



ZENONAS ROKUS RUDZIKAS (1940–2011)

Šių metų birželio 8 d. staiga mirė žymus Lietuvos mokslininkas ir mokslo organizatorius, buvęs „Lietuvos fizikos žurnalo“ vyriausiasis redaktorius akademikas Zenonas Rokus Rudzikas.

Zenonas Rokus gimė 1940 m. rugpjūčio 16 d. Gulbiniškių kaimo vienkiemyje (Lazdijų r.). Buvo šeštasis vaikas ūkininkų šeimoje. Baigęs Vainežerio pradinę mokyklą, 1951 m. pradėjo mokytis vidurinėje mokykloje Kapčiamiestyje. Deja, tų metų rugsėjo viduryje visa šeima buvo ištremta į Sibirą – Tomsko sritį, Asino gyvenvietę. Vaikui buvo leista lankyti vietos mokyklą. Mokydamasis labai gerai, 1957 m. jis baigė vidurinę mokyklą aukso medaliu.

Tais pačiais metais Z. R. Rudzikas sugrįžo į Lietuvą ir įstojo į Vilniaus universiteto Fizikos ir matematikos fakultetą studijuoti fiziką. 1962 m. su pagyrimu baigęs studijas jis buvo priimtas dirbti į Lietuvos mokslų akademijos Fizikos ir matematikos institutą, ten įstojo į aspirantūrą. Profesoriaus Adolfo Jucio vadovaujamas parengė ir 1965 m. apgynė mokslų kandidato (dabar daktaro) disertaciją „Neredukuotinių tenzorinių operatorių matematinio aparato ir jo taikymo atominių spektrų teorijoje klausimu“. Tais pačiais metais vedė medikę Mariją Danutę Kriukaitę.

Z. R. Rudzikas – talentingas teoretikas – nustatė radiacinių šuolių dėsningumą, naujų atominių dydžių sąryšių, gavo reliatyvistinių pataisų išraiškų. A. Jucio paragintas, jis intensyvaus septynerių metų darbo rezultatus apibendrinęs disertacijoje „Daugiaelektronų atomų spektrų teorijos klausimu“, kurią apgynė 1972 m.

1974 m. staiga mirus prof. A. Juciui, Z. R. Rudzikui teko atsakinga pareiga tapti savo mokytojo sukurtos atomo teorijos mokyklos vadovu. Jis inicijavo Atomo teorijos skyriaus darbų plėtrą naujomis, turinčiomis svarbių taikymų daugiakrūvių jonų ir astrofizikos kryptimis. Z. R. Rudzikas parengė 26 mokslų daktarus. Pažymėtini jo su mokiniais gauti esminiai atomo teorijos, spektroskopijos rezultatai: izosukinio formalizmo įvedimas atomo fizikoje, antrinio kvantavimo vaizdavimo pritaikymas kilminių koeficientų išraiškoms gauti, reliatyvistinės elektronų šuolių teorijos plėtra. Minėti ir kiti rezultatai paskelbti per 280 mokslinių publikacijų, tarp jų 5 monografijose. Z. R. Rudziko monografiją „Theoretical Atomic Spectroscopy“ išleido Kembridžo universitetas (2 leidimai). Jo mokslo darbai įvertinti dviem Lietuvos mokslo premijomis, LMA vardine A. Jucio premija. Apie Z. R. Rudziko darbų tarptautinį pripažinimą liudija Vilniuje jo surengtos trys tarptautinės atomo fizikos konferencijos.

Z. R. Rudzikas atliko didžiulį mokslo organizacinį darbą Lietuvoje ir užsienyje. Beveik du dešimtmečius jis vadovavo LMA Fizikos bei Teorinės fizikos ir astronomijos institutams. Pasižymėdamas dideliu geranoriškumu ir

taktiškumu, sutelkė kūrybingą kolektyvą, rūpinosi įvairių mokslo šakų plėtra. Atkūrus Lietuvos Nepriklausomybę, Z. R. Rudzikas, būdamas Lietuvos mokslo tarybos nariu, Vyriausybės ekspertu, Lietuvos fizikų draugijos prezidentu, daug prisidėjo ne tik prie Lietuvos fizikos, bet ir prie viso mokslo pertvarkos, glaudesnio jo integravimo į pasaulinį mokslą. 1994 m. jis buvo išrinktas Lietuvos mokslų akademijos tikroju nariu, 2003 m. – jos prezidentu. Šešetą metų eidamas šias pareigas, jis rūpinosi naujo LMA vaidmens formavimu, ypač jos tarptautinių ryšių stiprinimu. Jo iniciatyva Baltijos šalių mokslininkai ėmė dalyvauti europiniuose paskirstytųjų skaičiavimų plėtos projektuose, Lietuva pasirašė bendradarbiavimo susitarimą su Europos branduolinių tyrimų centru CERN.

2002–2008 m. būdamas „Lietuvos fizikos žurnalo“ vyriausiuoju redaktoriumi, Z. R. Rudzikas labai stengėsi didinti jo populiarumą. Buvo sudaryta tarptautinė žurnalo patarėjų taryba, jis pripažintas Europos fizikų draugijos, priimtas indeksuoti Thomson ISI.

Zenonas Rokus atstovavo Lietuvos mokslui ir gynė jo interesus įvairiuose Europos Sąjungos komitetuose ir komisijose: kaip Pasaulio mokslininkų federacijos narys, Europos ekonomikos ir socialinių reikalų komiteto narys, jis dalyvavo svarstant esmines mokslo plėtos problemas, ypač išskirdamas globalias grėsmes, klimato kaitą, energetiką ir gyvenimo kokybę. Akademikas buvo apdovanotas Lietuvos didžiojo kunigaikščio Gedimino ordino Karininko kryžiumi.

Akademiko Zenono Rokaus Rudziko vaisinga veikla, šviesus jo paveikslas ilgam išliks Lietuvos mokslininkų atmintyje.

Redaktorių kolegija

ZENONAS ROKUS RUDZIKAS (1940–2011)

Professor Zenonas Rokus Rudzikas, the former Editor-in-Chief of *Lithuanian Journal of Physics*, suddenly passed away in Vilnius on 8 June 2011. Until his last day, he worked as a chief researcher at the Institute of Theoretical Physics and Astronomy of Vilnius University.

Zenonas Rokus Rudzikas was born on 16 August 1940 in Lazdijai region, Lithuania. In 1951, his family was deported to Siberia, Tomsk region. However, Zenonas Rokus had the possibility to continue his education and in 1957 he finished the Asin settlement secondary school with a gold medal. By that time, deported persons were already permitted to return to Lithuania, and he was admitted to the physics speciality at the Faculty of Physics and Mathematics of Vilnius University. Zenonas Rokus graduated with honours in 1962.

During 1962–1965, Z. R. Rudzikas was a post-graduate student of theoretical and mathematical physics under the supervision of Professor A. Jucys at the Institute of Physics and Mathematics of the Lithuanian Academy of Sciences. At 24 he defended his doctoral thesis and already at 31 he became a habilitated doctor, i. e. one of the youngest scientists in Lithuania to acquire such degrees. In these works he summarized his results on the application of irreducible tensorial apparatus and group theory in atomic physics.

After the sudden death of Professor A. Jucys in 1974, his close disciple Z. R. Rudzikas had to fulfil the difficult task of replacing his teacher in the capacity of the head of theoretical atomic school. He initiated the applications of many-electron theory in plasma physics and astrophysics. Zenonas Rokus Rudzikas was the supervisor of 26 doctoral students. His group obtained basic results in atomic theory and spectroscopy, the most important being the introduction of the isospin formalism in atomic theory, the application of the second quantization approach to the derivation of explicit expressions for the fractional parentage coefficients and other atomic quantities, the development of relativistic theory of electron transitions in atoms. Professor Rudzikas was the author of about 280 scientific publications, including 5 books. His monograph *Theoretical Atomic Spectroscopy*, published by the Cambridge University Press, enjoyed two editions. Zenonas Rokus twice became the laureate of the Lithuanian Science Award. The international recognition of his work in the field of atomic physics was witnessed by three international conferences held by him in Vilnius.

He paid much attention to the effective organization of Lithuanian science, especially after the restoration of the independence of Lithuania. For almost two decades, Z. R. Rudzikas was the Director of the Institute of Physics and the Institute of Theoretical Physics and Astronomy. In 1994, he was elected a full member of the Lithuanian Academy of Sciences and in 2003 became its President. During the six years of his presidency of Academy, he made many efforts to strengthen its international relations and increase its role in Lithuanian society.

Zenonas Rudzikas was the President of the Lithuanian Physical Society (1995–2007) and a member of the Executive Committee of the European Physical Society (EPS). As the Editor-in-Chief of the *Lithuanian Journal of Physics* (2002–2008), he achieved its recognition by the EPS. Also, the International Advisory Board of the journal was formed, and the *Lithuanian Journal of Physics* was selected for coverage by the Thomson ISI.

Zenonas Rudzikas represented Lithuanian physics and science in various European organizations and committees. He was the expert-evaluator of the DG Research Directorate L of the European Commission (since 2003), member of the Joint Research Centre's Board of Governors (since 2004), member of the European Economics and Social Committee (since 2006).

Academician Z. R. Rudzikas was awarded the Cross of Officer of the Order of the Lithuanian Grand Duke Gediminas.

The fruitful work and warm personality of Zenonas Rokus Rudzikas will be enduring and fondly remembered by the scientific community.

Editorial Board

FAREWELL

The calmness of a summer vacation 2011 was disturbed by the sad news that reached me after its travel across the ocean: “Zenonas died a few hours ago;” this message was about a famous Lithuanian atomic physicist, Professor Zenonas Rokus Rudzikas, who passed away suddenly on June 8 in his beloved Vilnius.

We were friends for many years, and together we experienced the tough conditions of life under the previous system in our native countries, Poland and Lithuania. Prior to the changes in 1989, we had been exchanging critical comments whispering them during the international schools on advanced methods of quantum mechanics, organized at the lake in the middle of nowhere in Poland, in Bachotek (see photograph below). Zenonas, because of his gentle nature, very often was concluding a criticism of others from the neighbouring countries of the so-called Soviet block with just a smile, yet giving the impression that he had more to say but preferred to be quiet. Only in 1989, during another meeting at the school in Bachotek, the conversations became more open; in the fall of that year the Berlin wall fell.

For that particular scientific meeting, when the wind of freedom was sensed also in Lithuania, a Soviet republic at that time, Zenonas joined the gathering of the international group of physicists together with his wife Marija and daughter Gražina. Only then did I learn about Zenonas' childhood in Lithuania and the trauma of being deported in 1951 from his mother country to Siberia, to a remote region of Tomsk. His heroic determination, talented mind and hard work were the reasons that he was able to overcome the ‘black spot’ on his biography of being a deportee to Siberia.

In addition to a common language we used to describe the situation in our countries prior to the political changes of 1989, we had also the common language of our scientific activity. This was Racah algebra, the powerful tool of atomic spectroscopy. Zenonas was the student, protégée and successor of the famous Professor Adolfas Jucys, founder of theoretical physics in Vilnius. Professor Jucys was indeed a guru in the field, and Zenonas Rudzikas very well deserved the position of being his successor and beneficiary of his scientific legacy.



School on Advanced Quantum Mechanics, Bachotek (Poland) 1987; Professor Rudzikas in a black frame; at the right-hand side in red and orange circles Dr. Angela Merkel, now Chancellor of Germany, and Professor Joachim Sauer (her husband).

We also had common friends and collaborators. Brian Garner Wybourne was one of them. Originally he was from distant New Zealand, but his publications were very close to our interest and therefore very well known. Another example of connected segments of the chain of atomic physicists is our common collaborator and friend, Charlotte Froese Fischer¹, the last PhD student of Douglas Hartree. Charlotte was the one who conveyed to me the sad news about Zenonas' passing just a few hours after this tragic moment in Vilnius. To share the sorrow Charlotte wrote, '[. . .] I shall remember Zenonas the way he was at the last conference – after every talk he had an interesting question. He really was amazing.'

An outstanding physicist recognized in the world, organizer of science in his reborn and freed Lithuania, over all and most of all, Zenonas was a family man, devoted to Marija, his wife of 46 years, proud of his daughter Gražina and son Andrius. He was the happiest when able to gather all of them together, including two granddaughters and a grandson.

How to say good-bye to a cordial friend, a fellow physicist of many talents and charisma, a serious person but yet humble, with a touching and warm personality? Let me use his own words, with which he bid farewell to Brian Wybourne:

Professor Brian G. Wybourne [Professor Zenonas Rokus Rudzikas] has passed away. Is this the end? Of course, it is not. This is not even the beginning of the end. This is just the end of the beginning.'

And in the main asteroid belt, between the orbits of Mars and Jupiter, among many celestial bodies of the solar system, *167960 Rudzikas* (2005 EV249)² orbits to forever commemorate Zenonas Rokus Rudzikas' legacy.

One chapter of the international atomic physics is closed.

*Lidia Smentek
Vanderbilt University
June 20, 2011*

¹ Author of the famous MCHF program, retired Professor from Vanderbilt University and presently active researcher at NIST.

² Asteroid discovered by K. Černis and J. Zdanavičius on March 13, 2005 at the Molėtai Astronomical Observatory in Kulionys, Lithuania.