

## Some forgotten Relativists

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The list of physicists mentioned in the abstract of the paper should be completed with Leonid Petrovich Grishchuk (16 august 1941, Zhitomir, Ukraine-2012, Cardiff, UK), Vitaly Nikolaevich Melnikov (24 Jan 1941, Moscow- 27 march 2017, Moscow) and Ioan Gottlieb ( 21 Jan 1929, Baia Mare - 2 sept. 2011, Yassy). I intend bellow to comment these shortest biographic data in a following way. I knew personally 7 of these physicists [11] and the purpose of this article is just to tell about circumstances and some personal impressions. All them were very concerned to Gravitation and some of them to Cosmology also. One of them was a member of an Academy (Romanian- Gheorghe Vranceanu), while another (Ionescu-Pallas was elected just before the die). One of them was my coauthor (Ionescu-Pallas), 3 of them were my referees at PhD (Leonid P. Grishchuk , Vitaly Nik. Melnikov and Nikolay V. Mitskevich). Almost al of them are from Eastern Europe and in some sense knew each other. For example, Vitaly Melnikov (and his younger colleague and Secretary of the Russian Gravitational Society, Kirill Bronnikov) visited Romania in 1993 after an invitation by prof. Ioan Gottlieb a then President of the Romanian Society of Gravitation and General Relativity.

Professor Gheorghe Vranceanu ( 30.06.1900, Valea Hogeii, Vaslui-27.04.1979,[3]) , mainly known as a mathematician –geometer with contributions to Riemann-Cartan geometry, was one of pioneers of gravitational research in Romania in a framework of General relativity with one of his pupils: Andrei Popovici. Vranceanu is known also as one of the teachers of the well known Japanese mathematical physicist Kentaro Yano, with an important contribution to theory of Betti numbers, Kiliing and Killing-Yano tensors. Yano visited in 1939 the Chernowitz University (then in Romania, actually in Ukraine) , where Vranceanu was a professor, and published works with one of the disciples of Vranceanu- Stefan Petrescu (*Disquisit. Math. Phys.* **1**, (1940). 191—246, 1940). In 1956 Vranceanu was a guest at one of most important mathematical Congresses in USSR. But there is need to mention also that almost all most important physicists and mathematicians in Romania were formed outside of Romania- especially in France, Italy and Germany. So, Vranceanu was a doctoral pupil of Tullio Levi-Civita in Rome during 1922-1924. Later he was also in scientific contacts with G.D. Birkhoff, O. Veblen, Hermann Weyl and Elie Cartan.

As a geographic curiosity should be mentioned that Gheorghe Gheorghiev(27.06.1907, Bolgrad-28.06.1999, Yassy, [4]), which is of Bulgarian origin , was born in Bolgrad at the South of Bessarabia (actually in Ukraine), which belonged then to Romania, but finished the University in Yassy just before the World War II. During the War years He was a doctoral fellows of professor Wilhelm Blaschke (1885-1962) in Germany, while after the WWII was during many years a dean and professor at the chair of Geometry of the Yassy University. Both are cited in a well known book by Alexander Zinovievich Petrov [9] concerning classification of gravitational fields. There is need to make a comment about the political affiliation of persons above: Gheorghiev, Mociutchi –

Tomozei, Ionescu-Pallas, Ioan Gottlieb and one of two: Grishchuk or Melnikov were members of Communist Parties, but their motivations were very different.

Ioan Gottlieb (b. 21.01.1929, Baia Mare- 3.09.2011, Yassy, [11]) and his second wife Mociutchi were convinced Marxists. They agreed Marx, but disagreed Lenin. The reader can know, that the teacher of Gheorghiev, Blashke, was loyal to Hitler since 1933. I do not know exactly when Gheorghiev entered to Romanian Communist Party. There is also need to mention, that I. Gottlieb, being of Hebrew origin, was prisoned to 3 Nazis detention Camps in 1944, including Melk and Mauthausen, but survived [5]. He was liberated in 1945 and later was one of colleagues of Gheorghiev in Yassy and a disciple of Teofil Vescan. About Gheorghiev one told his disciples (V. Oproiu), that he had a very developed sense of humour. Perhaps, he was a kind of brave soldier Schwejk. I. Gottlieb, in spite of his Membership to Romanian Communist Party, was far of sympathies with Ceausescu. He was a very energetic man who due to his energies and personal charm was able to organize the Romanian Society of General Relativity and Gravitation, during the years of Ceausescu (1964-1989), which in 1988- 1991 counted between 50 and 100 members.

Leonid Grishchuk (16 aug. 1941, Zhitomir, Ukraine-2012, Cardiff, UK, [2], [11]), was one of my referees at PhD work (1981). I recollect him as a man with very developed critical sense. He was the most intransigent physicist to Logunov theory between scientists at Moscow State University. There is a connection with article of D. Rabounski, cited by me bellow. Both, Grishchuk and Mitskevich, were pupils of Abram L. Zelmanov (1913-1987) at Sternberg Astronomical Institute of the Moscow University, but later they separated. Mitskevich was sent to Russian Friendship of Peoples University, at the department of Theoretical Physics, while Grishchuk remained at Shternberg Institute, where He spent all his life till his contract in Cardiff (since 1991).

Mitskevich (b. 1931, [11]) was also a referee of My PhD, but He was an additional referee. I have reported to his seminar in RUDN before defending. I recollect him also as an organizer of a very quoted gravitational Seminar at the Physics department of Moscow State University together with then Yurii S. Vladimirov (b. 1938), which was one of my lecturers at the Physics Department of Moscow University. Mitskevich is a member of the International Society of General Relativity and Gravitation, He is working actually in Mexico. And I know also him as a participant at the Quantum Gravity Seminar in Moscow (1987), when He discussed with professor J. A. Wheeler. Mitskevich is known also as a prolific translator of gravitational literature into Russian Language.

With Vitaly Melnikov (24 Jan 1941, Moscow- 27 march 2017, Moscow, [1],[11]) I discussed few times by phone before his die. Melnikov also was a representative of the referent Organization to my PhD work (1981). At the finish of 80-th he was very enthusiastic to organize the Russian Gravitational Society, which was founded during one of the Soviet Gravitational Conferences held in Erevan, to which I was present also. Melnikov signed together with participants to the Conference a petition in favor of Armenia in a dispute about Karabakh. He was the last PhD of the academician N.N. Bogoliubov, senior, He told me by Phone.

Professor Vescan (11.06.1913, Bratislava- 9.12.1963, Yassy) is less known to me, but there is need to mention that he was a student in Paris (Sorbonne, 1932-1933), while later He was a professor in Cluj and Yassy (1950-1963) where he became the advisor of a then young I. Gottlieb.

Concerning my coauthor Nicolae Ionescu-Pallas (30.07.1932, Pallas -7.01.2017, Bucharest, [11]), recently died there is need to tell following. He was very skilled in mathematics, but not only in mathematics. He had also contributions to electrodynamics, radiation theory, atomic physics and books on Quantum mechanics and Theoretical mechanics. He is one of the authors of third laser in the World, which was built soon after the Russian and American. He authored a very good course on General Relativity and Cosmology on 632 pages. This is a big work which He made with enthusiasm, being encouraged by his friends I. Gottlieb and C. Mociutchi- Tomozei and his wife Constanta. The surname Pallas is due to a village, where He was borne. The book by Ionescu-Pallas [10] contains a detailed presentation and critical analysis of almost all alternative to General relativity theories, existed till 1981, when the book issued. But He is concluding: The best of all theories is Einsteinian general Relativity, to which the book is concerned mainly. There is need also to mention that Ionescu-Pallas was a formal member of Communist Party but not a man concerned to communist ideology. He was just forced to enter to Communist Party, as his work on laser was related with some delegations abroad- to nearest Countries, including German Democratic Republic, Hungary and Bulgaria. Only Communist Party members were allowed by the Regime of Ceausescu to travel abroad.

Cecile deWitt-Morette (21.12.1922, Paris- 8.05.2017, Austin, [11]). I found for a first time She's name from the Phys. Rev.D (1984), where She published papers on Scattering theory by Black Holes, which is closed to my interests. During that years correspondence with Western Physicists was very difficult and controlled by KGB. The publication of articles in Western Journals was also controlled by the so-called I-st Sections (in fact KGB) at the Universities and Scientific Institutions. For example, I have not received any answer from Nobel Prize Winner S. Chandrasekhar, whom I have sent a copy of a published article with a solution of the Dirac-Chandrasekhar equation (1976) in Kerr gravitational field. Instead I was invited to 1-st section of the Technical University of Moldova (then: Chisinau Politechnic Institute) and admonished strongly. The articles by Cecile de Witt convinced me, that the problems I have treated since 1979 were of interest, but they should be published in more prestigious journals. So, in 1987 I had an occasion to visit the Quantum Gravity Seminar in Moscow, chaired by the Academician M.A. Markov, where also were present a number of Western Physicists from UK, USA, France. Between Soviet Physicists were present the acad. Yakov Zeldovich and Andrei Sakharov, which contributed to construction of Soviet Nuclear weapons. A.D. Sakharov was just liberated from a prison in Gorkii. I had occasion to discuss in detail with Professors Cecile deWitt-Morette, Stephen Hawking, Garry Gibbons, Andrei Sakharov. We traveled a day to Physical Institute of the Academy of Sciences in order to met there Sakharov and discuss about many other topics of interest, but, unfortunately Andrei Dmitriveich was called somewhere up to Presidium of the Academy of Sciences. Instead We spent a day at the Main Seminar chaired by Corr.-member of the Academy E.L. Feinberg, where Renata Kallosh presented a work. During the seminar we discussed in detail about scattering theory on Black Holes, while after the Seminar we spent the rest of the day in a Company of Renata. Subsequently we

corresponded with Cecile, B. DeWitt and S. Hawking. In my opinion Cecile deWitt had a great role in the organization of Les Houches Summer School in France, which contributed much to reestablishment of Physics in France and Europe in general, but also to education of many future Nobel Prize winners from everywhere. She has 4 children, while one of them, Chris is very concerned to She's parents did in Physics.

Cleoptara Mociutchi (1929, Cotiujenii de Sus- dec. 2011, Yassy, [11]) was borne in a village in Bessarabia, near Floresti, then in Romania. She was a young scholar at the Lyceum "Maria Doamna" in Chisinau, when the Molotov - Ribbentrop pact was signed in a presence of Stalin and with agreement of Adolf Hitler (on 23 august 1939). This pact assumed the occupation of Bessarabia by Soviet Army, so that on 28 June 1940 the Red Army troops entered to Bessarabia. A lot of peoples escaped from Bessarabia to Romania since 26 till 28 June, but not only of Moldavian (Romanian) origin. Between them were also soldiers of White Csar Army, Popes, relatively rich peoples (Koulaks), Political men-members of the Bessarabian Parliament "Sfatul Tarii", members of Romanian InterWars Political Parties. Between them was also Cleopatra Mociutchi, a young girl-scholar at the Lyceum. She's father was purged in GULAG. The War's years were difficult. But after the War the Soviet rule was established in 1949. Communists were put to power in Romania due to Stalin. She finished the physics Department of the Yassy University, where She was a student of Professor Stefan Procopiu, known for the alternative calculation of the Bohr's magnetic moment (1913). Later She also studied together with Ioan Gottlieb General Relativity with Teofil Vescan, but She's main interests that years were in astronomy. She worked in coauthorship with another lecturer from Bessarabia- Victor Nadolschi. A little bit later She came back to gravity. In 1960<sup>th</sup> She found a new solution to Einstein equations, which, unfortunately, is not cited in the well known book [7], as the authors of the book cite the discoverers anew of that solution. Let us mention that papers by Cleopatra are signed as Mociutchi, or Tomozei.

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