

Prof. Dr. Yerach Doytsher

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Professor Yerach Doytsher was born in Russia (1945) and immigrated to Israel as a young child (1950). He studied at the Technion - Israel Institute of Technology, and obtained BSc in Civil Engineering - specializing in Surveying and Geodesy - Summa Cum Laude in 1967. In 1970 he was licensed for land surveying ("Israeli Licensed Surveyor"). Later, he received MSc (1973) and DSc (1979) in Geodetic Engineering also from the Technion.

He started his professional activity in the public sector and had worked for 8 years at the Survey of Israel (the governmental agency responsible for geodesy, mapping, cadastre and GIS). As head of the automation and computation division, he was involved in developing automation methods and techniques for plane and geodetic surveying, and in developing automation applications and projects for cadastral survey.

During the next 20 years he had worked in the private sector as a professional manager, mapping and GIS projects supervisor, and as a senior scientific consultant. He handled topographic and cadastral engineering projects; developed geo-referenced urban databases and automated methods for town planning projects; implemented analytical and digital photogrammetry for cadastral mapping and land management, and digital terrain models for automated topographic and highway design; and managed multi-layer wide range GIS projects. He had also acted during this period as a scientific and professional consultant to different domestic and international organizations in the fields of Geodesy, Photogrammetry, Computer Graphics, Automated Mapping, and Geographic Information Systems.

Simultaneously with his professional career, he had lectured since the 1970s as an Adjunct Associated Professor at several universities (Technion, Tel-Aviv University, Bar-Ilan University), tutoring mapping and geo-information engineers, surveyors and geodesics, civil engineers, and geographers.

The third period of Prof. Doytsher's career had started at 1996, when he was appointed as a faculty member at the Technion, where he is today a full Professor of Mapping and Geo-Information and holder of the Abel Wolman Chair in Civil Engineering. He was responsible for updating and upgrading the previous geodetic curricula, with a significant transition from a limited geodetic program focusing mainly on geodetic aspects to a comprehensive and modern mapping and geo-information undergraduate and graduate programs. This transition was followed by a considerable increase in the number of undergraduate students, and a huge increase in the number of MSc & PhD students. In addition to teaching and research activities, he was appointed as head of the Geodetic Engineering Division (1996-2002), head of the Department of Transportation and Geo-Information Engineering (2002-2006) and

Dean of the Faculty of Architecture and Town Planning (2006-2010). Nowadays he is heading two prestigious Master programs at the Technion – a Real Estate program and an Urban Engineering program. Since 1999 he is also heading the Geodesy and Mapping Research Center of the Technion.

Included within the research interests and expertise of Prof. Doytsher are: Geographic Information Systems in general and graphical-digital conversions in particular; Using non-linear transformation (rubber sheeting) algorithms and techniques for maps and database conversion; Conflation and merging of digital 2D & 3D information (maps and databases); Land information & management systems in general and digital cadastre and 3-dimensional cadastre in particular; Digital terrain models (DTMs and DSMs); Digital photogrammetry and LiDAR.

Prof. Doytsher published more than 320 papers and research reports in international technical journals, international and local symposia proceedings. He participated in more than 130 conferences and congresses, and gave more than 150 presentations on various topics of geodesy, surveying, cadastre, cartography, photogrammetry, mapping and GIS, and geospatial processing. Since the mid-1990s, he received some 25 substantial research grants (from Israeli governmental agencies as well as from Israeli and foreign research foundations) dealing with most innovative subjects of geodesy, cadastre, photogrammetry and GIS. Since the 1990s, he had supervised (and continue supervising) about 25 PhD and 40 MSc graduate students.

Since the mid-1990s Prof. Doytsher has been active in international professional organizations, inter alia, FIG, ISPRS and ICA. For the last 15 years he is the Israeli national delegate to FIG commission 3 on Spatial Information Management and is currently the chair of this commission for the term 2011-2014. During the last 10-15 years, he has participated very actively in most of the annual FIG conferences and congresses and in the annual commission 3 workshops, and his activity is expressed mainly in issues such as: land management, geospatial information, Cadastre in general and digital and 3-dimensional cadastre in particular, etc.

In the past few years, Prof. Doytsher has very actively participated in the IARIA/GEO-Processing annual conferences. His active participation is expressed, inter alia, by membership in program committees, technical presentations (his 2012 and 2013 papers have been selected for the Best Papers Awards), keynote speech, panelist in panel sessions, reviewing papers, etc.

In addition to his academic work, Prof. Doytsher is also involved in the practical aspects of the geomatics profession as a consultant for the private and public sectors, and since 2011 is the President of the Association of Licensed Surveyors in Israel.