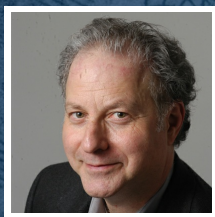# Exploring Technological Means for Society's Challenges

Nelson Morgan
Director Emeritus, SpeechProfessor in Residence Emeritus, EECS

CURRENT RESEARCH

How technology may help in aspects ranging from politics to speech processing

When you consider that the average presidential campaign costs close to one billion dollars, it is plain to see that money talks when it comes to politics. But what if there were means to reduce politicians' need to spend their time soliciting campaign funds, and instead were able to increase civic engagement? Dr. Nelson Morgan, of the International Computer Science Institute, has recently begun leading a project that hopes to provide just such means. Through technological approaches, he and his colleagues hope to reduce the influence of money on politics. In addition to his newest "Money Talks" project (referred to as Undermining Political "Scratch" Effects with Technology or UPSET), Dr. Morgan continues to retain interest in making speech recognition systems work much better under real world conditions, and the use of neural networks for the design of new features to help this to happen. Overall, these ongoing projects reflect his continued interest in making systems work in the real world, and his continuing work on speech, audio, hearing, and the brain is an important part of this. The potential for each of Dr. Morgan's projects is great. His work with UPSET is likely to increase the ability of elected officials to deal with the problems that confront our country rather than having to focus on funding a successful campaign, while his work with speech recognition will have an impact on increasing understanding of both human and machine mechanisms. By decreasing the limitations currently constraining speech recognition technology, Dr. Morgan will increase the utility of speech recognition systems, which are particularly important for those that need to use hands-free devices, especially those that use them for...

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AFFILIATION

Cal University of California, Berkeley

EDUCATION

- Ph.D. in Electrical Engineering, NSF Fellow, 1980
University of California, Berkeley
- M.S. in Electrical Engineering, NSF Fellow, 1979
University of California, Berkeley
- B.S. in Electrical Engineering, with Highest Honors, 1977
University of California, Berkeley

AWARDS

- Signal Processing Magazine Award for May 1995 paper, 1997
- Fellow of the IEEE
- Fellow of International Speech Communication Association (ISCA)
- Plenary speaker ICASSP, 2012
- Plenary speaker ASRU, 2013
- and 4 more...

RESEARCH AREAS

Technology, Computational Sciences / Mathematics, IOT, Devices, Data

FUNDING REQUEST

Your contributions will support the continued research of Dr. Nelson Morgan, of the International Computer Science Institute, for his money in politics, signal processing vs. deep neural networks, and interpreting brain signals to aid in machine perception projects. Your support will help to fund the necessary $1-2M per year required for his research. In choosing to support his research, you will play a role in advancing technological research with applications that have incredible societal implications.