Discovering new materials that will generate and store renewable energy in a low cost, environmentally benign and scalable fashion is perhaps the most important technological challenge facing society today. However, all phases of this scientific process – design, synthesis, and characterization – are routinely stymied by the same challenge: researchers are not equipped to handle the deluge of data coming from their labs and high performance computers. DIRECT, a UW program funded by the National Science Foundation, addresses these challenges by providing training that will equip a new generation of energy researchers to handle the massive data sets arising from all stages of materials discovery.

APPLICATION & QUALIFICATIONS
Applications are currently being accepted for the first cohort of trainees to start Fall 2016. No previous data science training is required. PhD students should be in the second year of their program. MS students should be in their first year.

Interested MS students should contact their graduate program coordinator. Interested PhD students may attend an info session hosted by PI Professor Jim Pfaendtner (details below).

Apply online at www.cei.washington.edu/opportunities/direct.

MORE INFORMATION
For further details about the program see reverse, visit www.cei.washington.edu/opportunities/direct or attend an upcoming info session:

Information Session for PhD Students
Tuesday 10/4 at 4:00 p.m.
Molecular Engineering & Science Building Room 115
DIRECT: Data Intensive Research Enabling Clean Technologies

A graduate training program for UW graduate students interested in data enabled discovery and design of advanced materials for clean energy

ABOUT THE TRAINING PROGRAM

DIRECT is funded by the National Science Foundation Research Traineeship Program (NRT). It is comprised of three phases: 1) new graduate coursework at the nexus of data science and advanced materials for energy, 2) a project-based learning (PBL) that allows trainees to apply new skills and work on challenging real world problems in a team-based setting, and 3) capstone experiences that leverage broad networks spanning industry, national labs and several international partners. The thematic focus of the research is next-generation materials for batteries and photovoltaics. The project based learning component of the traineeship will provide graduate students the chance to teach and practice leadership and management skills, a unique opportunity most trainees would not otherwise receive. DIRECT trainees who complete the program will be credentialed and equipped for many new career options that require data science training and prepared with the skills needed to thrive in the economy of the 21st century.

TYPICAL SCHEDULE

<table>
<thead>
<tr>
<th>Quarters</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AU16 – WI17</td>
<td>DIRECT trainees will work with program staff to plan a customized 2-3 course sequence to ensure each student meets core competencies in the area of data science (e.g., machine learning and data visualization) and materials design.</td>
</tr>
<tr>
<td>SP17 – WI18</td>
<td>DIRECT trainees will work in project teams on a real research project/problem related to issues of data management, processing or statistics as applied to design of new materials. Program staff and faculty will customize the project experience to be relevant to trainees PhD or MS theses/projects.</td>
</tr>
<tr>
<td>SP18 – SU18</td>
<td>DIRECT trainees will have the option to apply for supplemental “top off” fellowships to support an independent innovative data science project related to their thesis project.</td>
</tr>
</tbody>
</table>

PARTNERS

Bellevue College
Boeing Research & Technology
University of Washington eScience Institute
Pacific Northwest National Laboratory
University of Campinas, Brazil
Zhejiang University, China

APPLY NOW!

To learn more or apply to the program, visit www.cei.washington.edu/opportunities/direct