



**Jiri Tichy** was born in 1927 in the former Republic of Czechoslovakia and passed away on March 27, 2019, in Prague (Czech Republic). He studied electrical engineering and physics, received a doctorate in technical sciences (DSc) from the Czech Technical University, Prague, in 1952, and was awarded the

Diploma Habil in 1965. He continued to work at the Czech Technical University, first as an assistant and then an associate professor in the Department of Physics.

Jiri immigrated to the United States in 1968 after the Prague Spring where he started at the Pennsylvania State University, State College, as an associate professor of architectural acoustics. After promotion to full professor, Jiri served as chair of the Graduate Program in Acoustics until his retirement in 1995. He mentored 28 MS and PhD students.

Jiri's involvement with professional societies was quite intensive. His home society was the Acoustical Society of America (ASA), which he joined in 1960. He served on or chaired many of its committees, was elected an ASA Fellow in 1970, and was president from 1994 to 1995. Jiri was awarded the ASA Gold Medal for his contributions to acoustics and education in 2010.

Jiri's principal academic interests were architectural acoustics, noise control, the acoustic intensity technique, active noise control, and virtual reality.

In architectural acoustics, Jiri's work focused on the statistical properties of the potential energy density in reverberation rooms. Jiri showed that the sound field modulation caused by rotating diffusers effectively spread the bandwidth of narrow-band sources and would thereby lower the number of required measurement points when estimating the sound power radiated by a source.

Jiri was a pioneer in the measurement of the acoustic intensity technique and helped develop the vector for "Maxwell's" equations for complex acoustic intensity. These relationships showed that the curl of the active intensity was related to the angular momentum of the particles in the sound field. He led

the team that was the first to show that measurements of the curl of the active intensity vector field showed actual intensity vortices in a sound field.

Jiri also made pioneering contributions in the area of active noise control by the use of feedforward control signal-processing techniques to reduce the radiated noise. Jiri's most recent book, *Acoustics of Small Rooms* (Kleiner and Tichy, 2014), comprehensively covers Jiri's career-long focus in understanding the influence of room acoustic modes and their impact on the perception of sound in rooms.

Jiri and his wife Dagmar were married in Prague in 1955. After Dagmar died in 2003, Jiri married Iva Apfelbeckova-Tichy, and they split their time between the United States and the Czech Republic. Jiri will be greatly missed by his students, colleagues, friends, and family.

#### **Selected Publications by Jiri Tichy**

- Elko, G. W., and Tichy, J. (1984). Measurement of the complex acoustic intensity and the acoustic energy density. *Proceedings of Inter-Noise 84. In INTER-NOISE and NOISE-CON Congress and Conference Proceedings, InterNoise84, Honolulu, HI, Vol. 1984, No. 1, pp. 1061-1064.* Available at <https://bit.ly/2HBwyNN>.
- Kleiner, M., and Tichy, J. (2014). *Acoustics of Small Rooms*, CRC Press, Boca Raton, FL.
- Leishman, T., and Tichy, J. (2003). On the significance of reflection coefficients produced by active surfaces bounding one-dimensional sound fields. *The Journal of the Acoustical Society of America* 113, 1475-1482.
- Mann, J. A., Tichy, J., and Romano, A. (1987). Instantaneous and time-averaged energy transfer in acoustic fields. *The Journal of the Acoustical Society of America*, 82, 17-30.
- Sommerfeldt, S. D., and Tichy, J. (1990). Adaptive control of a two-stage vibration isolation mount. *The Journal of the Acoustical Society of America* 88, 938-944.
- Tichy, J., and Baade, P. (1974). Effect of rotating diffusers and sampling techniques on sound pressure averaging in reverberation rooms. *The Journal of the Acoustical Society of America* 56, 137-143.

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