

The Reminiscence of the First Graduate in the Field of Electrical Engineering - Desanka Jovanović born Perišić



Desanka Jovanović. Family archive.

Desanka Jovanović (maiden name Perišić) was born on May 12, 1905 according to the "old" Julian calendar or on May 25, 1905 according to the "new" Gregorian calendar in Požega (Serbia). Soon, she moved with her family to Belgrade. After completing the First Grammar School for Women in Belgrade in the school year 1923/1924, she enrolled in the Faculty of Technical Engineering, University of Belgrade. She was the first graduate in the field of Electrical Engineering at the Faculty of Technical Engineering. Desanka regularly carried out her university assignments. She passed the preparatory graduation exam in 1928, and graduated in 1931, while the grade point average, although lower when compared to what is considered a common one today, was something she was proud of. She was particularly fond of the grade eight she obtained on the Mechanics examination, within which "*God knew for 10, the Professor for 9, and the students for 8 at best.*" For those who have been at the School¹ of Electrical

Engineering for a while, this story sounds irresistibly familiar, and, therefore, it is difficult to make a list of all the Professors who used the same criteria during the Faculty existence. Although from the point of view of standards today, this type of grading practice can be called arrogant and unacceptable, and above all, prohibited because it introduces criteria that are not prescribed by the study regulations rulebook, it should be viewed from a different angle and in the spirit of the times in which it existed. The high criteria of the Professors were not considered a flaw and it was an honor, pleasure, and pride to meet the strict requirements for passing such an exam. Strict Professors were not avoided and their courses were not changed in order to take other elective courses, but an integral part of the studies and life of future engineers was the knowledge they acquired and the obstacles they overcame during academic studies. Moreover, it was prestige. The orientation of studies towards the best students is still not uncommon at many universities, and in addition to enabling the education of the best experts, it also creates an atmosphere full of incentives and positive competition in which it is possible to reach the maximum potential of each individual. Some lessons from the past could still be of great use today within the Bologna² or post-Bologna education in (re)defining the goals of education.

¹ Faculty of Electrical Engineering, University of Belgrade (Serbian: *Elektrotehnički fakultet, Univerziteta u Beogradu*) is now re-titled as University of Belgrade – School of Electrical Engineering in English. Author of this article favors Faculty over School since it is inherent in European context and has been recognizable for decades abroad. However, the current official title is used to avoid any potential ambiguity.

² In this part of the text, the Author does not refer to the Bologna Declaration in its authentic form, which is aimed at harmonizing the credit point system, support mobility, and encourage international cooperation, but rather looks back to the procedure of implementing the Bologna Declaration, which introduced changes in higher education that were not foreseen by the Bologna Declaration.

"We don't need property; all money should be invested in education!" - Those were the words of the teacher Vojimir Perišić from Požega, Desanka's father. After selling the entire inherited estate, Vojimir and Darinka Perišić moved to Belgrade to educate their five children. Vojimir's and Darinka's grandchildren jokingly like to say that the "most uneducated" of their children was the daughter Branislava, who was a teacher by vocation. While Darinka kept everything under control in their house, Vojimir, in addition to his job of a teacher, dedicated his time to his children and their education with the desire to leave them as a legacy something that no one could ever take away from them and what he and Darinka considered the most valuable - education.



The teacher Vojimir Perišić (the second from left in the top row) and his wife Darinka Perišić (the third from the left at the table) with friends and acquaintances in Požega. Family archive.

The descendants say that Desanka had always loved to do mathematics and that she had had a great love for that field since the early childhood. She had had full support for her education and a warm-hearted home to devote herself to her studies with the help of her parents. She was exempt from chores and other hardships faced by all those who come from the provinces to study in the capital, and which particularly at that time, were imposed on young girls so that they would take over the role of wife and mother as soon as possible, the only role that society intended for them. Encouragement and

great support of the family would not have borne fruit if Desanka had not had inclinations towards electrical engineering and mechanical engineering and had not been as busy as a bee³.

Desanka Perišić acquired knowledge and a diploma at the Faculty of Technical Engineering, which, alongside the completed state exam for an authorized engineer in 1933, enabled her to get a job at The Railways Company (Serbian: *Železnice*). However, she also met her future husband at the Faculty of Technical Engineering.

Име, презиме и занимање венчаних и место становања, пребивања, вера, народност Ime, prezime i zanimanje venčanih i mesto stanovanja, prebivanja, vera, narodnost	жениха ženiha	Дорђе Јовановић, инжењер из Београда; православни Србин
	невесте neveste	Десанка Перишић, инжењер из Београда; православна Српкиња
Име, презиме занимање и место сталног пребивања родитеља венчаних лица Ime, prezime zanimanje i mesto stalnog prebivanja roditelja venčanih lica	жениха ženiha	Карло Хлиза, суб. обућар и Тинка из Београда
	невесте neveste	Мор. Војимир Перишић, суб. ученик и Лариса из Пожеге
Дан, месец, година и место рођења венчаних Dan, mesec, godina i mesto rođenja venčanih	жениха ženiha	16 јуни 1903 год. Београд
	невесте neveste	12 мај 1905 год. Пожега
Брачно стање и писменост Bračno stanje i pismenost	жениха ženiha	у браку
	невесте neveste	писмени
Кога су дана испитани и оглашени Koga su dana ispitani i oglaseni		испитани 4/17 маја, а оглашени: 7/20, 11/24 и 13/26 маја 1934 год.
Дан, месец и година венчања Dan, mesec i godina venčanja		3 јуни / 21 мај 1934 год.
Храм или место, где је венчање извршено Hram ili mesto, gde je venčanje izvršeno		Црква Св. Вознесења - Београдска

A part of the wedding certificate from the wedding book of engineer Desanka Perišić and engineer Djordje Jovanović from 1934. Family archive.

It is said that Desanka's husband was very meticulous, and that his technical drawings were extremely precise. His notebook from Thermodynamics with 100 completed tasks (which was a requirement for passing the exam) has been preserved in the family archive. Georgie Hliza, the son of the Belgrade shoemaker Karlo from Brno, a Czech and his wife Kristina Tinka, an Austrian from Zemun, changed his

³ Desanka's father, Vojimir Perišić, who was also the first teacher in the village Glumač in the municipality of Požega, in 1899, having completed a course in handiwork and agricultural lessons, established a bee farm in the school yard and together with his students left the inscription "Emulate the bees" (from the text on The Celebration of the 50th Anniversary of the Organized Beekeeping in the Požega region, page 375, Pčelar, 1986, and originally from B. Ž. Mičić, On Bees and Beekeeping, Belgrade, 1930)



The photograph from the wedding of engineer Desanka Perišić and engineer Djordje Jovanović from 1934. Family archive.

name to Djordje⁴ Jovanović and converted from the Catholic faith to the Orthodox faith, choosing St. George's Day as his Saint's Day for two reasons. Firstly, because he loved Serbia and wanted to fit into the environment, in order to study, live and work in Serbia, secondly, because he fell in love with Desanka Perišić, whom he married after graduating from the Faculty of Technical Engineering. They got married in the Church of the Holy Ascension in Belgrade in 1934, and their best men were their colleagues from the Faculty. According to a family anecdote, until the end of his life, Djordje was more Orthodox than Desanka. In their marriage, they had two children, Nadežda Prelević (maiden name Jovanović), who completed her Russian language studies at the Faculty of Philology, University of Belgrade, and Radomir Jovanović Jerd, who moved to Sweden.



Desanka Jovanović in the middle right, leaning on a machine in The Railways Company (Železnice) in a work coat with workers and her fellow colleagues. According to the testimony of her grandchildren, she had a cordial relationship with her colleagues and was liked and respected by colleagues and workers. Family archive.

It is difficult to speak from a great distance and without Desanka's testimony about the obstacles and internal dilemmas she must have faced during her engineering career. However, based on all the available data, the fact that she was the only woman at the Faculty that had long been considered as a male-only Faculty (and it is safe to say that perhaps it is still regarded as such by the bewitching eyes) Desanka's professors and colleagues from the Faculty treated her with respect, equally like other

⁴ Georgie changed his name to Djordje, and not Đorđe or the Cyrillic Ђорђе as was recorded in some documents.

colleagues, and she enjoyed their support. The fact that she was a woman and not a man was of no concern to anybody apart from her husband. Nevertheless, not everything was as smooth as it seems at the first glance. Desanka did the same job at The Railways like her male colleagues for a significantly lower salary, and was very angry about that. And, who wouldn't be angry? They could praise her to the skies and glorify her work, celebrate March 8, call her a friend (or better still, comrade⁵), a colleague, and an engineer. And yet, all of that would go up in smoke if they didn't pay her what she deserved and thus subtly sent a word to her that she is less valuable just because of her biological characteristics, and not because of her knowledge, abilities, and work performance.



The diploma of the Faculty of Technical engineering from 1931. Family archive.

We may never find out whether and how Desanka had fought with this injustice, but her devotion to social justice in her immediate environment, as well as her great love for her family and her native Serbia is remembered. Desanka always insisted on honesty, truth, and positive human values. Although family memories speak in favor of the traditional female-male marriage roles in the household where Desanka learned how to cook and became an excellent housewife, and Djordje arranged everything

⁵ Historically speaking, at that particular period of history of Yugoslavia the term *comrade* was widely used both for female and male friends. However, since it has political and ideological connotations, Author has chosen the first the term, i.e. *friend* and then its political-historical synonymous explanation, which seems to be more suitable at least in the Serbian language.

himself and repaired the house, it is impossible not to notice the presence of an equal contribution to society (through the work of engineers, both of whom were the employees of The Railways Company) and equal contribution to joint family life (in which, although there is a division of labor, it, nevertheless, represents the consequences of mutual agreements and joint efforts and work).



Desanka Jovanović. Family archive.

People do not choose historical circumstances, but circumstances choose them. The whirlwind of the Second World War devastated almost the entire world. Neither Serbia nor Desanka's family were spared. While her husband Djordje was imprisoned in the Nazi concentration camp Dachau, she sold the family jewelry and carried sacks of flour on her shoulders to feed the family and send packages to her husband in Dachau. The German occupation forces stopped her several times on the streets of Belgrade, but each time she managed to bring a sack of flour home. Life in Vojvode Milenka Street in Belgrade at the time did not offer many opportunities for mere survival, which was in the ultimate focus of all mothers of that time; Desanka raised domestic animals on the terrace, and rather than seeding decorative flowers in her flat, she planted vegetables. The catalog of the exhibition "The Liberation of Belgrade – 70 Years Later"⁶ at the Archives of Belgrade contains evidence that speaks in favor of the fact that the green areas in Belgrade parks were used as

miniature agricultural goods to ensure the necessary minimum and survive the famine that inevitably occurred during and towards the end of the Second World War. Such a life was not sustainable. When the gold jewelry had disappeared, Desanka moved for a while with her children to her sister Branislava, a teacher, in the countryside. Upon the end of the war, the family was reunited. Despite the daily portions of food the size of a matchbox and the inevitably bad treatment that all prisoners of the Nazi camp went through, engineer Djordje Jovanović managed to survive his stay in the concentration camp, partly due to the correspondence with his family, which was his moral support, and also owing to Desanka's packages. It is said that until the end of his life he advocated that food should not be wasted, and he is said to have enjoyed every meal for at least two hours. However, all hard times leave consequences. Although Desanka and Djordje's marriage did not stand the ravages of time, their mutual respect and care for their children and grandchildren was never questioned. For the rest of their lives, they both had love for mathematics and the profession, and did homework with their grandchildren. At one time, grandma Desanka came to visit her grandson Nebojša Jovanović at the boarding school of the Rajlovac Secondary Military Aviation Technical School. That day was remembered by all his friends who witnessed an unusual scene unfolding before them: grandma Desanka helping her grandson to solve math problems.

⁶ S. Lazić, S. Mandić, V. Mijatović, J. Mitrović Kocov, M. Obradović, I. Stojanović, "The Liberation of Belgrade - 70 Years Later, through the Funds and Collections of the Historical Archives of Belgrade," The Historical Archives of Belgrade, 2014, https://www.arhiv-beograda.org/images/publikacije_elektronske_pdf/katalog%2070%20godina%20oslobodjenja%20BGD%20web.pdf, accessed on June 12, 2023.

УНИВЕРЗИТЕТ У БЕОГРАДУ

ТЕХНИЧКИ ФАКУЛТЕТ

ОДСЕК ЗА МАШИНСКЕ ИНЖЕЊЕРЕ

УВЕРЕЊЕ

О

положеном ПРИПРЕМНОМ ДИПЛОМСКОМ испиту

Госпођица Десанка Петришић редовни слуша-
лац Техничког Факултета Универзитета, завршио је фебруара 1928.
године Припремни Дипломски Испит у одсеку за **машинске инжењере** са успе-
хом 7,30 (врто добар)

Оцене из графичких радова и оцене из наука, из којих је кандидат
испит полагао, ове су:

Из Математике	7 (седам)
„ Нацртне Геометрије	8 (осам)
„ Техничке Механике с Графичком Статиком	7 (седам)
„ Науке о отпорности материјала	6 (шест)
„ Физике	8 (осам)
„ Хемије	10 (десет)
„ Машинских Еlemenата	8 (осам)
„ Опште Маханичке Технологије	7 (седам)
„ Енциклопедије Машинства	6 (шест)
„ Кинематике	7 (седам)
„ Графичких радова (општа оцена)	6,25 (шест и 25/100)
„	
Просечна оцена	7,30 (седам и 30/100)

Ово се уверење издаје према чл. 29. Уредбе Техничког Факултета од
1. фебруара 1906. године.

у Београду

31. октобра 1928.

Бр. 4798



Оверава



Ректор Универзитета,

[Signature]

Декан

Техничког Факултета,

[Signature]

In addition to images, sounds, and smells, all memories are colored by tastes. Therefore, Desanka would be remembered in the family for the famous 'Reforma' cake, stuffed patience docks, fried peppers with cheese, and dumplings, while Djordje will be remembered for 'Bata and Seka' chocolates, as well as Kiki candies that he regularly brought to his grandchildren. Although they both considered education important, and were successful engineers, diligent and hardworking people, they had never pressured their children and grandchildren to be the best in their class, or to study electrical engineering. Neither Desanka nor Djordje ever considered money as a motive or a goal. They left behind a grandson, granddaughter, two great-grandsons, and one great-granddaughter.

Although she was up to her ears in work as an engineer in The Railways, Desanka enjoyed her family and social life, and she was particularly fond of card games. The famous Serbian painter Pavle Paja Jovanović⁷ sketched Desanka's profile during a gathering with friends on paper the background of which was a café tablecloth, but unfortunately, that sketch was lost over time. Her family friend was also Radivoje Lola Đukić, the founder of the Theater in Terazije and the celebrated Editor of the cultural and artistic program on Television Belgrade⁸. Her friends came over for coffee, and she enjoyed the ordinary things that make life beautiful and worthy. She loved to read and retell the books she read to her grandchildren. She enjoyed visiting Soko Banja Spa and Vrnjačka Banja Spa, as well as other places in Serbia. Until her death at the age of 90, she lived a full and rich life, and according to family testimonies she said about herself that she had had a fulfilled life. Although she will not have the opportunity to read this article and subsequently find out that she has not been forgotten as the first woman to graduate in the field of Electrical Engineering, it is comforting to know that she was invited to the celebration organized by the Faculty of Mechanical Engineering, University of Belgrade, to receive the award in the early 90s of the last century as the first woman-graduate in Electrical Engineering in Yugoslavia.

⁷ https://sr.wikipedia.org/wiki/Paja_Jovanović, accessed on June 13, 2023.

⁸ https://sr.wikipedia.org/sr-el/Radivoje_Lola_Đukić, accessed on June 12, 2023.

The fate of this article is very exciting and, therefore, worth mentioning. The story begins with the Second conference „Application of Free Software and Open Hardware” (PSSOH⁹) organized by the School of Electrical Engineering, University of Belgrade, held in 2019, when Assistant Professor Dr. Biljana Stanković from the Faculty of Philosophy, University of Belgrade and the Author of this article wrote and presented a paper on the topic of gender gap through the history of the School of Electrical Engineering, University of Belgrade¹⁰, which was based on The Register of Electrical Engineers edited by Professor Miodrag Popović and Professor Dimitrije Tjapkin¹¹. In the analysis of the data they had at their disposal, the name of the first female graduate in the field of Electrical Engineering, Desanka Perišić, stood out. Although she was not mentioned by name in the paper, another acquaintance through the PSSOH Conference and the invitation of the Executive Director of Wikimedia Serbia, Ivana Madžarević, to the Author of this paper to contribute to the Editorial Marathon on the occasion of International Women's Day in 2020¹² led to the creation of an article on Wikipedia about Desanka Perišić in a very modest edition. Although the Author inquired among her acquaintances in Požega about the possibility of obtaining more pieces of information from the City Archives about the woman who decided to study Electrical Engineering and about everything that surrounded and motivated her at the time, that initiative did not bear fruit.

The daily routines which surround us, as well as problems and events that are not crucial for us, but rather take away precious time from us, led to the fact that this journey to investigating the history of the School of Electrical Engineering, University of Belgrade was left aside, and the Author of the article did not have the slightest idea that at that time the descendants of Desanka Jovanović (maiden name Perišić) enthusiastically read the Wikipedia article about Desanka with pride and nostalgia. Then, there was an unexpected and equally random meeting of the Dean's Secretary of the School of Electrical Engineering in Belgrade, Danka Despotović, with Nebojša Jovanović, Desanka Jovanović's grandson, in Vrnjačka Banja. Their acquaintance led to the meeting of the Author of the article with the descendants of Desanka Jovanović, more specifically, with her granddaughter Dragana Prelević Dovedan, a retired political scientist who spent her working life in the Ministry of Education in the Department for Higher Education, and her grandson Nebojša Jovanović, a graduate in economics and a graduate of the Higher Military Aviation Technical School, Department of Rocket Technology, and now a beekeeper.

This article would not have been brought to light if it had not been for the kind support and initiative of the Dean, Dr. Dejan Gvozdić, Full Professor, and the Vice Dean for Science, Dr. Dragan Olčan, Full Professor, to write an appropriate text about the first female graduate in the field of Electrical Engineering for the purposes of compiling an anniversary publication on the occasion of the Day of the School of Electrical Engineering, University of Belgrade.

The Author offers boundless thanks to the Assistant Professor Dr. Biljana Stanković, from the Faculty of Philosophy, University of Belgrade, for proofreading the text, as well as for her kind and useful suggestions.

Although the paper is full of historical facts that are supported by the appropriate documents and enriched by the testimonies of the descendants, an inseparable part of this paper is the Author's vision of a Serbian grandmother, mother, wife and daughter, a woman in all the complexity of her roles and system of values, as well as the Author's view of the importance of the family, the educational system, and specifically Electrical Engineering and the School of Electrical Engineering, University of Belgrade. The Author hopes that she has managed to faithfully present the life and work of Desanka Jovanović born Perišić, with a tacit agreement with her descendants that some family secrets should remain as such forever.

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⁹ <https://pssoh.etf.bg.ac.rs/>, accessed on May 30, 2023.

¹⁰ The original title of the paper in the English language is "Gender gap in electrical engineering at the University of Belgrade (1923-2010): Analysis of graduates' structure using R", <https://doi.org/10.5281/zenodo.3464105>

¹¹ "The Register of Electrical Engineers who Graduated from the University of Belgrade 1923-2010," Edited by: Prof. Miodrag Popović and Prof. Dimitrije Tjapkin, School of Electrical Engineering, University of Belgrade and Academic Mind, Belgrade, Serbia, 2010.

¹² https://sr.wikipedia.org/sr-el/Vikipedija:Uređivački_maraton_povodom_Međunarodnog_dana_žena_2020, accessed on May 30, 2023.