Surface Engineering and Tribology Funding at the NSF

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Budget
Engineering Directorate
Core Program Funding
Typical Review Process
Other initiatives
What-ifs.....
BUDGET

• Overall NSF FY04 budget goes up by 3%

• Significant increases in specific programs such as graduate fellowships and nanoscale science and engineering

• Decrease in most core programs (single or small-group investigator): -10% typical in FY04, -2.5% in FY05

• Strategy: Submit a reasonable budget
ENGINEERING DIRECTORATE

- Six divisions: bioengineering and environmental systems; civil and mechanical systems; chemical and transport systems; design, manufacture and industrial innovation; electrical and communications systems; engineering education and centers
- Each division may have 5 to 6 programs
- Strategy: Do not submit a proposal without being sure that it is a good fit – call or email program managers; check FastLane for deadlines (different for each program)
- Corollary: Do not suggest cofunding
CORE PROGRAM FUNDING

- IIA (Individual investigator awards)
- CAREER: Young faculty members, minimum $400K for five years ($500K in FY05)
- GOALI: interactions with industry
- SGER: small grants for exploratory research
- REU supplements: research experience for UG
- Conferences/symposia & workshops
- Strategy: Good fit and reasonable budget
Surface Engineering and Materials Design: Program Interest

- Microstructure design and control; nanotechnology
- Properties, performance and engineering of materials and surfaces for novel applications in civil and mechanical components and systems; biomedical applications
- Coatings and advanced surface treatments
- Tribology (friction, wear and lubrication) and corrosion
- Simulation and computational materials engineering
Program Metrics

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>No. Proposals</th>
<th>No. Awards</th>
<th>Funding Rate % (New)</th>
<th>Dwell Time (months)</th>
<th>Ann. Mean K$</th>
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<tbody>
<tr>
<td>2003</td>
<td>147</td>
<td>27</td>
<td>18 (12)</td>
<td>4.71</td>
<td>104</td>
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<tr>
<td>2002</td>
<td>153</td>
<td>18</td>
<td>12 (10)</td>
<td>4.14</td>
<td>78</td>
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<tr>
<td>2001</td>
<td>181</td>
<td>24</td>
<td>13 (8)</td>
<td>5.73</td>
<td>87</td>
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<tr>
<td>2000</td>
<td>198</td>
<td>29</td>
<td>15 (10)</td>
<td>5.58</td>
<td>64</td>
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TYPICAL REVIEW PROCESS

• Panel or mail review; typ 4-5 reviews per proposal

• Reviews advisory to program managers

• PM makes recommendations to DD

• Goal: complete process in 6 months

• STRATEGY: Be responsive when asked to be a reviewer
NER/NIRT REVIEWS

• One division to do the initial sorting (7 themes in NER/NIRT)
• Strategy: Must clearly fit in one theme
• Panel review – recommend for further consideration or not
• PMs “shopping” for proposals recommended for further consideration
• Strategy: Discuss with PM’s who have NIRT/NER funds
Other Initiatives

New funding initiatives appear all the time – that’s where the “new” money is:

• Nanoscale science and engineering
• Sensors
• Mathematical sciences and engineering
• Informational technology
• Major research instrumentation
• ....

Strategy: check out FastLane often; talk to your PM
What if Your Proposal Is Declined?

Don’ts
• Don’t get mad at the PM
• Don’t blame the reviewers
• Don’t read the reviews for a while
• Don’t be discouraged

Do’s
• Do cool off for a while
• Do regroup and revise the proposal for another try
• Do talk to the PM for advice/suggestions
What if Your Proposal Is Funded?

Don’ts
• Don’t gloat
• Don’t be greedy by asking the PM for more money

Do’s
• Do celebrate and be thankful
• Do cooperate with your PM in reviewing proposals and in informing him/her of your successes