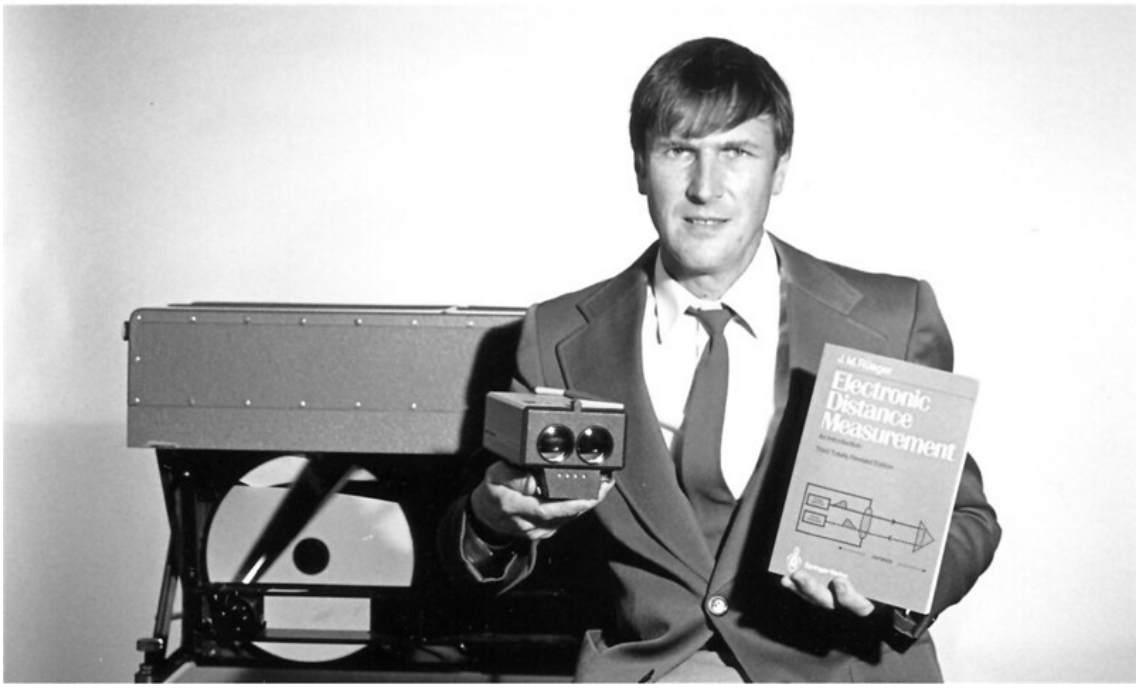
Obituary for Associate Professor Jean Rüeger

Associate Professor Jean Marc Rüeger 13 February 1944 – 16 August 2025



In Memoriam: Associate Professor Jean Rüeger

It is with deep sorrow that we announce the passing of Associate Professor Jean Rüeger, a dedicated scholar, educator, and mentor whose contributions to academia and the lives of countless students will be remembered with admiration, gratitude and respect.

Commencing in 1975, Jean Rüeger was employed as a lecturer teaching high precision surveying and researching atmospheric effects on geodetic measurements. He soon established himself as an academic of the highest quality, developing challenging courses for students and expecting high standards. He was involved with the design of new exercises for survey camps and in-depth field exercises on campus to enhance the theory imparted in lectures.

He extended the work of Professor Fritz Brunner on EDM Height traversing using electronic tacheometers as an alternative to levels and field tested these techniques in partnership with students. These exercises are still relevant and taught to this day.

In 1986 Jean lead the establishment of the Surveying Measurement Lab and filled it with top-of -the-range equipment from the Wild Heerbrugg company (now Leica Geosystems). In 1990, the Surveying Measurement Lab acquired two manual and one robotic precision electronic theodolite (interfaced to a PC for online recording and processing) as the backbone of a general-purpose industrial measurement system. The lab supported teaching and research in specialised surveying techniques such as 3D metrology and calibration of surveying equipment (theodolites, levels, EDM and barometers) and voice control of

instruments. From 1993 – 2000 it was routinely used by undergraduate students for individual training and instrument adjustment, 4th yr gyroscopic azimuth determination and industrial 3D measurement with real-time processing.

Associate Professor Jean Rüeger convened an International Working Party (1992 – 2003) to review the refractive index formulae of light, infrared and radio waves and this work led to the adoption of new refractive index formulae of light and near infrared waves by the International Association of Geodesy (IAG).

Affectionately known as JMR, he devised design equations for three types of EDM calibration baselines, one of which was later adopted for the relevant DIN (Deutsches Institut für Normung) and ISA (International Standards Organisation) standards. He published widely on a number of systematic errors of EDM instruments. In 1984 Associate Professor Jean Rüeger collaborated with the National Standards Commission and the Surveyors General of the Australian States and Territories on a scheme for the legal calibration of EDM instrument, traceable to national standards.

Associate Professor Jean Rüeger authored the definitive reference *Electronic Distance Measurement: An Introduction* in support of his lectures, with the early versions published inhouse (first edition 1978). The third and fourth editions were published by Springer in 1990 and 1996. The performance of electronic theodolites (including motorized ones) was investigated in the 1990s. He also wrote extensive class notes and study packs for students of his courses.

Associate Professor Jean Rüeger published on the use and testing of digital levels (with Professor Fritz Brunner) and the testing of electronic tacheometers and theodolites. His second book, Electronic Surveying Instruments: A Review of Principles, Problems and Procedures, was published by the School of Surveying and Spatial Information Systems, UNSW in 2003.

After his retirement in 2004 Jean continued as an Honorary academic at UNSW for many years. He continued to be a regular reviewer of journal papers. He also maintained our real and our virtual museums of surveying instruments.

Over the course of his distinguished career, Jean was known for his intellectual rigor, detailed teaching, and unwavering commitment to advancing knowledge.

He is survived by his wife Monique Rüeger and sons Michaël, Pascal and Thomas.

Authored by Associate Professor Craig Roberts, Honorary Academic Bruce Harvey (with extensive edits from the History of the UNSW School of Surveying and Spatial Information Systems 1949 – 2007).

Options for another pic

J. M. Rüeger at the National Research Laboratory of Metrology, Tsukuba, Japan
During lectures on Electronic Distance Measurement at NRLM, July 1989
Photo by T. Seto, scanning by J. M. Rüeger (JMR personal collection) (Item 1989-12-35)

Measurement of the EDM Calibration Baseline of the National Measurement Laboratory, CSIRO, Lindfield, Sydney
J. M. Rüeger with a Hewlett-Pakard HP3820A electronic tacheometer on one of the pillars, 23.4. or 8.5.1981
Photo by CSIRO, Scanning by J. M. Rüeger Personal Collection of J. M. Rüeger) (Item 1981-01-01)

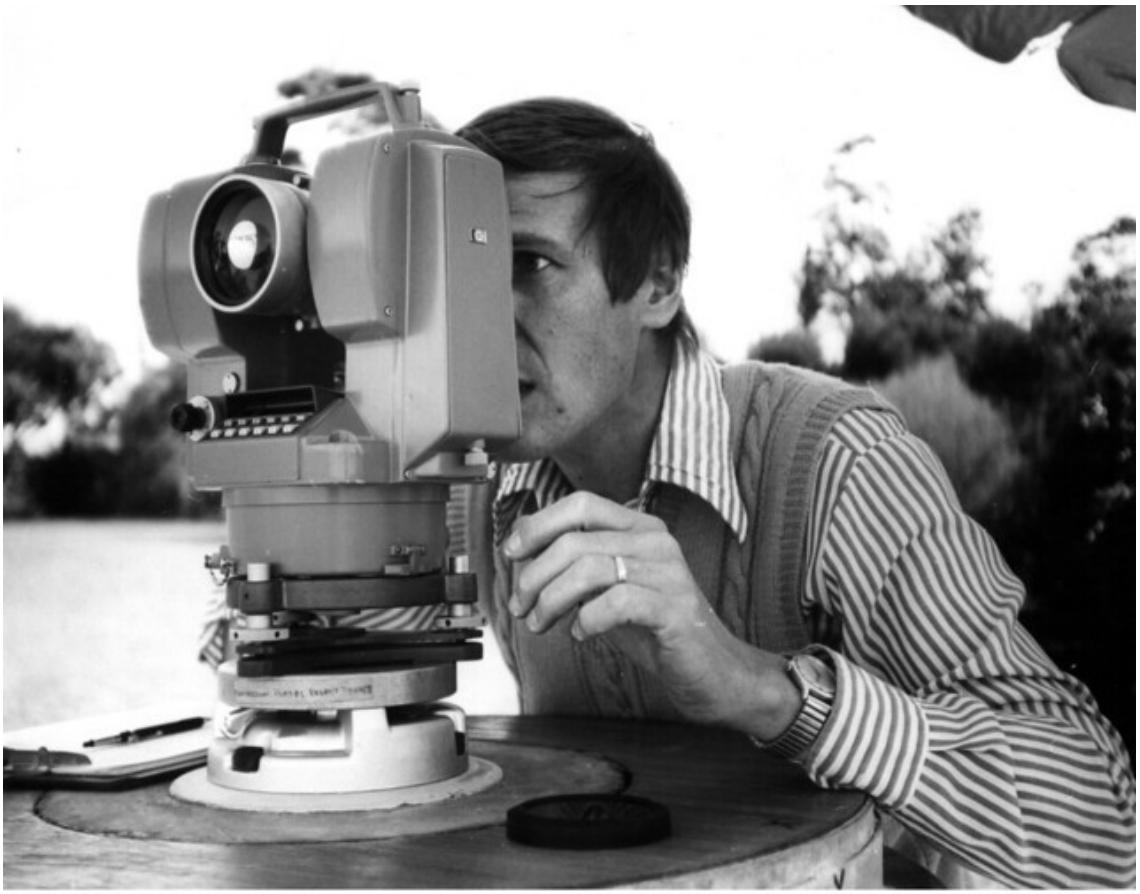


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Photo by CSIRO, Scanning by J. M. Rüeger Personal Collection of J. M. Rüeger) (Item 1981-01-02)