

E. Lynn Usery (1951–2022)

In memoriam

Dr. E. Lynn Usery, Chair of the ICA Commission on Map Projections passed away on 22 March 2022. He was a Senior Scientist with the U.S. Geological Survey (USGS) and Director of the Center of Excellence for Geospatial Information Science (CEGIS). His research areas were in theoretical cartography and GIScience, map projections, geospatial semantics and ontology, high performance computing (HPC), and CyberGIS. To recognize his remarkable impact on the field of cartography and GIScience, let me recall a few facts from his career.

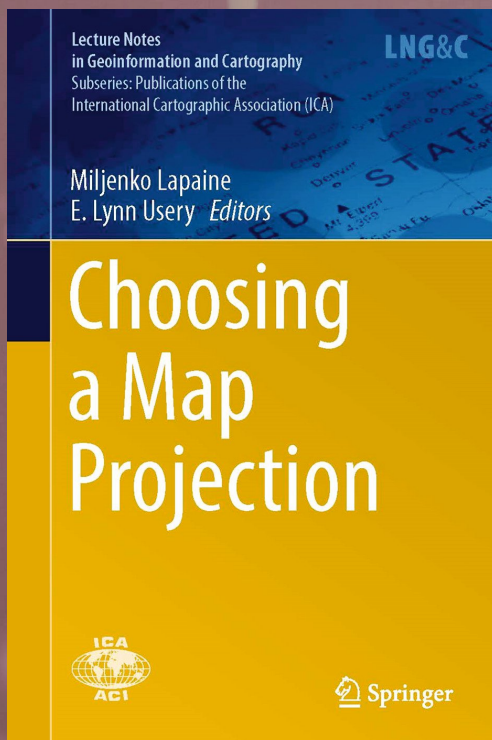
Lynn earned his B.S. from the University of Alabama and M.A. and Ph.D. from the University of Georgia. He began work with the USGS in 1977 as a cartographer in the Topographic Mapping Division, at the beginning of the digital transition. During this time, he began the development of automated digital mapping systems for production of printed topographic maps. Working in research, he later accepted faculty positions at the University of Wisconsin-Madison (1988–1993) and the University of Georgia (1994–2005), and has also taught at the university of Missouri, Rolla. In these positions he developed and taught classes in cartography and geographic information science, as well as conducted research in these fields. He

returned to USGS and began a cartographic research program that led to CEGIS. As Director of CEGIS he directed the science program and the visions and plans for topographic mapping research. His USGS work and academic research accomplishments included a digital mapping production system, theoretical basis, and implementation for feature-based data models for topographic data, advances in map projections for raster data, topographic feature representation with geospatial semantics, terrain representation, and HPC implementations for topographic data processing and mapping. He published more than 130 articles in the very best journals in the discipline, including Photogrammetric Engineering and Remote Sensing, International Journal of Geographical Information Systems, Cartography and Geographic Information Systems, Geoinformatica, Journal of Remote Sensing, Annals of the Association of American Geographers, and Transactions in GIS. His research interests span from the world of map projections, scale and resolution, spatial analysis, landscape analysis, issues of time, image classification, to semantics and map projections ontology. Lynn's research and scholarly contributions have covered nearly all aspects of our field. His work has resulted in invitations to lectures around the globe, including Tunisia, Russia, Austria, China, Egypt, Bulgaria, and Croatia.

Some of Lynn's projects at the USGS further illustrate his huge research interests. These include, 125 Years of Topographic Mapping, Map Projections of Raster Data, Data Integration for The National Map, Modeling, Simulation, and Animation of Sea Level Rise, Generalization for The National Map, Developing an Ontology for The National Map, and Rapid Map Projection over the Web.

Professionally, Lynn has served as an editor of the journal Cartography and Geographic Information Science and was Director of the Auto-Carto series that he helped to re-establish after a gap of many years. He served as President of the University Consortium for Geographic Information Science (UCGIS), the Cartography and Geographic Information Society (CaGIS), and the American Society for Photogrammetry and Remote Sensing (ASPRS). He was a Fellow of CaGIS, UCGIS, and ASPRS, and received the CaGIS Distinguished Career Award in 2012.

He served as Vice-President of the International Cartographic Association from 2015–2019. He was Chair of the Local Organizing Committee and Director of the 2017 International Cartographic Conference in Washington, D.C. Lynn was a Vice-Chair of the newly established ICA Working Group on Body of Knowledge on Cartography (2015–2019).



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In memoriam

Dr. E. Lynn Usery, predsjedavajući Povjerenstva za kartografske projekcije ICA-e preminuo je 22. ožujka 2022. Bio je viši znanstvenik u Geološkom institutu SAD-a (U.S. Geological Survey - USGS) i direktor Centra izvrsnosti za geoprostorne informacijske znanosti (Center of Excellence for Geospatial Information Science - CEGIS). Područja njegovog istraživanja bila su teorijska kartografija i GIS-znanost, kartografske projekcije, geoprostorna semantika i ontologija, računalstvo visokih performansi (High-performance computing - HPC) i CyberGIS. Kako bismo bolje upoznali njegov izniman utjecaj na polje kartografije i GIS-znanosti, prisjetimo se nekoliko činjenica iz njegove karijere.

Lynn je stekao B.S. na sveučilištu u Alabami te magistrirao i doktorirao na sveučilištu Georgia. Za USGS počeo je raditi 1977. kao kartograf u Odjelu za topografsko kartiranje u doba početka digitalne tranzicije. Tijekom tog vremena započeo je razvoj automatiziranih digitalnih kartografskih sustava za izradu tiskanih topografskih karata. Istraživao je, a onda prihvatio mjesto profesora na sveučilištu Wisconsin-Madison (1988–1993) i sveučilištu Georgia (1994–2005). Predavao je i na sveučilištu Missouri, Rolla. Tamo je razvijao i predavao kartografiju i geografske informacijske znanosti, ali i dalje istraživao. Vratio se u USGS i započeo kartografski istraživački program koji je doveo do CEGIS-a. Kao direktor CEGIS-a vodio je znanstveni program te radio na viziji i planovima istraživanja topografskog kartiranja. Bavio se sustavom digitalnog kartiranja, teorijskim osnovama i primjenom modela utemeljenih na značajkama topografskih podataka, novostima u primjenama kartografskih projekcija na rasterske podatke, predstavljanju topografskih obilježja s geoprostornom semantikom, prikazivanjem terena i primjenom HPC-a na topografsku obradu podataka i kartiranje. Objavio je više od 130 članaka u najboljim časopisima u tom području, uključujući Photogrammetric Engineering and Remote Sensing, International Journal of Geographical Information Systems, Cartography and Geographic



Information Systems, Geoinformatica, Journal of Remote Sensing, Annals of the Association of American Geographers, i Transactions in GIS. Njegovi istraživački interesi protežu se od svijeta kartografskih projekcija, mjerila i rezolucije, prostorne analize, analize krajolika, pitanja vremena, klasifikacije slika, do semantike i ontologije kartografskih projekcija. Lynnova istraživanja i znanstveni doprinosi pokrili su gotovo sve aspekte našeg područja. Njegov rad rezultirao je

pozivima za predavanja diljem svijeta, uključujući Tunis, Rusiju, Austriju, Kinu, Egipat, Bugarsku i Hrvatsku.

Neki od Lynnovih projekata na USGS-u dodatno ilustriraju njegove velike istraživačke interese. To su 125 godina topografskog kartiranja, kartografske projekcije rasterskih podataka, integracija podataka za nacionalnu kartu, modeliranje, simulacija i animacija porasta razine mora, generalizacija za nacionalnu kartu, razvoj ontologije za nacionalnu kartu i brza kartografska projekcija za web.

Lynn je bio urednik časopisa Cartography and Geographic Information Science i direktor niza konferencija Auto-Carto koje je pomogao ponovno uspostaviti nakon dugogodišnjeg prekida. Bio je predsjednik Sveučilišnog konzorcija za geografsku informacijsku znanost (UCGIS), Kartografskog i geografskog informacijskog društva (CaGIS) i Američkog društva za fotogrametriju i daljinska istraživanja (ASPRS). Bio je suradnik CaGIS-a, UCGIS-a i ASPRS-a, pa je 2012. godine dobio CaGIS-ovu nagradu za istaknutu karijeru (Distinguished Career Award).

Od 2015. do 2019. bio je potpredsjednik Međunarodnog kartografskog društva (*International Cartographic Association - ICA*). Bio je predsjednik lokalnog organizacijskog odbora i direktor Međunarodne kartografske konferencije 2017. u Washingtonu D.C. Bio je dopredsjedavajući novoosnovane Radne skupine o korpusu znanja o kartografiji ICA-e (2015–2019). Lynn je bio vrlo aktivan u Povjerenstvu za kartografske projekcije ICA-e (*Commission on Map Projections - CoMP*) gdje je bio tajnik (2007–2011) i dopredsjedavajući (2011–2015). Novi plan

Map Projections Knowledge and Semantic Technology

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17th International Conference on
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Zagreb, Croatia
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Lynn was very active in the ICA Commission on Map Projections (CoMP) where he was Secretary (2007-2011), and Vice-Chair (2011-2015). The new CoMP Terms of Reference were proposed to and accepted by the ICA General Assembly in Tokyo in 2019. E. Lynn Usery was appointed new Chair of the CoMP.

As part of his work in the CoMP, we would like to first highlight the development of an on-line, searchable version of the *map projections bibliography*. From the start of its activities in 2003, the Commission put forward as one of its goals to develop a bibliography that can be updated and expanded with new entries by authorized users. The digitization of the bibliography was initiated by the CEGIS of the US Geological Survey as a contribution to the ICA CoMP in May of 2009 and reached a stage of completion one year later when made available on-line.

On request by ICA WG for the International Map Year (2015-2016), a chapter on map projections and reference systems for the book *World of Maps* was prepared by M. Lapaine and E. Lynn Usery and published on the International Map Year website (<https://mapyear.icaci.org/the-world-of-maps-overview/index.html>). The book was written in English and translated into several languages.

The book *Choosing a Map Projection* was published by Springer in 2017. The editors were M. Lapaine and E. Lynn Usery, and the book belongs to Lecture Notes in Geoinformation and Cartography, Subseries: Publications of the ICA. Our collaboration on the book, which lasted three years, was great.

We wrote the article *To the 20th Anniversary of the Commission on Map Projections of the International Cartographic*

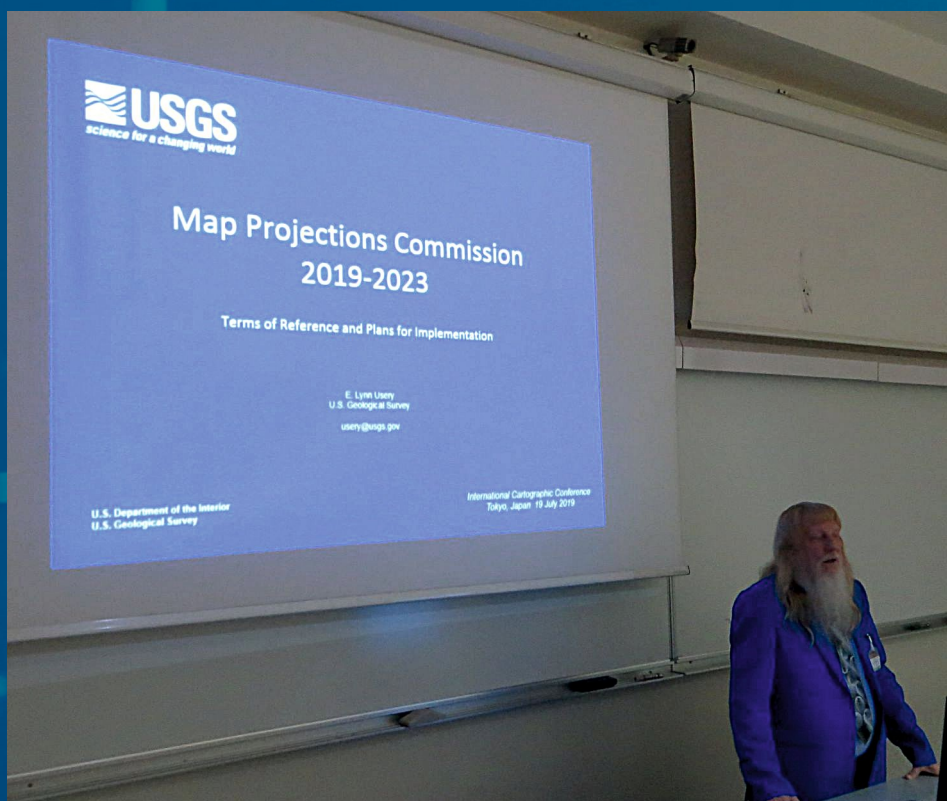
Association (2003-2023) which was published in Russian in 2020 (Lapaine M., Usery L., Nyrtsov M. V.: K dvadtsatiletyu komissii po kartograficheskim proektsiyam pri Mezhdunarodnoi kartograficheskoi assotsiatsii (2003-2023). *Geodesy and Cartography = Geodezia i kartografia*, 81, 9, pp. 44-52.

We have met at many conferences and scientific meetings. I would especially like to emphasize his participation in conferences organized by the Croatian Cartographic Society. He participated in person in the 15th International Conference on Geoinformation and Cartography held in Zagreb, Vodnjan / Dignano, Pula / Pola, Brijuni Islands, Croatia and Venice, Italy in 2019. He participated online in the 17th International Conference on Geoinformation and Cartography in 2021 with a presentation on Map Projections Knowledge and Semantic Technology.

In his last e-mail he sent me just five days before he passed away, he wrote: "FYI, some of my plans for workshops for CoMP in 2022, assuming I can travel. I am planning workshops for several conferences this year, in person assuming we are allowed to travel, including the 8th International Conference on Cartography and GIS is Nessebar, Bulgaria; the International Conference on Geoinformation and Cartography in Croatia; EuroCarto in Vienna, Austria; and AutoCarto 2022 in Redlands, CA. I am planning a tutorial on Map Projections as an introduction to the Workshops followed by two or three of research presentations." He was full of enthusiasm, but unfortunately his plans were unexpectedly stopped.

We have lost a dear and good colleague and friend. We will remember him as an extremely calm, kind, well-meaning and caring person.

Miljenko Lapaine ■



rada toga Povjerenstva predložen je i prihvaćen na Generalnoj skupštini ICA-e u Tokiju 2019. E. Lynn Usery imenovan je novim predsjedateljem CoMP-a.

Kao dio njegovog rada u CoMP-u, željeli bismo prvo istaknuti razvoj on-line pretražive verzije bibliografije kartografskih projekcija. Od početka svog djelovanja 2003. CoMP je kao jedan od svojih ciljeva postavio izradu bibliografije koju ovlaštene korisnici mogu ažurirati i proširivati novim unosima. Digitalizaciju bibliografije pokrenuo je CEGIS Geološkog instituta SAD-a kao doprinos CoMP-u u svibnju 2009. Godinu dana kasnije ta je baza postala dostupna on-line.

Na zahtjev Radne skupine za Međunarodnu godinu karte ICA-e (2015–2016), M. Lapaine i E. Lynn Usery pripremili su poglavlje o kartografskim projekcijama i referentnim sustavima za knjigu *World of Maps* i objavili ga na web stranici Međunarodne godine karte (<https://mapyear.ica-ci.org/the-world-of-maps-overview/index.html>). Knjiga je napisana na engleskom i prevedena na nekoliko jezika.

Knjigu *Choosing a Map Projection* objavio je Springer 2017. godine. Urednici su bili M. Lapaine i E. Lynn Usery, a knjiga pripada nizu *Lecture Notes in Geoinformation and Cartography*, Subseries: Publications of the ICA. Naša suradnja na knjizi, koja je trajala tri godine, bila je odlična.

Napisali smo članak *To the 20th Anniversary of the Commission on Map Projections of the International Cartographic Association (2003–2023)* koji je objavljen na ruskom 2020. godine (Lapaine M., Usery L., Nyrtsov M. V.: K dvadstiletiju komisii po kartograficheskim proektsiyam pri Mezhdunarodnoi kartograficheskoi assotsiatsii (2003–2023).

Geodesy and Cartography = Geodezia i kartografia, 81, 9, pp. 44–52.

Susretali smo se na mnogim konferencijama i znanstvenim skupovima. Posebno bih istaknuo njegovo sudjelovanje na skupovima u organizaciji Hrvatskoga kartografskog društva. Osobno je sudjelovao na 15. međunarodnoj konferenciji o geoinformacijama i kartografiji održanoj u Zagrebu, Vodnjanu / Dignano, Puli / Pola i na Brijunima u Hrvatskoj te u Veneciji u Italiji 2019. godine. Sudjelovao je online na 17. međunarodnoj konferenciji o geoinformacijama i kartografiji 2021. s prezentacijom o znanju o kartografskim projekcijama i semantičkoj tehnologiji.

U svojoj zadnjoj e-poruci koju mi je poslao samo pet dana prije nego što je preminuo, napisao je: “FYI, neki od mojih planova za radionice za CoMP u 2022., pod pretpostavkom da mogu putovati. Planiram radionice za nekoliko konferencija ove godine osobno, pod pretpostavkom da nam je dopušteno putovati, uključujući 8. međunarodnu konferenciju o kartografiji i GIS-u u Nesebaru, Bugarska; Međunarodnu konferenciju o geoinformacijama i kartografiji u Hrvatskoj; EuroCarto u Beču, Austrija; i AutoCarto 2022 u Redlandsu, CA. Planiram tutorial o kartografskim projekcijama kao uvod u radionice nakon kojeg slijede dvije ili tri prezentacije istraživanja.” Bio je pun entuzijazma, ali su njegovi planovi, nažalost, neočekivano zaustavljeni.

Izgubili smo dragog i dobrog kolegu i prijatelja. Pamtit ćemo ga kao izuzetno mirnu, ljubaznu, dobro namjernu i brižnu osobu.

Miljenko Lapaine ■