

## In memoriam – zaslužni profesor dr. Uroš Bajželj



### Professor emeritus dr. Uroš Bajželj

Quietly and suddenly, he left our world struggling with a coronavirus pandemic. Dear and respected professor emeritus dr. Uroš Bajželj unfortunately lost this battle on March 30 this year. We often look back and find that the development of any profession largely depends

### Zaslužnemu profesorju dr. Urošu Bajžlju

Tiho in nenadoma je zapustil naš svet, ki se spopada s pandemijo koronavirusa. Dragi in spoštovani zaslužni profesor dr. Uroš Bajželj je to bitko žal izgubil 30. marca letos. Pogosto se oziramo nazaj in ugotavljamo, da je razvoj kate-

on the people who are committed to it and with their abilities co-shape the directions of action with a view to the future. Among them, without a doubt, we can also include the professor emeritus dr. Uroš Bajželj, to whom we sincerely thank for his contribution to the development of mining and geotechnological science.

He was born in Ljubljana on October 6th, 1931, and like many other talented children in his youth, he walked the paths dictated primarily by school and the desire for knowledge, especially in the fields of technology and science, which allowed him to be already appointed a demonstrator during his studies at the University of Ljubljana. In 1957, he successfully completed his university studies and became a graduate mining engineer. His life path first brought him to Idrija, to the Mercury Mine, where he quickly integrated into the mining environment with a centuries-old tradition and began to work systematically and creatively in the demanding professional field of mining. The hard and development-oriented work of the young engineer was highly appreciated by the employees in the mine, because he was always ready to lead development projects or participate in innovations and improvements in technical and technological processes of ore extraction in extremely complex geological conditions. Before leaving for the new position of general manager of the Kaolin and Calcite Mine Črna - Kamnik, he was the head of the development department for one year. In his new position, its ability to achieve development goals has come to the fore again, thus, in 1978, as an innovator, he was awarded the "innovation chain".

One year earlier, one of the stations in his life was the position of general manager of the Mining Institute Ljubljana, where with great love and persistent work he managed to organize the institute into an internationally recognized research organization in the field of mining.

Until his election in 1987 to the title of Associate Professor of Mining at the University of Ljubljana, where he also successfully defended his doctoral dissertation, he worked scientifically and research in various fields of mining activities. Although he worked creatively in several areas of mining, his attachment to the Idrija mine never dried up. In several roles, he actively participated professionally and scien-

rely on the people who are committed to it and with their abilities co-shape the directions of action with a view to the future. Among them, without a doubt, we can also include the professor emeritus dr. Uroš Bajželj, to whom we sincerely thank for his contribution to the development of mining and geotechnological science.

re koli stroke v veliki meri odvisen predvsem od ljudi, ki so ji predani in s svojimi sposobnostmi sooblikujejo smeri delovanja s pogledom naprej, v prihodnost. Mednje brez dvoma lahko štejemo tudi zaslužnega profesorja dr. Uroša Bajžlja, ki se mu na tem mestu med drugim iskreno zahvaljujemo za njegov prispevek k razvoju rudarske in geotehnoške znanosti. Rodil se je v Ljubljani 6. oktobra 1931 leta in je kot mnogi drugi nadarjeni otroci v mladosti prehodil pota, ki jih je v prvi vrsti narekovala šola in želja po znanju, predvsem s področij tehnike in naravoslovja, kar mu je omogočilo, da je bil že v času študija na Univerzi v Ljubljani imenovan za demonstratorja. Leta 1957 je uspešno končal univerzitetni študij in postal diplomirani inženir rudarstva. Življenjska pot ga je najprej pripeljala v Idrijo, v Rudnik živega srebra, kjer se je hitro vklopil v rudarsko okolje z večstoltno tradicijo in začel sistematsko in ustvarjalno delati na zahtevnem strokovnem področju rudarstva. Naporno in razvojno naravnano delo mladega inženirja so sodelavci v rudniku visoko cenili, ker je bil vedno poleg operativnega in odgovornega dela, ki ga je opravljal kot tehnični vodja jame, pripravljen voditi razvojne projekte ali sodelovati pri inovacijah in izboljšavah tehničnih in tehnoloških postopkov pridobivanja rude v izjemno zapletenih geoloških razmerah. Pred odhodom na novo delovno mesto direktorja Rudnika kaolina in kalcita Črna - Kamnik, je bil eno leto vodja službe za razvoj. Na novem delovnem mestu je ponovno prišla do izraza njegova sposobnost udejanjanja razvojnih ciljev, tako je bil leta 1978 kot inovator nagrajen z »inovacijsko verigo«.

Eno leto prej je bila ena izmed postaj na njegovi življenjski poti delovno mesto direktorja Rudarskega inštituta Ljubljana, kjer je z veliko ljubeznijo in vztrajnim delom uspel organizirati inštitut v mednarodno prepoznavno raziskovalno organizacijo na področju rudarstva.

V času do izvolitve leta 1987 v naziv izrednega profesorja za področje rudarstva na Univerzi v Ljubljani, kjer je med drugim tudi uspešno obranil doktorsko disertacijo, je znanstveno in raziskovalno delal na različnih področjih rudarskih dejavnosti. Čeprav je ustvarjalno delal na več področjih rudarstva, njegova navezanost na idrijski rudnik ni nikoli presahnila. V več vlogah je dejavno strokovno in znanstveno so-

tifically and led projects that guided the mine through difficult periods of closure with at least partially preserved mercury production, so that he and his colleagues managed to combine environmental conditions of ore mining with adapted technological processes of precious metal extraction. The exact opposite of the centuries-old tradition of bottom-up excavation was the introduction of a top-down mining method using hardened backfill in Permo-Carboniferous shales with much lower impacts on the development of sedimentation of the narrower and wider excavation area with higher yield of native mercury, past due to its physical properties lost in the backfill below each level of excavation.

He actively led and participated in the production and implementation of mine closure projects, which were built into the mining environment in order to preserve the town of Idrija above the partially submerged cave, which for centuries gave hard-earned bread to miners and their families. As part of these mining activities, he contributed with his knowledge and rich experience to the arrangement of Antonijev rov and other mining facilities into a mining museum, which is now visited by tourists and various experts from around the world. He was also an active member of the expert commission, which oversaw the maintenance work in the wider area of the mine, throughout the closure work and later. He focused a lot of his professional and scientific potential on research for the needs of uranium ore mining in the Žirovski vrh uranium mine. Also in this "young mine" he led the development of a new mining method, with great emphasis on improved protection of miners and respect for environmental conditions, in order to guide the development of environmentally friendly mining, which at that time was not as important as today. In professional interviews and scientific debates, he indicated that he felt a special desire or a kind of mission that mining must adapt to new challenges that require economic efficiency while strictly respecting environmental requirements and ensuring the protection and health of miners who perform demanding mining works. All of this points to a mining expert and scientist, and a university teacher who had a sense of the future and a sense of realiz-

deloval in vodil projekte, ki so usmerjali rudnik skozi težka obdobja zapiranja ob vsaj delno ohranjeni proizvodnji živega srebra tako, da je uspel skupaj s svojimi sodelavci združiti okoljevarstvene pogoje odkopavanja rude s prilagojenimi tehnološkimi postopki pridobivanja dragocene kovine. Pravo nasprotje večstoletni tradiciji načina odkopavanja od spodaj navzgor je bila uvedba metode odkopavanja z uporabo utrjenega zasipa od zgoraj navzdol v permo-karbonskih skrilavcih z veliko manjšimi vplivi na razvoj posedanja ožjega in širšega območja odkopavanja ob višjem izkoristku pridobivanja samorodnega živega srebra, ki se je v preteklosti zaradi svojih fizikalnih lastnosti izgubljalo v zasipih pod vsakokratnim nivojem odkopavanja.

Aktivno je vodil in sodeloval pri izdelavi in izvajanju projektov zapiralnih del rudnika, ki so bili vgrajeni v rudarsko okolje z namenom ohranjanja mesta Idrija nad delno potopljeno jamo, ki je stoletja dajala težko zaslužen kruh rudarjem in njihovim družinam. V okviru navedenih rudarskih dejavnosti je s svojim znanjem in bogatimi izkušnjami prispeval k urejanju Antonijevega rova in drugih rudniških obratov v rudarski muzej, ki ga danes obiskujejo turisti in različni strokovnjaki s celega sveta. Prav tako je bil vseskozi, v času izvajanja zapiralnih del in kasneje, aktiven član strokovne komisije, ki je bedela nad izvajanjem vzdrževalnih del na širšem območju rudnika. Veliko svojega strokovnega in znanstvenega potenciala je usmeril v raziskave za potrebe pridobivanja uranove rude v Rudniku urana Žirovski vrh. Tudi v tem »mladem rudniku« je vodil razvoj nove odkopne metode, z velikim poudarkom na izboljšani zaščiti rudarjev in spoštovanju okoljevarstvenih pogojev, z namenom usmerjanja razvoja okolju prijaznega rudarjenja, ki v tistem času še ni bilo tako pomembno kot danes. V strokovnih razgovorih in znanstvenih debatah je nakazoval, da v sebi čuti posebno željo oziroma neke vrste poslanstvo, da se mora rudarjenje prilagajati novim izzivom, ki zahtevajo ekonomsko učinkovitost ob strogem spoštovanju okoljevarstvenih zahtev in stalnem zagotavljanju varstva in zdravja rudarjev, ki izvajajo zahtevna rudarska dela. Vse to kaže na rudarskega strokovnjaka in znanstvenika ter univerzitetnega učitelja, ki je imel občutek za prihodnost in smisel za udejanjanje

ing original ideas based on a solid professional foundation and vision. He has presented the results of research projects at numerous international conferences, symposia and congresses and lectured on research achievements at various universities around the world, including prestigious ones such as Columbia University, Henry Krumb School of Mines in New York and elsewhere.

After 1987, his work in the field of pedagogy brought him even closer to mining science. He led and organized research work in the projects with international participation in the field of introduction of hardened backfill in the metal mines and coal mines in order to ensure development of mining even in more demanding economic and environmental management conditions.

Special thanks go to him also as a leader in the establishment of the geotechnological profession in our country, which enables the transfer and application of traditional knowledge of the field of mining to the other industries and thus the existence and further development of this applied science. During his pedagogical work at the faculty, in 1993 he was elected to the title full professor of mining and geotechnology.

Under his mentorship, more than twenty students graduated, more than five of them successfully defended their master's theses and just as successfully defended their doctoral dissertations at the Department of Geotechnology, Mining and Environment at the Faculty of Natural Sciences and Engineering, University of Ljubljana.

During his tenure at the University of Ljubljana, the late Professor Uroš Bajželj performed high-quality scientific research work and other responsible functions and received several national and international awards, including the title of Honorary Doctor at Petrosani University in Romania and the title of Meritorious Member of International of the International Society of Mining Professors and the World Mining Congress - IOC-WMC. In the period 1993–1997 he was the first president of the Slovenian Mining Association of Engineers and Technicians - SRDIT and its honorary member. At the 58th Jump over the leather skin in Velenje, he received the title of honorary jumper. Until recently, he was an active member of the Slovenian Chamber of

izvirnih zamisli temelječih na trdnih strokovnih osnovah in viziji. Rezultate raziskovalnih projektov je predstavil na številnih mednarodnih konferencah, simpozijih in kongresih ter predaval o raziskovalnih dosežkih na različnih univerzah v svetu med drugimi tudi na prestižnih kot sta Columbia University, Henry Krumb School of Mines v New Yorku in drugje.

Delo na pedagoškem področju ga je po letu 1987 še bolj približalo rudarski znanosti. Vodil in organiziral je raziskovalno delo na projektih z mednarodno udeležbo s področja uvajanja utrjenih zasipov v kovinske rudnike in premogovnike z namenom zagotavljanja razvoja rudarstva tudi v zahtevnejših ekonomskih in okoljevarstvenih pogojih gospodarjenja.

Posebna zahvala mu velja kot vodilnemu pri ustanavljanju geotehnoške stroke v naši državi, ki omogoča prenose in uveljavljanje tradicionalnih znanj s področja rudarstva tudi na druge gospodarske panoge in s tem obstoj in nadaljnji razvoj te aplikativne znanstvene vede. V času opravljanja pedagoškega dela na fakulteti, je bil leta 1993 izvoljen v naziv rednega profesorja za področje rudarstva in geotehnologije.

Pod njegovim mentorstvom je diplomiralo več kot dvajset študentk in študentov, več kot pet jih je uspešno zagovarjalo magistrska dela ter prav toliko uspešno obranilo doktorske disertacije na Oddelku za geotehnologijo, rudarstvo in okolje na Naravoslovnotehniški fakulteti Univerze v Ljubljani.

Pokojni profesor Uroš Bajželj je v času svojega delovanja na Univerzi v Ljubljani opravljal visoko kakovostno znanstveno raziskovalno delo in druge odgovorne funkcije ter prejel več domačih in mednarodnih priznanj, med katerimi velja posebej izpostaviti naslov častnega doktorja na Univerzi Petrosani v Romuniji ter podelitev naziva zaslužnega člana mednarodnih združenj International Society of Mining Professors in World Mining Congress – IOC-WMC. V obdobju 1993–1997 je bil prvi predsednik Slovenskega rudarskega društva inženirjev in tehnikov – SRDIT ter njegov častni član. Na 58. Skoku čez kožo v Velenju je prejel naziv častnega skakalca. Do zadnjega je bil aktiven član Inženirske zbornice Slovenije, ki mu je podelila pomembno nagrado za njegovo življenjsko delo na področju rudarstva in geotehnologije.

Engineers, which awarded him with award for his life's work in the field of mining and geotechnology.

Younger colleagues are proud and we will be proud of him in the future as well, even if he is no longer among us. There remains a deep respect and gratitude for all his noble deeds, which helped us in our professional decisions and other orientations in our work, which is related to the nature and difficulty of the mining profession, in its own always interesting and attractive.

Mlajši kolegi smo in bomo ponosni nanj tudi v prihodnje, čeprav ga ni več med nami. Ostaja globoko spoštovanje in zahvala za vsa plemenita dejanja, ki so nam bila v pomoč pri naših strokovnih odločitvah in drugih usmeritvah pri našem delu, ki je povezano z naravo in težavnostjo rudarskega poklica, po svoje vedno zanimivega in privlačnega.

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