Abstract: Impact is achieved by teaching. The goal of every job talk, conference presentation, group meeting and tutorial hour should be to give your audience a gift: a skill that they can use to advance their own careers. This talk will review key teaching skills from the point of view of signal processing and machine learning. First: decide what skill your listeners will possess by the end of your talk. Second, decide what fundamental understandings your listeners need in order to perform this skill effectively: derivation, parameterization, application. Engineering skills are communicated in a three-way balance among story, pictures, and equations; a tripod out of balance falls on its face. Fourth, get the audience involved, even if they refuse to talk. Fifth, end with the skill of summary: tell 'em what you're going to say, say it, then tell 'em you said it. The ability to teach differentiates successful from unsuccessful engineers in every career path; ideas that are revolutionary and correct are only useful if they are also communicated.

Bio: Mark Hasegawa-Johnson is a Professor of Electrical and Computer Engineering at the University of Illinois. He is author or co-author of about 200 papers on the subjects of signal processing and machine learning, especially in the fields of audio, speech, and language processing. His current research interests include audiovisual synthesis of nuanced speech, multimedia data mining for social science research, and the communication theoretic modeling of second language speech perception.