roger was Physics Chair-elect and met Roger at a reception party the evening of the day I gave my interview talk. When I returned to Pasadena after my visit, I learned about Roger's accomplishments as a theoretical physicist. When I started my appointment during the 1973 Fall semester Roger was the Physics chair. Roger was remarkably kind and approachable and I looked upon him as a mentor. I was probably somewhat cocky (scratch the 'probably') in the early part of my career at IU but I very much respected Roger as a physicist and leader. Even after Roger's tenure as Chair I always looked up to Roger and always enjoyed the occasional chats that we had. During the following 33 years until my retirement in 2006 I considered myself extremely lucky to have had the experience I had doing research and teaching in the Physics Department. In reading the obituary I found it interesting that Roger captured family memories with his "ubiquitous Nikon cameras." Over the last 15 years I have been using my "ubiquitous Nikons" to do nature photography underwater and above. I wish I had known about Roger's love for photography. My life has been richer for knowing Roger and for his guidance early in my career.*

*Alex Dzierba*

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**Alex R. Dzierba** - April 18, 2018 at 05:03 PM

SD

“ Roger and I (no, not that documentary) were fellow-laborers in the Harvard Physics PhD vineyards from 1949 to 1953, a Gulag-worthy experience. We then went together to the Institute as that year's postdocs from the Schwinger atelier, but not before undergoing a thorough psychiatric exam by Oppenheimer--the previous envoy having been found lacking in sanity--unlike us paragons. We, including our respective spouses, remained friends for life, a friendship that survived my being marooned in their house for 8 days, by a historic snowstorm! Memories of Roger's masterful driving their monster US Ford wagon in Rome, and then their living among orange crates as furniture in Montpelier are some of the pictures that flash through the mind. Roger was a real mensch--and a fine physicist. Germany's loss was our gain.  
Stanley Deser

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stanley deser - April 18, 2018 at 04:03 PM

SB

“ Susan Brown lit a candle in memory of Roger G. Newton



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Susan Brown - April 18, 2018 at 03:57 PM

SB

“ *A remarkable gentleman who lived a remarkable life; I know all of us here in IU Physics will be poorer for his absence, as will his family, friends and the world at large. I hope that our future students and faculty will learn of him and his contributions. He will be remembered fondly, for his wit, humor and intelligence, as a powerful presence in the department and life. God bless and keep his family.*

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**Susan Brown** - April 18, 2018 at 03:56 PM