

# Drago Štemberger (1943-2024)

## In memoriam

Drago Štemberger was born on 20 April 1943 in Klana near Rijeka and passed away on 6 February 2024 in Zagreb. He graduated from the Rijeka high school in 1961. In the same year, he enrolled at the Geodetic Military Academy in Belgrade, which he graduated in 1964. He enrolled in the Geodetic Department of the Faculty of Civil Engineering in Belgrade as a part-time student in 1967 and graduated in 1972, defending his thesis "Determining astronomical azimuth with a one-second theodolite". He finished his post-graduate studies in 1977 with the defence of his master's thesis "Multigroup adjustment of geodetic networks using the method of conditional measurements". On 29 April 1987, he defended his doctoral dissertation entitled "Analysis of determining the size of larger territorial units using modern methods and procedures with application to the territory of the SFRY" in front of the committee of the Faculty of Civil Engineering in Belgrade.

From the end of the Geodetic Military Academy until 1991, he was employed at the Military Geographical Institute in Belgrade and engaged in various professional and scientific development tasks in the fields of topography, lower geodesy, higher geodesy, geodetic astronomy, photogrammetry, cartography, adjustment calculations and engineering geodesy. From 1972 to 1987, he worked on scientific and development tasks in the field of application of computer technology in geodetic disciplines. Since 1988, he was the only Doctor of Technical Sciences in the field of geodesy in the former Yugoslav Army.

At the end of 1991, he moved with his family to Croatia and took a job in the Ministry of Defence of the Republic of Croatia, located in the premises of the Brodarski Institut, where he was assigned to work on the organization of the geodetic service in the Croatian Army (HV). At the beginning of 1992, he founded the Department of Geodesy in the Directorate for Construction of the Ministry of Defence, which he headed until his retirement with the rank of Brigadier of the Army. He participated in a series of geodetic service tasks in the HV, among the most important of which are: organizing the collection of cartographic material after the withdrawal of the Yugoslav National Army from Croatia, establishing a central warehouse for geotopographical material and cartographic archives, supplying the Croatian Army with geotopographical materials, geodetic support for the HV, creating various geodetic-cartographic instructions and manuals, executing the first cartographic editions of the Ministry of Defence: Map of Municipalities, scale 1:500,000 and Map of Counties, scale 1:500,000.

He was personally involved in the following tasks: By the decision of the Government of the Republic of Croatia,

he was appointed to the State Commission for the Borders of the Republic of Croatia, he was appointed as a member of the interdepartmental group of the Government of the Republic of Croatia to resolve the issue of the status of the Hydrographic Institute in Split, and he was a member of the team for the creation of the initial material for the geostrategic features research project Republic of Croatia.

From 1976 to 1988, he was an external associate of the Centre of Higher Military Schools in Belgrade, teaching "Calculation Techniques and Programming", "Calculus of Adjustment" and "Geodetic Astronomy". In 1989, he was elected assistant professor at the University of Belgrade for the subject "Automatic data processing in geodesy". He was an associate professor at the Military Academy of the former Yugoslav Army for the subject "Mathematical Cartography". At the beginning of 1992, he was elected to the scientific title of senior scientific associate at the Faculty of Geodesy in Zagreb and entered in the Republic Register of Scientific Workers.

He was a long-time member of the Croatian Cartographic Society, as well as a member of a large number of professional and scientific bodies and commissions. He published several professional and scientific research papers in the field of geodesy and computer data processing. He is the author of the scientific monographs "Digital model of the topographic map of Yugoslavia - Coordinate system" and "Using the UTM coordinate system in the conditions of the Gauss-Krüger projection of the meridian zones". He is also the author of many scientific studies, including: "Possibilities of automatic processing of the high-accuracy Nivelman network", "Determination of the area and volume of SFRY from data obtained by digitizing TK25", "Research and trial works on the automation of technical-technological procedures in the production of topographic and thematic maps" etc.

He published the following papers in Geodetski list:  
 Štemberger, D. (1979): Contribution to the strict adjustment of geodetic networks by dividing them into smaller parts, Geodetski list, 33 (56), 1-3, 5-16, <https://hrcak.srce.hr/clanak/427655>.  
 Štemberger, D. (1991): A shorter algorithm for calculating the area of an ellipsoidal trapezoid, Geodetski list, 45 (68), 4-6, 149-155, <https://hrcak.srce.hr/clanak/425122>.  
 Štemberger, D. (1992): Calculation of the area of a figure of an arbitrary shape on an ellipsoid, Geodetski list, 46 (69), 3, 301-313, <https://hrcak.srce.hr/clanak/423581>.

*Dragana Zovko, Tamara Sremac, Željko Železnjak* ■

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Drago Štemberger rođen je 20. travnja 1943. u Klani kod Rijeke, a umro 6. veljače 2024. u Zagrebu. Riječku gimnaziju završio je 1961. godine. Iste godine upisao se na Geodetsku vojnu akademiju u Beogradu, koju završava 1964. Geodetski odsjek Građevinskog fakulteta u Beogradu upisuje kao izvanredni student 1967. i završava 1972. obranom diplomskog rada „Određivanje astronomskog azimuta sekundnim teodolitom“. Postdiplomski studij završava 1977. obranom magistarskog rada „Višegrupno izjednačenje geodetskih mreža metodom uvjetnih mjerenja“. Doktorsku disertaciju pod nazivom „Analiza određivanja veličina većih teritorijalnih jedinica korištenjem suvremenih metoda i postupaka sa primjenom na teritoriju SFRJ“ obranio je 29. travnja 1987. pred komisijom Građevinskog fakulteta u Beogradu.

Od završetka Geodetske vojne akademije do 1991. bio je zaposlen u Vojnogeografskom institutu u Beogradu i angažiran na raznim stručnim i znanstveno-razvojnim zadacima iz područja topografije, niže geodezije, više geodezije, geodetske astronomije, fotogrametrije, kartografije, računa izjednačenja i inženjerske geodezije. Od 1972. do 1987. radio je na znanstvenim i razvojnim zadacima iz područja primjene računarske tehnologije u geodetskim disciplinama. Od 1988. godine bio je jedini doktor tehničkih znanosti za područje geodezije u bivšoj Jugoslavenskoj armiji.

Krajem 1991. preselio se s obitelji u Hrvatsku i zaposlio u Ministarstvu obrane RH smještenom u prostorijama Brodarskog instituta gdje dobiva zadatak rada na organizaciji geodetske službe u Hrvatskoj vojsci. Početkom 1992. godine osniva Odjel za geodeziju u Upravi za graditeljstvo MORH-a na čijem je čelu sve do umirovljenja sa činom brigadira HV. Sudjelovao je u nizu zadaća geodetske službe u HV-u, a među važnijima su: organizacija prikupljanja kartografskog materijala nakon povlačenja JNA iz Hrvatske, formiranje centralnog skladišta geotopografskog materijala i kartografske arhive, opskrba Hrvatske vojske geotopografskim materijalima, geodetska potpora HV-u, izrada raznih geodetsko-kartografskih napatuka i priručnika, realizacija prvih kartografskih izdanja MORH-a: Karta općina, mjerila 1:500 000 i Karta županija, mjerila 1:500 000.

Osobno je bio angažiran na sljedećim poslovima: Odlukom Vlade RH imenovan je u Državnu komisiju za granice



RH, postavljen je za člana međuresorske grupe Vlade RH za rješavanje pitanja statusa Hidrografskog instituta u Splitu i bio je član tima za izradu inicijalnog materijala za projekt istraživanja geostrateških značajki Republike Hrvatske.

Od 1976. do 1988. bio je vanjski suradnik Centra visokih vojnih škola u Beogradu u svojstvu nastavnika za predmete „Tehnika računanja i programiranje“, „Račun izjednačenja“ i „Geodetska astronomija“. Godine 1989. izabran je za docenta Univerziteta u Beogradu za predmet „Automatska obrada podataka u geodeziji“. Bio je izvanredni profesor Vojne aka-

demije bivše Jugoslavenske armije za predmet „Matematička kartografija“. Početkom 1992. izabran je na Geodetskom fakultetu u Zagrebu u znanstveno zvanje viši znanstveni suradnik i upisan u Republički registar znanstvenih radnika.

Bio je dugogodišnji član Hrvatskoga kartografskog društva te član velikog broja stručnih i znanstvenih tijela i komisija. Objavio je više stručnih i znanstveno-istraživačkih radova iz područja geodezije i kompjutorske obrade podataka. Autor je znanstvenih monografija „Digitalni model topografske karte Jugoslavije – Koordinatni sustav“ i „Korištenje UTM koordinatnog sustava u uvjetima Gauss-Krügerove projekcije meridijanskih zona“. Autor je i mnogih znanstvenih studija, npr. „Mogućnosti automatske obrade mreže Nivelmana visoke točnosti“, „Određivanje površine i obima SFRJ iz podataka dobivenih digitalizacijom TK25“, „Istraživačko-probni radovi na automatizaciji tehničko-tehnoloških postupaka u izradi topografskih i tematskih karata“ i dr.

U Geodetskom listu objavio je ove radove:

- Štemberger, D. (1979): Prilog strogom izravanju geodetskih mreža podelom na manje delove, Geodetski list, 33 (56), 1-3, 5-16, <https://hrcak.srce.hr/clanak/427655>.
- Štemberger, D. (1991): Jedan kraći algoritam za računanje površine elipsoidnog trapeza, Geodetski list, 45 (68), 4-6, 149-155, <https://hrcak.srce.hr/clanak/425122>.
- Štemberger, D. (1992): Računanje površine lika proizvoljnog oblika na elipsoidu, Geodetski list, 46 (69), 3, 301-313, <https://hrcak.srce.hr/clanak/423581>.

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