



The Center for Language and Speech Processing
at Johns Hopkins University invites one page research proposals for a
NSF-sponsored, Six-week Summer Research Workshop on
Machine Learning for Language Engineering
to be held in Baltimore, MD, USA,
June 22 to July 31, 2009.

CALL FOR PROPOSALS

Deadline: **Wednesday, October 15, 2008.**

One-page proposals are invited for the 15th annual NSF sponsored JHU summer workshop. Proposals should be suitable for a six-week team exploration, and should aim to advance the state of the art in any of the various fields of Human Language Technology (HLT) including speech recognition, machine translation, information retrieval, text summarization and question answering. This year, proposals in related areas of Machine Intelligence, such as Computer Vision (CV), that share techniques with HLT are also being solicited. Research topics selected for investigation by teams in previous workshops may serve as good examples for your proposal. (See <http://www.clsp.jhu.edu/workshops>.)

Proposals on all topics of scientific interest to HLT and technically related areas are encouraged.

Proposals that address one of the following long-term challenges are particularly encouraged.

- **ROBUST TECHNOLOGY FOR SPEECH:** *Technologies like speech transcription, speaker identification, and language identification share a common weakness: accuracy degrades disproportionately with seemingly small changes in input conditions (microphone, genre, speaker, dialect, etc.), where humans are able to adapt quickly and effectively. The aim is to develop technology whose performance would be minimally degraded by input signal variations.*
- **KNOWLEDGE DISCOVERY FROM LARGE UNSTRUCTURED TEXT COLLECTIONS:** *Scaling natural language processing (NLP) technologies—including parsing, information extraction, question answering, and machine translation—to very large collections of unstructured or informal text, and domain adaptation in NLP is of interest.*
- **VISUAL SCENE INTERPRETATION:** *New strategies are needed to parse visual scenes or generic (novel) objects, analyzing an image as a set of spatially related components. Such strategies may integrate global top-down knowledge of scene structure (e.g., generative models) with the kind of rich bottom-up, learned image features that have recently become popular for object detection. They will support both learning and efficient search for the best analysis.*
- **UNSUPERVISED AND SEMI-SUPERVISED LEARNING:** *Novel techniques that do not require extensive quantities of human annotated data to address any of the challenges above could potentially make large strides in machine performance as well as lead to greater robustness to changes in input conditions. Semi-supervised and unsupervised learning techniques with applications to HLT and CV are therefore of considerable interest.*

An independent panel of experts will screen all received proposals for suitability. Results of this screening will be communicated no later than **October 22, 2008**. Authors passing this initial screening will be invited to Baltimore to present their ideas to a peer-review panel on **November 7-9, 2008**. It is expected that the proposals will be revised at this meeting to address any outstanding concerns or new ideas. Two or three research topics and the teams to tackle them will be selected for the 2009 workshop.

We attempt to bring the best researchers to the workshop to collaboratively pursue the selected topics for six weeks. Authors of successful proposals typically become the team leaders. Each topic brings together a diverse team of researchers and students. The senior participants come from academia, industry and government. Graduate student participants familiar with the field are selected in accordance with their demonstrated performance, usually by the senior researchers. Undergraduate participants, selected through a national search, will be rising seniors who are new to the field and have shown outstanding academic promise.

If you are interested in participating in the 2009 Summer Workshop we ask that you submit **a one-page research proposal** for consideration, detailing the problem to be addressed. If your proposal passes the initial screening, we will invite you to join us for the organizational meeting in Baltimore (as our guest) for further discussions aimed at consensus. *If a topic in your area of interest is chosen as one of the two or three to be pursued next summer, we expect you to be available for participation in the six-week workshop.* We are not asking for an ironclad commitment at this juncture, just a good faith understanding that if a project in your area of interest is chosen, you will actively pursue it.

Proposals should be submitted via e-mail to clsp@jhu.edu by 4PM EST on **Wed, October 15, 2008**.