



NATIONAL SCIENCE FOUNDATION  
INDUSTRY/UNIVERSITY COOPERATIVE RESEARCH CENTERS

# FINAL Report

## *2007-2008 STRUCTURAL INFORMATION<sup>1</sup>*

- **TABLE 1:** GENERAL CENTER INFORMATION
- **TABLE 2:** OPERATING BUDGET: TOTAL FUNDING
- **TABLE 3:** CAPITAL AND IN-KIND SUPPORT
- **TABLE 4:** INDUSTRY MEMBERSHIP DESCRIPTORS
- **TABLE 5:** HUMAN RESOURCES
- **TABLE 6:** CENTER DIRECTOR DESCRIPTORS
- **TABLE 7:** CENTER OUTCOMES
- **TABLE 8:** INTELLECTUAL PROPERTY EVENTS
- **APPENDIX:** FOOTNOTES: SPECIAL CONSIDERATIONS  
(Footnotes appear on top of columns and/or at end of rows for each table and are described in the appendix on the last page).

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<sup>1</sup>**NOTE:** 2007-2008 data collected from 34/34 Center Director Surveys (100% response rate).

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**Table 1: 2007-2008 GENERAL CENTER INFORMATION\* (Sorted Chronologically)**

<i>Yr Funded:</i>	<i>Center Name</i>	<i>University Name: Director</i>	<i>Partner University 1 Director</i>	<i>Partner University 2 Director</i>	<i>Partner University 3 Director</i>	<i>Partner University 4 Director</i>
1985*	Nondestructive Evaluation	Iowa State Univ. Thompson				
1986*	Berkeley Sensor & Actuator Center	Univ. of California, Berkeley Huggins	Univ. of California, Davis Horsley			
1988*	Composite & Ceramic Materials	Rutgers Univ. Haber	Univ. of New Mexico Plamen		Pennsylvania State Univ. Adair	
1998*	Advanced Studies in Novel Surfactants	Columbia Univ. Somasundaran				
1998*	Precision Metrology	Univ. of North Carolina, Charlotte Hocken				
1998*	Silicon Wafer Engineering and Defect Science	North Carolina State Univ. Duscher	Univ. of California, Berkeley Weber			
1999	Advanced Vehicle Electronics	Auburn Univ. Lall				
1999	Repair of Buildings and Bridges with Composites	Univ. of Miami Nanni	North Carolina State Univ. Rizkalla			
1999	Water Quality	Univ. of Arizona Pepper	Arizona State Univ. Abbaszadegan			
2000	Biocatalysis & Bioprocessing of Macromolecules	Polytechnic Univ. of New York Gross				
2001	Biomolecular Interaction Technologies	Univ. of New Hampshire Laue				
2001	Dielectric Studies	Pennsylvania State Univ. Randall	Missouri Univ. of Science and Technology Dogan			
2001	Intelligent Maintenance Systems	Univ. of Cincinnati Lee	Univ. of Michigan Ni		Missouri Univ. of Science and Technology Sarangapani	
2001	Membrane Applied Science and Technology	Univ. of Colorado at Boulder Greenberg				
2002	Compact High-Performance Cooling Technologies	Purdue Univ. Garimella				
2002	Engineering Logistics and Distribution <sup>a</sup>	Univ. of Arkansas Meller	Clemson Univ. Ferrell	Lehigh Univ. Zimmers	Oklahoma State Univ. Ingalls	Texas Tech Univ. Matis
2002	Identification Technology Research	West Virginia Univ. Hornak / Cukic	Univ. of Arizona Burgoon / Nunamaker			
2002	Plasmas & Lasers in Advanced Manufacturing	Univ. of Virginia Gupta	Univ. of Michigan Mazumder		Southern Methodist Univ. Kovacevic	
2003	Communications Circuits & Systems	Arizona State Univ. Kiaei	Rensselaer Polytechnic Institute Shur		Ohio State Univ. Volakis	Univ. of Arizona Krunz
2003	E-Design <sup>b</sup>	Virginia Tech Terpenny	Univ. of Massachusetts Grosse		Univ. of Central Florida Geiger / Crumpton-Young	Univ. of Pittsburgh Lovell
2003	Experimental Research in Computer Systems	Georgia Tech University Schwan	Ohio State Univ. Ramanathan			
2003	Fuel Cell Center	Univ. of South Carolina Van Zee				

\* Report sorted by Status, Organized by Year Funded; \* = Last year funded by NSF

a: Additional Universities and Directors for the Center for Engineering Logistics and Distribution are: Univ. of Louisville (Heragu), Univ. of Oklahoma (Pulat), Virginia Tech. (Ellis) Univ. of Missouri (Noble)

b: Dr. Lovell is the Interim Director of E-Design

c: Univ. of Denver is a supplemental site for the Safety, Security, Rescue Research Center

d: Additional Universities and Directors for Bioenergy Research and Development are: North Carolina State Univ.(Peretti)

IUCRC Structure Database, FY 2007-2008

<i>Yr Funded:</i>	<i>Center Name</i>	<i>University Name: Director</i>	<i>Partner University 1 Director</i>	<i>Partner University 2 Director</i>	<i>Partner University 3 Director</i>	<i>Partner University 4 Director</i>
2004	Friction Stir Processing	South Dakota School of Mines and Tech Arbegast	Missouri Univ. of Science and Technology Mishra	Brigham Young Univ. Nelson	Univ. of South Carolina Reynolds	Wichita State Univ. Burford
2004	Safety, Security, Rescue Research Center <sup>c</sup>	Univ. of Minnesota Papanikolopoulos	Univ. of Pennsylvania Kumar	Univ. of Denver Voyles		
2004	Wireless Internet Center for Advanced Technology	Polytechnic Univ. of New York Bertoni	Univ. of Virginia Horowitz	Auburn Univ. Agrawal	Virginia Tech Bose	
2005	Child Injury Prevention Studies	Children's Hospital of Philadelphia Winston				
2005	Computational Materials Design	Pennsylvania State Univ. Liu	Georgia Institute of Tech. McDowell			
2005	Information Protection	Iowa State Univ. Jacobson				
2006	Center for High-Performance Reconfigurable Computin	Univ. of Florida George	Brigham Young Univ. Nelson	George Washington Univ. El-Ghazawi	Virginia Tech Athanas	
2006	Center for Minimally Invasive Diagnostics	Univ. of Minnesota Erdman	Univ. of Cincinnati Haridis			
2006	Precision Forming	Ohio State Univ. Altan	The Virginia Commonwealth Univ. Koc			
2007	Smart Vehicle Concepts	Ohio State Univ. Singh				
2008	Advanced Forestry Systems	North Carolina State Univ. Goldfarb	Oregon State Univ. Howe	Purdue Univ. Michler	Virginia Tech Fox	
2008	Autonomic Computing	Univ. of Florida Fortes	Univ. of Arizona Hariri	Rutgers Univ. Parashar		
<b>New</b>						
2009	Advanced Cutting Tools	Michigan State Univ. Kwon	Georgia Tech University Liang			
2009	Advanced Knowledge Abatement	Florida International Univ. Rishe				
2009	Advanced Space Technologies Research and Engineer	Univ. of Florida Fitz-Coy	North Carolina State Univ. Edmonson			
2009	Advanced Sustainable Iron and Steel	Michigan Tech. Univ. Kawatra	Univ. of Utah Sohn			
2009	Bioenergy Research and Development <sup>d</sup>	South Dakota School of Mines and Tech Abata	South Dakota State Univ. Dixon	Kansas State Univ. Rezac	State Univ. of New York; Stony Brook Mahajan	Univ. of Hawaii at Manoa Turn
2009	Health Organization Transformation	Texas A&M Health Science Center Gamm	Georgia Institute of Tech. Lee			
2009	Particulate and Surfactant Systems	Univ. of Florida Moudgil	Columbia Univ. Somasundaran			
2009	Silicon Solar Cell	North Carolina State Univ. Rozgonyi	Georgia Tech University Rohatgi			

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c: Univ. of Denver is a supplemental site for the Safety, Security, Rescue Research Center

d: Additional Universities and Directors for Bioenergy Research and Development are: North Carolina State Univ.(Peretti)

IUCRC Structure Database, FY 2007-2008

**Table 2: 2007-2008 OPERATING BUDGET AND TOTAL FUNDING**

Center Name	Total <sup>4</sup> Funding	NSF <sup>5</sup>		INDUSTRY		State <sup>8</sup>	University <sup>9</sup>	OTHER <sup>10</sup>		
		NSF/ IUCRC	Other NSF	Member <sup>6</sup> Fees	Addl <sup>7</sup> Industry			Other <sup>11</sup> Federal	Non- <sup>12</sup> Federal	Other Cash
Advanced Forestry Systems	\$3,576,721	\$290,000	\$0	\$1,190,194	\$155,000	\$0	\$1,096,527	\$825,000	\$0	\$20,000
Advanced Studies in Novel Surfactants	\$625,000	\$95,000	\$25,000	\$225,000	\$280,000	\$0	\$0	\$0	\$0	\$0
Advanced Vehicle Electronics	\$2,681,344	\$40,000	\$0	\$1,662,379	\$0	\$0	\$415,595	\$0	\$0	\$563,370
Autonomic Computing	\$1,268,860	\$332,000	\$0	\$525,000	\$0	\$0	\$411,860	\$0	\$0	\$0
Berkeley Sensor & Actuator Center	\$12,554,190	\$233,000	\$260,000	\$2,368,801	\$1,533,464	\$104,354	\$0	\$7,532,004	\$522,567	\$0
Biocatalysis & Bioprocessing of Macromolecules	\$1,402,000	\$102,000	\$0	\$350,000	\$0	\$0	\$0	\$950,000	\$0	\$0
Biomolecular Interaction Technologies	\$325,000	\$25,000	\$0	\$300,000	\$0	\$0	\$0	\$0	\$0	\$0
Center for High-Performance Reconfigurable Computi	\$3,132,555	\$303,275	\$0	\$1,386,254	\$0	\$0	\$743,026	\$700,000	\$0	\$0
Center for Minimally Invasive Diagnostics	\$684,600	\$222,000	\$0	\$350,000	\$0	\$0	\$110,000	\$0	\$0	\$2,600
Child Injury Prevention Studies	\$585,000	\$160,000	\$0	\$425,000	\$0	\$0	\$0	\$0	\$0	\$0
Communications Circuits & Systems	\$3,547,805	\$349,000	\$40,000	\$1,100,000	\$50,000	\$819,805	\$387,000	\$640,000	\$30,000	\$132,000
Compact High-Performance Cooling Technologies	\$2,191,560	\$135,000	\$0	\$600,000	\$250,000	\$1,000,000	\$206,560	\$0	\$0	\$0
Composite & Ceramic Materials	\$6,641,797	\$133,000	\$1,762,140	\$926,600	\$376,189	\$149,400	\$697,884	\$2,224,107	\$372,477	\$0
Computational Materials Design	\$438,000	\$111,000	\$0	\$327,000	\$0	\$0	\$0	\$0	\$0	\$0
Dielectric Studies	\$4,324,000	\$830,000	\$180,000	\$780,000	\$34,000	\$70,000	\$130,000	\$1,700,000	\$0	\$600,000
E-Design	\$887,955	\$310,455	\$200,000	\$340,000	\$0	\$0	\$37,500	\$0	\$0	\$0
Engineering Logistics and Distribution	\$3,999,629	\$645,911	\$100,000	\$1,861,442	\$134,757	\$50,056	\$601,100	\$313,363	\$293,000	\$0
Experimental Research in Computer Systems	\$677,144	\$40,000	\$0	\$283,702	\$0	\$0	\$0	\$0	\$0	\$353,442
Friction Stir Processing	\$1,725,415	\$515,415	\$25,000	\$910,000	\$35,000	\$0	\$240,000	\$0	\$0	\$0
Fuel Cell Center	\$972,200	\$152,200	\$0	\$420,000	\$0	\$0	\$400,000	\$0	\$0	\$0
Identification Technology Research	\$4,425,225	\$443,000	\$0	\$1,122,725	\$4,000	\$0	\$15,703	\$2,839,797	\$0	\$0
Information Protection	\$170,000	\$50,000	\$0	\$120,000	\$0	\$0	\$0	\$0	\$0	\$0
Intelligent Maintenance Systems	\$2,750,118	\$153,686	\$567,535	\$1,251,000	\$101,000	\$99,717	\$49,000	\$173,000	\$291,000	\$64,180
Membrane Applied Science and Technology	\$664,802	\$102,421	\$0	\$512,381	\$0	\$0	\$50,000	\$0	\$0	\$0
Nondestructive Evaluation	\$7,350,930	\$257,380	\$0	\$455,000	\$0	\$625,037	\$127,888	\$5,451,348	\$65,719	\$368,557
Plasmas & Lasers in Advanced Manufacturing	\$1,420,825	\$211,000	\$25,000	\$444,357	\$0	\$0	\$128,960	\$611,508	\$0	\$0
Precision Forming	\$1,073,000	\$175,000	\$100,000	\$315,000	\$100,000	\$100,000	\$270,000	\$8,000	\$0	\$5,000
Precision Metrology	\$433,000	\$43,000	\$0	\$390,000	\$0	\$0	\$0	\$0	\$0	\$0
Repair of Buildings and Bridges with Composites	\$976,531	\$100,000	\$0	\$480,687	\$205,000	\$0	\$190,844	\$0	\$0	\$0
Safety, Security, Rescue Research Center	\$459,600	\$305,000	\$0	\$105,000	\$34,600	\$0	\$15,000	\$0	\$0	\$0
Silicon Wafer Engineering and Defect Science	\$533,000	\$83,000	\$0	\$450,000	\$0	\$0	\$0	\$0	\$0	\$0
Smart Vehicle Concepts	\$912,084	\$80,000	\$0	\$420,000	\$0	\$0	\$298,000	\$114,084	\$0	\$0
Water Quality	\$2,124,055	\$106,000	\$0	\$432,000	\$692,458	\$873,597	\$20,000	\$0	\$0	\$0
Wireless Internet Center for Advanced Technology	\$7,698,528	\$523,000	\$2,066,613	\$1,707,815	\$249,500	\$216,000	\$207,000	\$1,576,000	\$660,000	\$492,600
<b>Grand Mean</b>	\$2,448,014	\$225,198	\$157,391	\$721,686	\$124,558	\$120,823	\$201,454	\$754,653	\$65,728	\$76,522
<b>Grand Sum</b>	\$83,232,472	\$7,656,743	\$5,351,288	\$24,537,337	\$4,234,968	\$4,107,966	\$6,849,447	\$25,658,212	\$2,234,763	\$2,601,749

\* Report sorted Alphabetically by Center

IUCRC Structure Database, FY 2007-2008

**Table 3: 2007-2008 CAPITAL AND IN-KIND SUPPORT**

<i>CenterName</i>	<i>Capital and In-Kind Support<sup>13</sup></i>							<i>Overhead</i>	<i>Budget</i>		
	<i>Total Funding</i>	<i>Total Cap In-Kind</i>	<i>Equipment</i>	<i>Facilities</i>	<i>Personnel</i>	<i>Software</i>	<i>Other Support</i>	<i>% to Mem<sup>14</sup></i>	<i>Typical<sup>15</sup></i>	<i>Admin<sup>16</sup></i>	
Advanced Forestry Systems	\$3,576,721	\$45,000	\$0	\$25,000	\$20,000	\$0	\$0	0	48	2	
Advanced Studies in Novel Surfactants	\$625,000	\$82,222	\$82,222	\$0	\$0	\$0	\$0	5	61	20	
Advanced Vehicle Electronics	\$2,681,344	\$510,000	\$500,000	\$0	\$0	\$10,000	\$0	46	46	5	
Autonomic Computing	\$1,268,860	\$0	\$0	\$0	\$0	\$0	\$0	0	47	25	
Berkeley Sensor & Actuator Center	\$12,554,190	\$267,625	\$267,625	\$0	\$0	\$0	\$0	15	53	4	
Biocatalysis & Bioprocessing of Macromolecules	\$1,402,000	\$140,000	\$0	\$0	\$140,000	\$0	\$0	10	62	5	
Biomolecular Interaction Technologies	\$325,000	\$0	\$0	\$0	\$0	\$0	\$0	11	45	10	
Center for High-Performance Reconfigurable Computin	\$3,132,555	\$168,000	\$168,000	\$0	\$0	\$0	\$0	0	47	10	
Center for Minimally Invasive Diagnostics	\$684,600	\$37,584	\$0	\$0	\$37,584	\$0	\$0	9	46	15	
Child Injury Prevention Studies	\$585,000	\$255,000	\$5,000	\$0	\$0	\$0	\$250,000	0	65	12	
Communications Circuits & Systems	\$3,547,805	\$9,015,000	\$5,000,000	\$4,000,000	\$15,000	\$0	\$0	10	51	2	
Compact High-Performance Cooling Technologies	\$2,191,560	\$0	\$0	\$0	\$0	\$0	\$0	0	53	5	
Composite & Ceramic Materials	\$6,641,797	\$0	\$0	\$0	\$0	\$0	\$0	0	52	20	
Computational Materials Design	\$438,000	\$0	\$0	\$0	\$0	\$0	\$0	0	48	17	
Dielectric Studies	\$4,324,000	\$330,000	\$0	\$0	\$330,000	\$0	\$0	0	48	20	
E-Design	\$887,955	\$627,250	\$0	\$0	\$0	\$627,250	\$0	0	57	6	
Engineering Logistics and Distribution	\$3,999,629	\$65,000	\$0	\$25,000	\$40,000	\$0	\$0	16	46	10	
Experimental Research in Computer Systems	\$677,144	\$128,000	\$128,000	\$0	\$0	\$0	\$0	0	51	6	
Friction Stir Processing	\$1,725,415	\$85,000	\$20,000	\$25,000	\$15,000	\$0	\$25,000	0	38	25	
Fuel Cell Center	\$972,200	\$0	\$0	\$0	\$0	\$0	\$0	0	44	15	
Identification Technology Research	\$4,425,225	\$10,513	\$0	\$0	\$10,513	\$0	\$0	0	47	10	
Information Protection	\$170,000	\$0	\$0	\$0	\$0	\$0	\$0	8	47	30	
Intelligent Maintenance Systems	\$2,750,118	\$60,000	\$40,000	\$0	\$20,000	\$0	\$0	0	56	10	
Membrane Applied Science and Technology	\$664,802	\$0	\$0	\$0	\$0	\$0	\$0	6	52	20	
Nondestructive Evaluation	\$7,350,930	\$0	\$0	\$0	\$0	\$0	\$0	0	48	15	
Plasmas & Lasers in Advanced Manufacturing	\$1,420,825	\$60,000	\$60,000	\$0	\$0	\$0	\$0	0	52	16	
Precision Forming	\$1,073,000	\$355,000	\$110,000	\$35,000	\$0	\$210,000	\$0	10	50	5	
Precision Metrology	\$433,000	\$100,000	\$0	\$0	\$100,000	\$0	\$0	0	43	10	
Repair of Buildings and Bridges with Composites	\$976,531	\$0	\$0	\$0	\$0	\$0	\$0	0	50	0	
Safety, Security, Rescue Research Center	\$459,600	\$750,000	\$50,000	\$100,000	\$100,000	\$500,000	\$0	47	51	5	
Silicon Wafer Engineering and Defect Science	\$533,000	\$0	\$0	\$0	\$0	\$0	\$0	10	48	18	
Smart Vehicle Concepts	\$912,084	\$0	\$0	\$0	\$0	\$0	\$0	11	50	15	
Water Quality	\$2,124,055	\$0	\$0	\$0	\$0	\$0	\$0	0	51	5	
Wireless Internet Center for Advanced Technology	\$7,698,528	\$2,100,938	\$0	\$0	\$0	\$2,100,938	\$0	10	62	20	
<i>Grand Mean</i>	\$2,448,014	\$446,827	\$189,143	\$123,824	\$24,356	\$101,417	\$8,088	6.59	50.44	12.15	
<i>Grand Sum</i>	\$83,232,472	\$15,192,132	\$6,430,847	\$4,210,000	\$828,097	\$3,448,188	\$275,000	N/A	N/A	N/A	

\* Report sorted Alphabetically by Center

**Table 4: 2007-2008 INDUSTRY MEMBERSHIP DESCRIPTORS**

CenterName	2007-2008 MEMBERS				LIFETIME MEMBERS			ANNUAL FEES		
	Current Members	Starting	New	Left	Life Starting	Life New	Life Left	Primary	Secondary	Tertiary
Advanced Forestry Systems <sup>a</sup>	68	0	68	0	68	68	0	\$25,000	\$15,000	\$0
Advanced Studies in Novel Surfactants	13	15	0	2	15	21	24	\$25,000	\$9,500	\$0
Advanced Vehicle Electronics	21	19	7	5	11	32	21	\$75,000	\$37,500	\$25,000
Autonomic Computing	13	0	13	0	13	13	0	\$35,000	\$35,000	\$35,000
Berkeley Sensor & Actuator Center	46	47	9	10	6	87	47	\$50,000	\$0	\$50,000
Biocatalysis & Bioprocessing of Macromolecules	6	10	1	5	7	9	8	\$50,000	\$25,000	\$0
Biomolecular Interaction Technologies	11	12	1	2	8	12	9	\$30,000	\$0	\$0
Center for High-Performance Reconfigurable Computin	31	21	14	4	21	35	4	\$35,000	\$0	\$0
Center for Minimally Invasive Diagnostics	8	7	1	0	7	8	0	\$50,000	\$0	\$0
Child Injury Prevention Studies	9	9	0	0	6	3	0	\$50,000	\$25,000	\$0
Communications Circuits & Systems	20	19	2	1	9	22	11	\$50,000	\$17,500	\$0
Compact High-Performance Cooling Technologies	20	16	7	3	14	17	11	\$30,000	\$0	\$0
Composite & Ceramic Materials	30	40	4	14	8	24	24	\$40,000	\$15,000	\$0
Computational Materials Design	11	10	2	1	10	12	1	\$39,000	\$15,000	\$0
Dielectric Studies	30	27	6	3	18	25	9	\$30,000	\$8,500	\$0
E-Design	35	31	6	2	9	36	11	\$30,000	\$0	\$0
Engineering Logistics and Distribution	27	32	13	18	29	50	52	\$50,000	\$25,000	\$50,000
Experimental Research in Computer Systems	14	14	3	3	8	17	3	\$45,000	\$5,000	\$0
Friction Stir Processing	30	28	6	4	20	25	10	\$35,000	\$30,000	\$30,000
Fuel Cell Center	13	15	1	3	14	9	10	\$35,000	\$0	\$0
Identification Technology Research	19	18	5	4	8	26	14	\$40,000	\$0	\$0
Information Protection	5	7	0	2	11	13	8	\$30,000	\$15,000	\$10,000
Intelligent Maintenance Systems	36	38	6	8	25	45	35	\$40,000	\$12,000	\$0
Membrane Applied Science and Technology	8	14	1	7	8	31	31	\$50,000		
Nondestructive Evaluation	13	13	2	2	14	41	42	\$35,000	\$0	\$0
Plasmas & Lasers in Advanced Manufacturing	14	17	3	6	9	22	12	\$30,000	\$10,000	\$0
Precision Forming	16	18	2	4	18	20	4	\$30,000	\$15,000	\$10,000
Precision Metrology	13	11	2	0	15	16	17	\$30,000	\$0	\$0
Repair of Buildings and Bridges with Composites	16	16	6	6	9	36	29	\$50,000	\$25,000	\$5,000
Safety, Security, Rescue Research Center	8	11	1	4	7	17	18	\$35,000	\$12,000	\$0
Silicon Wafer Engineering and Defect Science	10	9	1	0	6	22	18	\$50,000	\$25,000	\$0
Smart Vehicle Concepts	14	0	14	0	14	14	0	\$40,000	\$0	\$10,000
Water Quality	41	35	8	2	16	57	34	\$30,000	\$15,000	\$3,000
Wireless Internet Center for Advanced Technology	32	13	20	1	7	39	7	\$40,000	\$0	\$0
<i>Grand Mean</i>	20.62	17.41	6.91	3.71	13.76	27.18	15.41	\$39,382	\$18,667	\$22,800
<i>Grand Sum</i>	701	592	235	126	468	924	524			

\* Report sorted Alphabetically by Center  
a: Advanced Forestry Systems secondary membership fee ranges from \$5,000 - \$24,999

**Table 5: 2007-2008 HUMAN RESOURCES**

<i>Center Name</i>	<i>RESEARCHERS</i>				<i>STUDENTS</i>		
	<i>Faculty<sup>18</sup> Scientists</i>	<i>Administrative</i>	<i>Post Docs</i>	<i>Research Staff</i>	<i>PhD</i>	<i>Masters</i>	<i>Undergraduate</i>
Advanced Forestry Systems	11	4	6	12	13	6	3
Advanced Studies in Novel Surfactants	6	1	5	0	4	0	0
Advanced Vehicle Electronics	18	1	2	2	16	38	7
Autonomic Computing	5	1	0	1	21	2	0
Berkeley Sensor & Actuator Center	13	3	31	1	119	0	6
Biocatalysis & Bioprocessing of Macromolecules	3	1	2	0	13	0	0
Biomolecular Interaction Technologies	2	1	0	1	2	0	1
Center for High-Performance Reconfigurable Computing	13	2	5	0	30	14	14
Center for Minimally Invasive Diagnostics	7	2	1	0	5	6	0
Child Injury Prevention Studies	12	1	0	2	2	2	18
Communications Circuits & Systems	42	3	5	5	70	30	7
Compact High-Performance Cooling Technologies	6	1	0	0	12	2	0
Composite & Ceramic Materials	31	8	13	4	33	4	39
Computational Materials Design	7	4	1	0	11	1	1
Dielectric Studies	22	2	3	3	9	1	7
E-Design	25	1	1	0	10	11	3
Engineering Logistics and Distribution	43	4	2	3	24	40	33
Experimental Research in Computer Systems	31	2	0	3	36	87	5
Friction Stir Processing	13	4	0	2	15	25	29
Fuel Cell Center	9	3	0	16	16	0	8
Identification Technology Research	13	3	2	5	21	16	4
Information Protection	8	2	1	0	0	9	0
Intelligent Maintenance Systems	3	5	2	3	20	4	1
Membrane Applied Science and Technology	13	2	4	0	4	3	1
Nondestructive Evaluation	16	3	1	16	12	10	40
Plasmas & Lasers in Advanced Manufacturing	1	0	5	5	9	0	4
Precision Forming	2	1	3	0	4	8	7
Precision Metrology	21	2	1	4	8	10	0
Repair of Buildings and Bridges with Composites	6	2	1	2	6	6	12
Safety, Security, Rescue Research Center	9	2	1	2	29	4	0
Silicon Wafer Engineering and Defect Science	2	1	3	0	5	1	0
Smart Vehicle Concepts	6	1	1	0	9	5	2
Water Quality	37	1	9	1	18	18	7
Wireless Internet Center for Advanced Technology	32	4	6	2	33	28	27
<i>Grand Mean</i>	14.35	2.29	3.44	2.79	18.79	11.50	8.41
<i>Grand Sum</i>	488	78	117	95	639	391	286

\* Report sorted Alphabetically by Center

**Table 6: 2007-2008 CENTER DIRECTOR DESCRIPTORS**

<i>*Includes only primary center director</i>				TIME ALLOCATION				
CenterName	Rank	Tenur	Reports To	Center Admin	Other Admin	Research	Teaching	Other
Advanced Forestry Systems	Professor	Tenured	Dean	10	80	5	5	0
Advanced Studies in Novel Surfactants	Professor	Tenured	Dean	15	15	30	30	10
Advanced Vehicle Electronics	Professor	Tenured	Dean	25	10	40	15	10
Autonomic Computing	Professor	Tenured	Department Chair	5	5	75	10	5
Berkeley Sensor & Actuator Center	No academic rank	Non-tenure track	Department Chair	75	15	10	0	0
Biocatalysis & Bioprocessing of Macromolecules	Full Professor	Tenured	Provost	25	20	40	10	5
Biomolecular Interaction Technologies	Professor	Tenured	Dean	20	40	20	20	0
Center for High-Performance Reconfigurable Computing	Professor	Tenured	Department Chair	15	5	50	15	15
Center for Minimally Invasive Diagnostics	Professor	Tenured	Department of Mechanical Engineering	4	16	50	20	10
Child Injury Prevention Studies	Associate Professor	Tenured	Chief Scientific Officer	5	10	80	5	0
Communications Circuits & Systems	Professor	Tenured	Department Chair	15	15	30	20	20
Compact High-Performance Cooling Technologies	Professor	Tenured	Department Head	15	5	55	20	5
Composite & Ceramic Materials	Professor	Tenured	Department Chair	25	25	25	10	15
Computational Materials Design	Professor	Tenured	Department Head	20	0	70	10	0
Dielectric Studies	Professor	Tenured	Director of Materials Research Institute	10	1	40	40	9
E-Design	Associate Professor	Tenured	Dean for College of Engineering	25	5	35	25	10
Engineering Logistics and Distribution	Professor	Tenured	Department Head	25	10	30	35	0
Experimental Research in Computer Systems	Professor	Tenured	Vice President for Research	10	10	40	40	0
Friction Stir Processing	No academic rank	Non-tenure track	Vise President of Research	45	25	25	5	0
Fuel Cell Center	Professor	Tenured	Vice President of Research and Health Sci	15	0	50	25	10
Identification Technology Research	Professor	Tenured	VP for Rsrch & Econ. Dev.	25	10	30	20	15
Information Protection	Professor	Tenured	Vice Provost for Rsrch & Econ. Dev.	15	20	25	30	10
Intelligent Maintenance Systems	Professor	Tenured	Department Head	50	0	20	20	10
Membrane Applied Science and Technology	Full Professor	Tenured	Department Chair	20	15	45	15	5
Nondestructive Evaluation	Professor	Tenured	Director, Inst. For Physical Rsrch & Tech	50	5	25	15	5
Plasmas & Lasers in Advanced Manufacturing	Professor	Tenured	Department Chair and to Dean of Enginee	12	5	50	30	3
Precision Forming	Professor	Tenured	Dept. Chair	25	20	25	20	10
Precision Metrology	Professor	Tenured	Dean	20	10	20	30	20
Repair of Buildings and Bridges with Composites	Professor	Tenured	Dean	15	35	20	25	5
Safety, Security, Rescue Research Center	Professor	Tenured	Department Heat	5	10	60	15	10
Silicon Wafer Engineering and Defect Science	Associate Professor	Tenured	Department Head	1	4	50	30	15
Smart Vehicle Concepts	Professor	Tenured	ME Dept. Chair and College Dean	22	0	38	30	10
Water Quality	Professor	Tenured	Dean	30	20	30	10	10
Wireless Internet Center for Advanced Technology	Full Professor	Non-tenure track	ECE Department Head	34	0	50	16	0
<b>Grand Mean</b>				21.41	13.71	37.88	19.59	7.41

*\* Report sorted Alphabetically by Center*

**Table 7: 2007-2008 CENTER OUTCOMES**

Center Name:	STUDENTS RECEIVING DEGREE 20			STUDENTS HIRED BY INDUSTRY <sup>21</sup>			PUBLICATIONS 22		
	BA Grad	MA Grad	PhD Grad	BA Hired	MA Hired	PhD Hired	w/ Ctr	w/ IAB	Presentations
							Research	Members	
Advanced Forestry Systems	1	5	3	0	3	1	31	3	60
Advanced Studies in Novel Surfactants	0	0	2	0	0	1	19	0	20
Advanced Vehicle Electronics	7	17	4	1	2	1	76	22	50
Autonomic Computing	0	0	0	0	0	0	1	1	3
Berkeley Sensor & Actuator Center	6	12	19	0	3	6	59	4	41
Biocatalysis & Bioprocessing of Macromolecules	2	5	1	0	0	0	10	2	12
Biomolecular Interaction Technologies	0	0	0	0	0	0	1	0	2
Center for High-Performance Reconfigurable Computi	7	5	1	0	2	1	15	1	32
Center for Minimally Invasive Diagnostics	0	0	0	0	0	0	0	0	0
Child Injury Prevention Studies	6	0	0	0	1	0	7	0	18
Communications Circuits & Systems	0	2	4	0	1	7	53	4	63
Compact High-Performance Cooling Technologies	0	0	3	0	0	1	20	1	20
Composite & Ceramic Materials	4	1	3	0	0	0	36	9	82
Computational Materials Design	1	1	1	0	0	0	11	0	29
Dielectric Studies	5	2	5	0	0	1	39	2	45
E-Design	4	1	11	4	5	16	87	0	45
Engineering Logistics and Distribution	17	19	5	2	0	0	29	0	59
Experimental Research in Computer Systems	0	8	10	0	12	10	33	12	41
Friction Stir Processing	7	11	0	0	1	0	15	1	13
Fuel Cell Center	0	1	3	0	0	3	13	1	13
Identification Technology Research	9	10	6	8	2	1	52	0	48
Information Protection	0	0	0	0	0	0	10	0	10
Intelligent Maintenance Systems	0	3	3	0	2	5	41	0	53
Membrane Applied Science and Technology	0	2	0	0	0	0	6	1	10
Nondestructive Evaluation	1	3	0	2	2	0	8	1	10
Plasmas & Lasers in Advanced Manufacturing	1	1	1	0	0	0	15	4	28
Precision Forming	0	3	4	0	0	0	14	1	7
Precision Metrology	0	5	2	0	0	2	5	0	3
Repair of Buildings and Bridges with Composites	0	6	1	0	0	0	36	3	11
Safety, Security, Rescue Research Center	0	1	4	0	1	1	23	0	22
Silicon Wafer Engineering and Defect Science	0	0	3	0	0	3	5	3	13
Smart Vehicle Concepts	2	2	4	0	1	0	11	0	18
Water Quality	6	4	5	2	1	1	37	0	68
Wireless Internet Center for Advanced Technology	4	20	11	0	1	0	32	2	29
<i>Grand Mean</i>	2.65	4.41	3.50	0.56	1.18	1.79	25.00	2.29	28.76
<i>Grand Sum</i>	90	150	119	19	40	61	850	78	978

\* Report sorted by Alphabetically by Center

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**Table 8: 2007-2008 INTELLECTUAL PROPERTY EVENTS**

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**Table 8a: Centers Reporting One or More Intellectual Property Event Last Fiscal Year**

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<b>Intellectual Property Event</b>	<b># of Centers</b>	<b>% of Centers</b>
Invention Disclosures	15	44%
Patent Applications	13	38%
Software Copyrights	2	6%
Patents Granted/Derived	7	21%
Licensing Agreements	5	15%
Royalties Realized	5	15%

**Table 8b: Total Number and Means of Intellectual Property Events last Fiscal Year**

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<b>Intellectual Property Event</b>	<b>Total for all Centers</b>	<b>Mean for All Centers</b>
Invention Disclosures	53	1.56
Patent Applications	45	1.32
Software Copyrights	2	0.06
Patents Granted/Derived	20	0.59
Licensing Agreements	8	0.24
Royalties Realized	23	0.68

# APPENDIX

## FOOTNOTES AND SPECIAL CONSIDERATIONS

Footnotes appear on top of columns and/or at end of rows for each Table and are described in this Appendix.

- 1) All averages and sums exclude missing data. With the exception of percentages, data from multi-university centers has been aggregated across universities; percentages represent averages for the reporting universities.
- 2) This report includes only data on Centers which were considered active participants in the NSF IUCRC Program during the 2006-2007 fiscal year.
- 3) On Table 1, "YEAR FUNDED" indicates the year NSF gave the center the operating grant it is currently operating under.
- 4) On Table 2, "TOTAL FUNDING" refers to the total cash income coming into the Center.
- 5) On Table 2, "NSF FUNDING" refers to two kinds of support, "IUCRC FUNDING" which refers to the total support provided by the IUCRC program, including operating grant, self-sustaining Center funding, evaluator support, TIE awards, RUI/PUI awards, etc. "NSF OTHER" refers to cash support for Center operations provided by other NSF groups or divisions. Neither of these categories includes money transferred through NSF from other Federal Agencies (MIPRs).
- 6) On Table 2, "INDUSTRY MEMBERSHIP FEES" refers to the total cash membership fees from Center members.
- 7) On Table 2, "INDUSTRY OTHER" refers to additional industry cash funding for operations provided by industrial members (e.g., enhancements, donations, etc.) which is applied to the Center as a whole (e.g., income that results in outcomes shared equally by all Center members).
- 8) On Table 2, "STATE TOTAL" refers to the support provided by state government and/or an agency or program funded by state government.
- 9) On Table 2, "UNIV. TOTAL" refers to the support for the Center operating costs including salary, travel, and overhead returned to the Center. It does NOT include items such as utilities and space.
- 10) On Table 2, "OTHER FEDERAL AGENCY" refers to cash support for Center operations provided by other Federal funding sources, but does NOT include funding from NSF.
- 11) On Table 2, "OTHER NON-FEDERAL AGENCY" refers to cash support for Center operations provided by other non-Federal funding sources, foundations, etc.
- 12) On Table 2, "OTHER FUNDING" refers to any other cash support, such as contracts, received by Center researchers that would not have been received if the Center did not exist. The funding would not result in outcomes shared equally by Center members.
- 13) On Table 3, "CAPITAL AND IN-KIND CONTRIBUTIONS" refers to capital support for items of value over \$25,000 and includes equipment, facilities, personnel, and software.
- 14) On Table 3, "% to MEM" refers to the overhead rate charged to industry membership fees.
- 15) On Table 3, "TYPICAL OVERHEAD" refers to the typical university Federally Negotiated Facilities and Administrative rate (indirect) charged to funding sources.
- 16) On Table 3, "ADMIN. BUDGET (%)" refers to the estimated percentage of the Center's direct operating budget allocated to administration (e.g., administrative salaries, travel, telephone).
- 17) On Table 4, "FEES" are broken down into primary, secondary, and tertiary (the latter two represent variable membership fees).
- 18) On Table 5, "FACULTY SCIENTISTS" includes the Center Director(s) and Faculty Researchers.
- 19) On Table 6, "TIME ALLOCATION" refers to allocation of director's full-time equivalent for budgetary purposes.
- 20) On Table 7, "STUDENTS RECEIVING DEGREE" refers to the number of Ph.D.'s, M.S.'s, and B.A./B.S.'s that received a degree during the reporting period.
- 21) On Table 7, "STUDENTS HIRED BY INDUSTRY" refers to the number of Ph.D.'s, M.S.'s, and B.A./B.S.'s that were hired by member companies during the reporting period.
- 22) On Table 7, "PUBLICATIONS" refers to the publications in the open literature the Center researchers produced based on Center research including publications reported that have a Center industry member as an author.