



On July 4, 2015, our colleague Roelof Johan (Roel) Ritsma passed away at the age of 90 after a short illness. Roel was a member of the Acoustical Society since 1967.

In 1941, Roel was admitted to the Faculty of Sciences at Utrecht University (UU), The Netherlands. His physics study was interrupted by World War II from the beginning of 1943 until the end of the war in 1945. He returned to Holland in July 1945 from a forced labor period in Germany. In 1949, he finished his Master's study of physics at UU. It was followed by a PhD study, and he presented his thesis on *Electrometers* at same university in 1955. Next, he became involved in the teaching of physics and later also in teaching the teachers.

In 1958, Roel returned to fundamental research at the Institute for Perception Research in Eindhoven, The Netherlands, obtaining an associate professor position at the Eindhoven University of Technology. His contributions to auditory perception started in 1962 with a number of papers in *The Journal of the Acoustical Society of America* (Ritsma, 1962, 1963, 1967; Schouten et al., 1962). These all addressed properties of the so-called tonal residue. At the time, it was clear that the pitch of a complex sound did not require the presence of a component at the fundamental frequency nor was it exactly determined by periodicity information, viz., pitch strength decreased at very high harmonics where temporal information would be retained. The contradiction was largely resolved when Julius Goldstein proposed a spectral pattern recognition interpretation. During this research phase, Roel spent half a year at the Bell Laboratories in Murray Hill, NJ, in active contact with Newman Guttman and Aaron Rosenberg.

Roel Ritsma moved to Groningen, The Netherlands, in 1969 where he was appointed as chair of the Audiology Section

of the ENT Department at the Academic Hospital (now the University Medical Center Groningen). He succeeded Henk Huizing, the first professor of audiology in The Netherlands. Roel actively promoted the field of audiology. In The Netherlands, he chaired the Dutch Audiological Society (NVA), and around 1970, he initiated the use of wireless equipment in schools for the hard of hearing.

Roel stimulated audiological research in relationship to the education of audiologists. Soon after the initiating research on otoacoustic emissions by David Kemp, the phenomena were verified in Groningen (Wit and Ritsma, 1979). He also remained interested in time-frequency properties of the auditory processing of complex signals such as speech in noisy environments (Horst and Ritsma, 1981).

Roel was married to Marietje van Buren from 1951 until her death in 2012. He is survived by three children and nine grandchildren.

Selected Articles by Roelof J. Ritsma

- Horst, J. W., and Ritsma, R. J. (1981). Anomalous auditory filter bandwidth derived from direct masking of complex signals. *The Journal of the Acoustical Society of America* 69, 1770-1777.
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- Ritsma, R. J. (1963). Existence region of the tonal residue. II. *The Journal of the Acoustical Society of America* 35, 1241-1245.
- Ritsma, R. J. (1967). Frequencies dominant in the perception of pitch of complex sounds. *The Journal of the Acoustical Society of America* 42, 191-198.
- Schouten, J. F., Ritsma, R. J., and Cardozo, B. L. (1962). Pitch of the residue. *The Journal of the Acoustical Society of America* 34, 1418-1424.
- Wit, H. P., and Ritsma, R. J. (1979). Stimulated acoustic emissions from the human ear. *The Journal of the Acoustical Society of America* 66, 911-913.

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