

**NEURAL ENGINEERING  
DATA CONSORTIUM**

**Welcome to the**

**IEEE Signal Processing in  
Medicine and Biology  
Symposium**

**Temple University  
Philadelphia, Pennsylvania**

**December 13, 2014**

# Organizing Committee

- **General Chairs:**

**Joseph Picone (Temple)**

**Ivan Selesnick (NYU-Poly)**

- **Conference Co-Chair:**

**Charles Rubenstein (Pratt)**

- **Program Chairs:**

**Iyad Obeid (Temple)**

**Mike Mayor (IEEE SP)**

**Gail Rosen (Drexel)**

- **Publications Chair:**

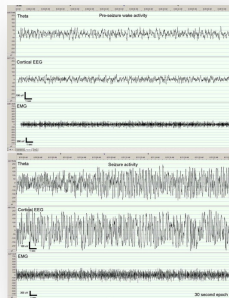
**Georgios Lazarou (USA)**

- **Conference Web Site:** <http://www.ieeespmb.org/2014>

# The Neural Engineering Data Consortium



**Mission:** To focus the research community on a progression of research questions and to generate massive data sets used to address those questions. To broaden participation by making data available to research groups who have significant expertise but lack capacity for data generation.

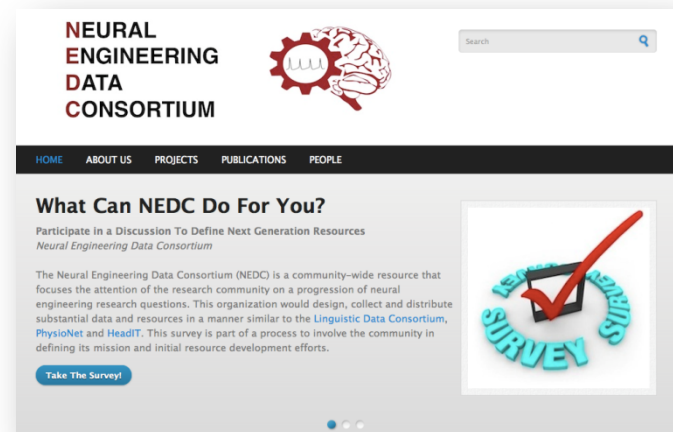


## Impact:

- Big data resources enables application of state of the art machine-learning algorithms
- A common evaluation paradigm ensures consistent progress towards long-term research goals
- Publicly available data and performance baselines eliminate specious claims
- Technology can leverage advances in data collection to produce more robust solutions

## Expertise:

- Experimental design and instrumentation of bioengineering-related data collection
- Signal processing and noise reduction
- Preprocessing and preparation of data for distribution and research experimentation
- Automatic labeling, alignment and sorting of data
- Metadata extraction for enhancing machine learning applications for the data
- Statistical modeling, mining and automated interpretation of big data



- To learn more, visit [www.nedcdata.org](http://www.nedcdata.org)

# NEURAL ENGINEERING DATA CONSORTIUM

[HOME](#)[ABOUT US](#)[PROJECTS](#)[PUBLICATIONS](#)[PEOPLE](#)

## What Can NEDC Do For You?

Participate in a Discussion To Define Next Generation Resources

*Neural Engineering Data Consortium*

The Neural Engineering Data Consortium (NEDC) is a community-wide resource that focuses the attention of the research community on a progression of neural engineering research questions. This organization would design, collect and distribute substantial data and resources in a manner similar to the [Linguistic Data Consortium](#), [PhysioNet](#) and [HeadIT](#). This survey is part of a process to involve the community in defining its mission and initial resource development efforts.

[Take The Survey!](#)





# Symposium Overview

| Time                | Room | Session               |
|---------------------|------|-----------------------|
| 08:00 AM – 08:30 AM | 217A | Breakfast             |
| 08:30 AM – 09:45 AM | 217C | Plenary Talk No. 1    |
| 09:45 AM – 10:15 AM | 217A | Break No. 1           |
| 10:15 AM – 12:00 PM | 217C | Lecture Session No. 1 |
| 12:00 PM – 01:00 PM | 217A | Lunch                 |
| 01:00 PM – 02:00 PM | 217A | Poster Session No. 1  |
| 02:00 PM – 03:00 PM | 217C | Plenary Talk No. 1    |
| 03:00 PM – 03:30 PM | 217A | Break No. 2           |
| 03:30 PM – 05:15 PM | 217C | Lecture Session No. 2 |
| 03:30 PM – 05:15 PM | 223  | Lecture Session No. 3 |
| 05:15 PM – 05:30 PM | 217C | Closing Remarks       |

## Spectral Methods for Brain Imaging and Text Analysis

Lyle Ungar

Professor of Computer and Information Science  
University of Pennsylvania

**Biography:** Dr. Lyle Ungar is a Professor of Computer and Information Science at the University of Pennsylvania, where he also holds appointments in several other departments in the Schools of Engineering and Applied Science, Business, Arts and Sciences and Medicine. Dr. Ungar received a B.S. from Stanford University and a Ph.D. from M.I.T. He has published over 200 articles and holds eleven patents. His current research focuses on developing scalable machine learning methods for data mining and text mining, including mining social media to better understand drivers of physical and mental well-being.