The UTSR Gas Turbine Industrial Fellowship Program

William H. Day

Leonardo Technologies, Inc.
Contractor for the US Department of Energy / NETL

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Acknowledgement

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Fellowship Program Description (1/2)

• Provides undergraduate and graduate-level engineering students with the opportunity to work at leading gas turbine industry sponsoring companies

• Provides the sponsoring companies an opportunity to recruit technical talent from a highly selective pool of applicants
Fellowship Program Description (2/2)

• Fellows spend 10-12 weeks over a summer working at a sponsoring company
• Fellows get a lump sum stipend of $11,500 (undergraduates) or $13,500 (graduates)
• Companies pay the stipends
  – OEMs pay $25,000 per year and get 2 Fellows
  – Non-OEMs pay $12,500 and get one Fellow
  – Member companies can hire additional Fellows from the applicant pool, and they will also be part of the Program.
Typical Work Areas at Companies

- Heat transfer
- Aerodynamics
- Combustion
- Thermodynamics
- Advanced materials and coatings
- Design
- Manufacturing
- Test and evaluation
Eligibility

• Must have a GPA of at least 3.0
• Must be US citizens or green card holders
• Undergraduates must complete their Junior year by June of the year that they work at the company
Selection Process

• Applicants provide transcript, letters of recommendation from faculty, description of technical area of most interest and list of companies they most want to work for
• Companies provide rank order of preferred applicants
• Offers are made for best match of company choices and applicants’ choices
Benefits to the Fellows

• Work experience in the gas turbine industry is an advantage in seeking jobs after graduation – in industry or academia
• Work experience helps them decide which fields they like best within the GT industry
• Practical knowledge gained helps make their remaining academic work more relevant
Benefits to Companies (1/2)

- Host student Fellows proportional to dues level – Assess some of the best students in the nation for future employment as they work on real world problems
- The students have been encouraged by their professors to apply and are interested in the gas turbine industry; an advantage in recruiting future employees
Benefits to Companies (2/2)

• **Historically, 80% of the UTSR Fellows benefit the gas turbine industry**
  – 70% of them accept jobs with companies in the gas turbine industry
  – Another 10% stay in academia, teaching and researching on gas turbine topics
Status of the Fellowship Program

• Since the fall of 2010, Southwest Research Institute is implementing the program for NETL, with oversight from LTI, site support contractor for NETL.

• 2015 Fellowship Program data:
  – 48 Eligible applicants
  – Made 9 offers to fill the 9 slots (100% acceptance)
  – 9 Fellows selected (19 % of eligible applicants)
  – 9 Universities
  – 6 Host Companies
Fellowship Host Companies 2015

• GE
• Siemens
• Solar Turbines
• FlexEnergy
• Woodward Governor
• Florida Turbine Technologies
<table>
<thead>
<tr>
<th>Fellow</th>
<th>University</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricola, Luca</td>
<td>Ohio State University</td>
<td>Solar Turbines</td>
</tr>
<tr>
<td>Bakir, Andrew</td>
<td>U. of Colorado Boulder</td>
<td>FlexEnergy</td>
</tr>
<tr>
<td>Betacour, Felipe</td>
<td>U. of Central Florida</td>
<td>GE</td>
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<tr>
<td>Billups, David</td>
<td>West Virginia U.</td>
<td>Siemens</td>
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<tr>
<td>Dillard, Luke</td>
<td>Cornell University</td>
<td>Solar Turbines</td>
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</table>
## 2015 Fellows (2/2)

<table>
<thead>
<tr>
<th>Fellow</th>
<th>University</th>
<th>Company</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kempema, Kathryn</td>
<td>U. of Wyoming</td>
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<tr>
<td>Lehmann, Matthew</td>
<td>Embry Riddle Aeronautical U.</td>
<td>Florida Turbine</td>
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<tr>
<td>Reuter, Christopher</td>
<td>Princeton University</td>
<td>Siemens</td>
</tr>
<tr>
<td>Sage, Dean</td>
<td>U. of Florida</td>
<td>Woodward</td>
</tr>
</tbody>
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Summary

The UTSR Fellowship Program is providing valuable experience for the Fellows and a source of trained engineers for the gas turbine industry.