



Risto Näätänen

* 14.6.1939 † 5.10.2023

Academy Professor Emeritus Risto Näätänen died of COVID-19 in Helsinki on 5 October 2023, at the age of 84 years.

Risto Näätänen was born in Helsinki on 14 June 1939. He received his MA degree in 1963 and PhD degree in 1968 from the University of Helsinki, where he was appointed Professor of Psychology in 1975. In 1983, he was appointed Academy Professor, followed by an exceptional number of re-appointments. He left this position in 2007, having reached the retirement age of 68. Thereafter, he worked as George Soros Professor of Psychology at the University of Tartu and as Visiting Professor at Aarhus University.

Risto Näätänen was elected a member of the Finnish Academy of Science and Letters in 1980 and served as its president in 2000–2002. He was also a member of Academia Europaea, the Royal Swedish Academy of Sciences, the Russian Academy of Sciences, and the International Academy of Science, and a Fellow of the Association for Psychological Science (USA). He also served as President of the Nordic Psychophysiological Society, the Federation of European Psychophysiology Societies, the Society for Psychophysiological Research (USA), and the International Brain Research Organization. In 2011, he

was awarded the Main Scientific Prize of the Finnish Academy of Science and Letters. In addition, he received the first National Science Award of Finland in 1997, the Distinguished Contributions Award of the Society for Psychophysiological Research in 1995, the Award for Contributions to Psychophysiology and Related Neurosciences of the International Organization of Psychophysiology in 2002, and the Nordic Prize for Research within Neurodevelopmental Disorders in 2007 (together with Teija Kujala). He was Honorary Doctor of the Universities of Helsinki, Jyväskylä, Tartu and Barcelona.

Risto Näätänen collected electroencephalography data for his PhD thesis on selective attention and event-related brain potentials (ERPs) at the University of California, Los Angeles. Several years later, in the Netherlands, he and his team observed two ERPs: the mismatch negativity (MMN), related to automatic auditory change detection, and the processing negativity (PN), related to selective auditory attention. In the early 1980s, he continued this research at the Department of Psychology of the University of Helsinki, where his research group evolved into the Cognitive Brain Research Unit with its

brain research methods extended to include magnetoencephalography, transcranial magnetic stimulation, positron emission tomography, and functional magnetic resonance imaging.

Based on results obtained with the PN, Risto Näätänen developed a novel theory of the neural basis of attention, which he presented in his widely cited review articles and in his book *Attention and Brain Function*, published in 1992. The MMN, in turn, enabled the study of auditory memory and preattentive predictive coding not only in adults, but even in neonates and fetuses, and even illuminated brain dysfunctions in neurological and psychiatric patients. Risto Näätänen, together with Teija Kujala and Gregory Light, summarized the results on MMN in his 2019 book *Mismatch Negativity: A Window to the Human Brain*, released on his 80th birthday. The MMN is now a prominent research method used around the world. An international congress on MMN research has been organised since 1998, with the next one in Salamanca in 2024.

Risto Näätänen also carried out research in traffic psychology and wrote a book on the topic *Maantiekuoolema: Tutkimus liikenneonnettomuuksista*; “Death on the road: A study on traffic accidents”, published in 1972. The President of Finland cited the book in his 1973 New Year’s speech, leading to the introduction of permanent speed limits in Finland, which sig-

nificantly decreased the number of traffic accidents causing deaths and serious injuries. In addition to several original traffic psychology studies, Risto Näätänen also co-authored, with Heikki Summala, the international book *Road-User Behaviour and Traffic Accidents*, published in 1976.

During his years as Academy Professor, Risto Näätänen belonged to the top 0,5% of the world’s most cited living scientists. His more than 400 scientific articles and several books have been cited over 80,000 times (Google Scholar). He supervised over 30 doctoral students and over 20 post-doctoral fellows and maintained close research collaborations with dozens of Finnish and foreign colleagues. Through their work and that of their students and colleagues, his scientific legacy continues to have a profound impact on the future of brain research.

Risto Näätänen had a high work ethic, but his family was still his priority and his wife Marjatta was his pillar. A condition of his many research visits abroad was that his family could accompany him. He taught his younger colleagues that friendships must be nurtured to last. Hirsilinna, the family’s vacation home in Hirvensalmi, will be remembered by many international guests for its iconic Finnish landscape and its cordial hosts for their exceptional hospitality. The research community will miss a remarkable scientist and a warm colleague.

*Kimmo Alho, Teija Kujala and
Liisa Keltikangas-Järvinen*