

**Center for Spoken Language Understanding
Oregon Graduate Institute**

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WHAT IS CSLU

- OGI Research Center
 - Directed by OGI faculty: *van Santen* [Director], and *Heeman, Macon, and Wan* [co-Directors]
 - Involves faculty members, post-docs, staff, and students.
- Key organizational functions: Conduit for technology transfer, helps to define common areas of research, facilitates funding for collaborative research

FACULTY ASSOCIATED WITH CSLU

Peter Heeman: Language modeling of spontaneous speech, collaboration and dialogue management.

Hynek Hermansky: Speech processing, digital signal processing.

Michael Johnston: Multimodal parsing, semantic interpretation.

Todd Leen: Neural and adaptive systems.

Michael Macon: Speech and music synthesis, digital signal processing.

Jan van Santen: Speech synthesis and perception, phonetics, statistical text analysis.

Eric Wan: Speech enhancement, neural and adaptive systems.

Yonghong Yan: Speech recognition, language identification.

MISSION: (1) Research

- Fundamental approach:
 - Basic research on general principles of human language and speech understanding and production
 - ... guided by the goal of inventing new algorithms
 - ... that can be used in spoken language technologies
- Areas of research: Natural Language Processing, Speech Enhancement, Speech Recognition Speech Synthesis, Spoken Dialogue, Speech Perception, Phonetics

MISSION: (2) Technology transfer

- Fundamental approach:
 - Provide tools, services, and components for:
 - Conducting research on spoken language
 - Building spoken language systems
 - Serving needs of business, researchers, educators
- Offerings:
 - CSLU toolkit
 - Speech and text corpora (labeled or raw)
 - Spoken language system components
 - Spoken language system evaluation

MISSION: (3) Education

- CSLU bridges Computer Science and Electrical Engineering departments.
- OGI: Small dynamic organization, with minimal barriers to developing an innovative cross-disciplinary curriculum.
- Non-traditional learning opportunities in a technology transfer environment
- CSLU is considering a new Master's program in Applied Speech Engineering.

PARTNERS, CORPORATE MEMBERS, ...

- 12 corporate CSLU members
- Commercial outlets: Fluent Technologies, Entrepreneurism encouraged by OGI
- Academic collaborations and partnerships: CSTR / Edinburgh, Perceptual Science Lab, UC Santa Cruz, CSLU at University of Colorado