



## Lawrence Rabiner, Professor II

**Years Service at Rutgers:** 4 years  
Sept. 2002 – Professor II

**Degrees:**

Ph.D., Electrical Engineering, MIT, Cambridge, MA, 1967.  
M.S., Electrical Engineering, MIT, Cambridge, MA, 1964  
B.S., Electrical Engineering, MIT, Cambridge, MA, 1964

**Other Related Experience (teaching, industrial, etc.):**

2002-2006 Univ. of California, Santa Barbara, CA, Distinguished Visiting Professor.  
1998-2002 AT&T Bell Labs, Research Vice-President.  
1990-1998 AT&T Bell Labs, Director.  
1985-1990 AT&T Bell Labs, Department Head.  
1972-1985 AT&T Bell Labs, Supervisor, Research.  
1967-1972 AT&T Bell Labs, Member of Technical Staff, Research.  
1962-1967 AT&T Bell Labs, MIT Co-operative Program.

**Consulting, Patents, etc.:**

- Audience, Scientific Advisory Board, 2003-present.
- Kirusa, Scientific Advisory Board, 2002-present.
- Tyco Electronics, Scientific Advisory Board, 2000-present.

**Principal Publications (last five years):**

- B. H. Juang, M. M. Sondhi, and L. R. Rabiner, "Digital Speech Processing," *Encyclopedia of Physical Science and Technology*, Third Edition, Vol. 4, pp. 485-500, 2002.
- L. R. Rabiner, "The Power of Speech," *Science*, Vol. 301, pp. 1494-1495, September 2003.
- L. R. Rabiner, "Leadership—Some Random Thoughts," *IEEE Signal Processing Magazine*, Vol. 21, No. 1, pp. 16-20, January 2004.
- L. R. Rabiner, "The Chirp z-Transform Algorithm—A Lesson In Serendipity," *IEEE Signal Processing Magazine*, Vol. 21, No. 2, pp. 118-119, March 2004.
- S. Dusan and L. R. Rabiner, "Can Automatic Speech Recognition Learn More From Human Speech Perception?," *Trends in Speech Technology*, C. Burileanu, Ed., *Proceedings of the 3<sup>rd</sup> Conference on Speech Technology and Human-Computer Dialogue*, pp. 21-36, May 2005.
- S. Dusan and L. R. Rabiner, "On Integrating Insights from Human Speech Perception into Automatic Speech Recognition," *Proc. Interspeech/Eurospeech 2005*, Lisbon, Portugal, 2005.
- B. H. Juang and L. R. Rabiner, "Automatic Speech Recognition—A Brief History of the Technology," *Elsevier Encyclopedia of Language and Linguistics*, Second Edition, 2005.
- L. R. Rabiner and B. H. Juang, "Statistical Methods of Speech Recognition," *Elsevier Encyclopedia of Language and Linguistics*, Second Edition, 2005.
- J. Hou, L. R. Rabiner and S. Dusan, "Automatic Speech Attribute Transcription (ASAT)—The Front End Processor," *Proc. ICASSP 2006*, Toulouse, France, 2006.
- S. Dusan and L. R. Rabiner, "On the Relations Between Maximum Spectral Transition Positions and Phone Boundaries," *Proc. Interspeech/ICSLP 2006*, Pittsburgh, PA, 2006.

**Scientific and Professional Society Memberships:**

- Fellow; Institute of Electrical and Electronic Engineers (IEEE).
- Fellow; Acoustical Society of America (ASA).
- Member; National Academy of Engineering (NAE).
- Member; National Academy of Sciences (NAS).

**Honors and Awards:**

- ASA Fellow, 1970.
- Paper Award of IEEE Group on Audio and Electroacoustics, 1971.
- Eta Kappa Nu Outstanding Young Electrical Engineer Award - Honorable Mention, 1972.
- ASA Biennial Award, 1974.
- IEEE Fellow, 1976.
- IEEE Acoustic, Speech and Signal Processing Society Achievement Award, 1978.
- IEEE Piore Award, 1980.
- IEEE Acoustic, Speech and Signal Processing Society Award, 1980.
- Election to National Academy of Engineering, 1983.
- IEEE Centennial Award, 1984.
- AT&T Bell Laboratories Fellow, 1989.
- Election to National Academy of Sciences, 1990.
- Speech Processing Magazine Award of the IEEE, 1994.
- AT&T Patent Award, 1995.
- AT&T Fellow Award, 1996.
- IEEE Millenium Medal, 1999.
- IEEE Kilby Medal, 1999.

**Institutional and Professional Service (last five years):**

- Member; IEEE History Board, 2002-present.

**Professional Development Activities (last five years):**

- Developed courses in Digital Speech Processing and Fundamentals of Speech Recognition.
- Book development in progress "Digital Speech Processing."