<table>
<thead>
<tr>
<th>Name of I/UCRC</th>
<th>Acronym</th>
<th>NCSU Role</th>
<th>Partner Universities</th>
<th>Lead Institution</th>
<th>Director</th>
<th>College/Department</th>
<th>RADAR and NSF Grant Award Numbers</th>
<th>Period of Performance on NSF Grant</th>
<th>Grant amount $$</th>
<th>Cost Share Committed</th>
<th>Phase of Program</th>
<th>Number of Industry members</th>
<th>Date Established as NCSU unit</th>
<th>Date disestablished as NCSU unit</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Center for Advanced Electronics Through Machine Learning</td>
<td>CAEML</td>
<td>Research Site</td>
<td>University of Illinois at Urbana-Champaign (UIUC), Georgia Tech</td>
<td>Paul Franzon, University of Illinois at Urbana-Champaign</td>
<td>Espinoza, Paul</td>
<td>CE/EE</td>
<td>2016-1294 CNS-1634770</td>
<td>08/01/2016-07/31/2021</td>
<td>308,000</td>
<td>10,493</td>
<td>Phase I</td>
<td>13 (in 2017) Membership handled by Lead Institution</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
</tr>
<tr>
<td>Center for Advanced Forestry Systems</td>
<td>CAPS</td>
<td>Lead Institution</td>
<td>Oregon State University, Purdue University, Virginia Tech</td>
<td>Barry Goldfarb</td>
<td>Carlson, E.P.</td>
<td>CNR/FSNS</td>
<td>2010-0562 CNS-1068955</td>
<td>02/01/2010-01/31/2016</td>
<td>73,114</td>
<td>181,575</td>
<td>Phase III</td>
<td>10 (in 2010) Membership handled by Lead Institution</td>
<td>N/A</td>
<td>N/A</td>
<td>Industry membership fees are deposited in ledger 7</td>
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<tr>
<td>Center for Advanced Processing and Packaging Studies</td>
<td>CAPPS</td>
<td>Research Site</td>
<td>Ohio State University, UC Davis</td>
<td>Kenneth R. Swartzel</td>
<td>Seracino, Rudolf</td>
<td>COE/CBE</td>
<td>1994-1496 ECC-9419541</td>
<td>09/01/1994-08/31/2000</td>
<td>305,899</td>
<td>N/A</td>
<td>Phase II</td>
<td>N/A</td>
<td>N/A</td>
<td>N/A</td>
<td>IUCRC leadership transferred to OSU in 2003</td>
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<tr>
<td>Center for Advanced Processing and Packaging Studies</td>
<td>CAPPS</td>
<td>Lead Institution</td>
<td>Ohio State University, UC Davis</td>
<td>Kenneth R. Swartzel</td>
<td>Seracino, Rudolf</td>
<td>COE/CBE</td>
<td>1999-1361 ECC-9900458</td>
<td>09/01/1999-08/31/2005</td>
<td>246,000</td>
<td>N/A</td>
<td>N/A</td>
<td>13 (in 2001)</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Center for Advanced Processing and Packaging Studies</td>
<td>CAPPS</td>
<td>Lead Institution</td>
<td>Ohio State University, UC Davis</td>
<td>Kenneth R. Swartzel</td>
<td>Seracino, Rudolf</td>
<td>COE/CBE</td>
<td>2008-1880 CNS-0832498</td>
<td>09/01/2008-08/31/2015</td>
<td>305,809</td>
<td>N/A</td>
<td>Phase II</td>
<td>Membership handled by Lead Institution</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Center for Advanced Processing and Packaging Studies</td>
<td>CAPPS</td>
<td>Lead Institution</td>
<td>Ohio State University, UC Davis</td>
<td>Kenneth R. Swartzel</td>
<td>Seracino, Rudolf</td>
<td>COE/CBE</td>
<td>2014-2060 CNS-1424605</td>
<td>09/01/2014-08/31/2019</td>
<td>198,829</td>
<td>0</td>
<td>Phase II</td>
<td>15 Total, 3 at NCSU</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Center for Integration of Composites into Infrastructure</td>
<td>CICI</td>
<td>Research Site</td>
<td>West Virginia University, WVU, University of Miami, University of Texas at Arlington (UTA)</td>
<td>Rudolf Seracino</td>
<td>Rudolf Seracino</td>
<td>COE/CCEE</td>
<td>2016-1280 CNS-1624605</td>
<td>09/01/2016-08/31/2019</td>
<td>180,000</td>
<td>363,125</td>
<td>Phase II</td>
<td>8</td>
<td>N/A</td>
<td>N/A</td>
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<tr>
<td>Center for Integration of Composites into Infrastructure</td>
<td>CICI</td>
<td>Research Site</td>
<td>West Virginia University, WVU, Rutgers University</td>
<td>Sam Rizkalla</td>
<td>Rizkalla, Sam</td>
<td>COE/CCEE</td>
<td>2008-1644 CNS-0834182</td>
<td>07/15/2008-06/30/2014</td>
<td>315,000</td>
<td>212,365</td>
<td>Phase I</td>
<td>12</td>
<td>N/A</td>
<td>N/A</td>
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<td>Repair of Buildings and Bridges with Composites Center</td>
<td>RB2C</td>
<td>Research Site</td>
<td>West Virginia University, University of Miami</td>
<td>Sam Rizkalla</td>
<td>Rizkalla, Sam</td>
<td>COE/CCEE</td>
<td>2008-0262 CNS-0741676</td>
<td>09/01/2008-08/31/2010</td>
<td>60,000</td>
<td>55,500</td>
<td>N/A</td>
<td>5</td>
<td>N/A</td>
<td>N/A</td>
<td></td>
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</tbody>
</table>
### Repair of Buildings and Bridges with Composites Center

**RB2C**

**Research Site**

Lead - WVU

**University of Missouri-Rolla**

(now called Missouri Univ of Sci and Tech or Missouri S&T)

**Principal Investigator**

Arkalla, Sam

**Co-Principal Investigator**

COE/CCGE

**Grant Number**

IIP-0235055

**Duration**

07/15/2002 - 06/30/2009

**Funding**

$412,000

**Budgeted**

$111,000

**Phase II**

7

**Participants**

N/A

**Date**

N/A

**Center for Innovation Management Studies**

**CIMS**

**Currently not supported by NSF IUCRC Program**

**Research Site**

Mugge, Paul

**COM**

**Grant Number**

N/A

**Duration**

N/A

**Funding**

N/A

**Budgeted**

N/A

**Phase II**

13

**Participants**

2000 by BOG

**Date**

N/A

**Center for Innovation Management Studies**

**CIMS**

**Started as IUCRC in 1985 at Lehigh University, transferred to NCSU in 2000**

**Industrial Research Institute (IRI)**

**Principal Investigator**

Bean, Alden

(reired)

Mugge, Paul

**Co-Principal Investigator**

**COM**

**Grant Number**

IIP-0438684

**Duration**

11/01/2004 - 06/30/2009

**Funding**

$719,000

**Budgeted**

N/A

**Phase II**

N/A

**Participants**

2000 by BOG

**Date**

N/A

**Center for Integrated Pest Management**

**CIIPM**

**Currently not supported by NSF IUCRC Program**

**Research Site**

Stinner, Ron

(CALS/Entomology (no longer used))

1997-1127

ECD-9116415-05

**Duration**

08/02/1991 - 06/30/1997

**Funding**

$499,664

**Budgeted**

N/A

**Phase II**

30

**Participants**

1991 by BOG

**Date**

N/A

**Center for Integrated Pest Management**

**CIIPM**

**Started as IUCRC in 1991**

**Industrial Research Institute (IRI)**

**Principal Investigator**

Louws, Frank

**Co-Principal Investigator**

Stinner, Ron

(reired)

1997-0117

EEC-9612468-11

**Duration**

07/15/1996 - 12/31/2001

**Funding**

$616,396

**Budgeted**

N/A

**Phase II**

30

**Participants**

1991 by BOG

**Date**

N/A

**Center for Lasers and Plasmas in Advanced Manufacturing**

**CLPAM**

**Research Site**

Lead - University of Virginia, UVa

**University of Michigan**

**Southern Methodist Univ**

**University of Illinois**

**University of Texas at Dallas (UTD)**

**Principal Investigator**

Shannon, Steven

**Co-Principal Investigator**

**Membership handled by Lead Institution**

**Research Site**

**Grant Number**

IIP-1362103

**Duration**

03/01/2014 - 09/30/2016

**Funding**

$120,000

**Budgeted**

$113,182

**Phase II**

Membership handled by Lead Institution

**Participants**

2000 by BOG

**Date**

NSF grant discontinued and funds debligated

**NonWovens Institute**

**NWI**

**Started as IUCRC in 1991**

**Research Site**

Purdeyhimi, Behnam

**ORIED**

**Principal Investigator**

**Co-Principal Investigator**

**Grant Number**

EEC-9108854

**Duration**

09/01/1991 - 08/31/2001

**Funding**

$2,070,000

**Budgeted**

N/A

**Phase I**

6 in 2001

**Participants**

2007 by BOT

**Date**

N/A

**Nonwovens Cooperative Research Center**

**NCRC**

**Lead Institution**

Safarzadeh, E. Reza

(retired)

**Grant Number**

IIP-1991-0852

**Duration**

09/01/1991 - 08/31/2001

**Funding**

$2,070,000

**Budgeted**

N/A

**Participants**

36 in 2001

**Date**

1992 by BOG

Upgraded by BOT to Nonwovens Institute (NWI) status in 2007

**Silicon Solar Consortium**

**SiSOC**

**Lead Institution**

**Georgia Tech**

**Texas Tech U**

**Texas Tech U**

**Washington Institute of Technology**

**Principal Investigator**

**Co-Principal Investigator**

**Grant Number**

IIP-1338820

**Duration**

10/02/2013 - 12/31/2015

**Funding**

$185,450

**Budgeted**

$132,045

**Phase II**

2 (in 2015)

**Participants**

2010 by BOT

**Date**

2015

**Silicon Solar Consortium**

**SiSOC**

**Lead Institution**

**Georgia Tech**

**Srinivas, George**

**Grant Number**

IIP-0758386

**Duration**

02/01/2008 - 07/31/2013

**Funding**

$586,000

**Budgeted**

N/A

**Phase I**

15 (in 2011)

**Participants**

2010 by BOT

**Date**

2015
### Silicon Wafer Engineering and Defect Science

<table>
<thead>
<tr>
<th>SWEDS</th>
<th>Lead Institution</th>
<th>Arizona State</th>
<th>MIT</th>
<th>Stanford</th>
<th>UC-Berkeley</th>
<th>Univ of Washington</th>
<th>Univ of Arizona</th>
<th>Rozgonyi, George</th>
<th>COE/MSE</th>
<th>IIP-0308883</th>
<th>05/15/2004-04/30/2008</th>
<th>589,000</th>
<th>N/A</th>
<th>Phase II</th>
<th>18</th>
<th>1999 by BOG</th>
<th>2009</th>
</tr>
</thead>
</table>

| Overlapping in dates of some NSF awards to the same Centers is due to NCE granted on the original grants. |

| BOG-UNC Board of Governors | BOT-NCSU Board of Trustees | CALS-College of Agriculture & Life Sciences | FBNC-Food, Bioprocessing & Nutrition Sciences | PP-Plant Pathology | COE-College of Engineering | CBE-Chemical & Biomolecular Engineering | CCEE-Civil, Construction & Environmental Engineering | CS-Computer Science | ECE-Electrical & Computer Engineering | MSE-Material Science & Engineering | NE-Nuclear Engineering | CNR-College of Natural Resources | FER-Forestry & Environmental Resources | COM-College of Management | COT-College of Textiles | TAAM-Textile And Apparel Management | ORIED-Office of Research, Innovation and Economic Development |

| 8 Lead, 5 Research Sites | Total of 220 over the years | 9,812,514 | 3,173,015 |