


Worcester Polytechnic Institute
Report of Proposals Submitted
April 2009

Department	Principal Investigator	Co-PI	Project Title	Sponsor	Prime Sponsor (if Sub)	Program Type	Amount Requested	Cost Sharing	Voluntary Uncommitted CS	Proposal #
Bioengineering Institute	Lambert, C.		Non Invasive Capacitive Coupling of Neurons	NIH		Research	431,344	0	15,978	9215
Subtotal: 1							431,344	0	15,978	
Biomedical Engineering	Gaudette, G.		Microthread-Based Delivery of Human Mesenchymal Stem Cells to Infarcted Hearts	NIH		Research	18,568	0		09061s1
Subtotal: 1							18,568	0	0	
Chemical Engineering	Camesano, T.		Cranberry Constituents and the Role of Iron in Inhibition of Growth and Biofilm Formation by Uropathogenic E. coli Bacteria	University of Massachusetts Dartmouth	The Commonwealth of Mass.	Research	5,200	2,714		9223
	Camesano, T.		SGER: Inactivation of Bacillus Spores Using Antimicrobial Peptides (Grad Research Supplement)	NSF		Education/Training	39,000	0	9,332	08151s1
Subtotal: 2							44,200	2,714	9,332	
Chemistry and Biochemistry	Kaminski, G.		Protein Simulations with a Fast Polarizable Force Field	NIH		Research	284,071	0	20,258	08248s1
Subtotal: 1							284,071	0	20,258	
Civil and Environmental Engineering	Mallick, R.	Tao, M., El-Korchi, T.	Handbook for Pavement Design, Construction and Management	Transportation Research Board	DOT	Other	399,935	0		9218
Subtotal: 1							399,935	0	0	
Computer Science	Heffernan, N.	Gobert, J., Beck, J., Ruiz, C., Ward, M., Heineman, G.	PhD Fellowship in Computer Science to Support the Learning Sciences and Security	DOEd		Education/Training	996,517	213,081		9220
	Rich, C.		HCC-Small: Engagement and Collaboration in Human-Robot Interaction	NSF		Education/Training	13,500	0		08097s1
	Ward, M.	Rundensteiner, E.	Stream Explanations: Using History for Model-Driven Stream Analytics	NSF		Research	486,423	0	57,080	9217
	Wills, C.		Virtual Machines Meet Application Clusters: A Highly Responsive Global Utility Computing Platform for Internet Applications	NSF		Education/Training	8,000	0		06103s1
Subtotal: 4						1,504,440	213,081	57,080		
Electrical and Computer Eng'g.	Duckworth, J.	Cyganski, D.	Testing and Evaluation of First Responder Indoor Location Technology	Natick Soldier Center	Army	Research	13,150	0		09005s1

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	Michalson, W.		PCOG Broadband Modem	Powerwave Technologies, Inc.		Other	50,525	0	465	9225
Subtotal: 2							63,675	0	465	
Mathematical Sciences	Tang, D.		In vivo Validation of Computational Model for Biomechanical Marker of Early Atherosclerosis	University of Washington	NIH	Research	295,268	0		9222
Subtotal: 1							295,268	0	0	
Mechanical Engineering	Demetriou, M.	Gatsonis, N.	Integration of Model-Based Estimation Theory with an Adaptive Finite Volume Method for the Detection of a Moving Gaseous Source via a Mobile Sensor	Air Force Office of Scientific Research		Research	332,595	0	21,631	9216
	Fischer, G.		Planning and Nonrigid Tracking for MRI-guided Robotic Deep Brain Stimulation	Kitware, Inc.	NIH	Research	171,459	0		9219
Subtotal: 2							504,054	0	21,631	
Social Sciences & Policy Studies	Skorinko, J.		Effects of Perspective-taking on Jurors' Perceptions and Decisions	DOJ		Research	287,568	0		9221
Subtotal: 1							287,568	0	Total: 0	
 Total: 16							3,833,123	215,795	124,744	

**Worcester Polytechnic Institute
Proposals Submitted by Department (FY 2009)**

Date: **April 2009**

Fiscal Year: **2008-2009**

	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Cumulative
Biology and Biotechnology	4	4		3	2	4		6	2				25
	3,962,154	1,472,774		5,821,862	16,402	196,923		6,892,954	702,176				19,065,245
Biomedical Engineering	2		2	1		1	2	1	1	1			11
	579,137		420,394	215,960		531,276	62,341	5,000	29,974	18,568			1,862,650
Bioengineering Institute		1		2						1			4
		150,000		894,588						431,344			1,475,932
Civil and Envir Engr	1		2	3	2	1	1	1	4	1			16
	139,951		386,053	698,446	204,834	26,953	128,771	174,968	1,500,157	399,935			3,660,068
Chemistry and Biochemistry	1		1	1	4				2	1			10
	786,119		264,205	100,000	501,565				449,506	284,071			2,385,466
Chemical Engineering			1	1	1	2	1	2	3	2			13
			6,114	19,007,473	5,000	74,092	198,870	38,116	133,805	44,200			19,507,670
Computer Science	2	2	2	4	3	6	2	3	1	4			29
	637,144	659,904	103,394	5,564,501	634,933	2,048,867	392,415	1,384,115	69,814	1,504,440			12,999,527
Electrical and Computer Engr	5	3	5	4	3	5	2	3	4	2			36
	1,773,802	415,718	1,100,678	862,504	905,138	340,113	139,962	764,366	1,458,178	63,675			7,824,134
Fire Protection Engineering	2	1	4				1	2	1				11
	515,135	313,261	584,811				570,762	375,395	195,827				2,555,191
Humanities and Arts	1	1		1									3
	417,540	221,355		215,333									854,228
Interdisciplinary and Global	1	3					2	1					7
	6,500	376,678					236,272	86,299					705,749
Mathematical Science			1	4	3	1	1	2	2	1			15
			265,000	2,744,300	217,773	408,590	99,523	1,959,819	173,434	295,268			6,163,707
Mechanical Engineering		6	15	7	2	3	3	3	8	2			49
		3,087,303	2,470,816	2,278,277	383,522	598,653	774,891	1,135,112	3,245,815	504,054			14,478,443
Management							1						1
							50,000						50,000
Social Science & Policy Studies		2								1			3
		252,848								287,568			540,416
Physics	1	1	1		4			1	1				9
	275,628	285,366	299,950		823,605			15,430	6,250				1,706,229
Other	1		2		2				1				6
	9,109		103,852		379,911				18,000				510,872
SUBTOTALS	21	24	36	31	26	23	16	25	30	16	0	0	248
	\$9,102,219	\$7,235,207	\$6,005,267	\$38,403,244	\$4,072,683	\$4,225,467	\$2,653,807	\$12,831,574	\$7,982,936	\$3,833,123	\$0	\$0	\$96,345,527
Add: Earmarks													0
													0
TOTALS	21	24	36	31	26	23	16	25	30	16	0	0	248
	\$9,102,219	\$7,235,207	\$6,005,267	\$38,403,244	\$4,072,683	\$4,225,467	\$2,653,807	\$12,831,574	\$7,982,936	\$3,833,123	\$0	\$0	\$96,345,527

05/07/09 kr

**Worcester Polytechnic Institute
Proposals Submitted by Department (FY 2008)**

Date: **April 2009**

Fiscal Year: **2007-2008**

	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Cumulative
Biology and Biotechnology	1		3	2	2		4	2	3	1			18
	33,272		446,967	889,027	66,907		3,962,154	302,520	267,789	30,029			5,998,665
Biomedical Engineering	2	1	1	2	2		2	1	1	3			15
	885,949	16,518	296,274	411,660	583,409		579,137	2,000	235,800	241,399			3,252,146
Bioengineering Institute		1	1	1	1				1				5
		81,944	149,971	711,868	800,350				25,000				1,769,133
Civil and Envir Engr			3	2	2	1	1	5	1	2			17
			443,391	236,275	348,125	74,916	139,951	943,450	243,132	365,809			2,795,049
Chemistry and Biochemistry	1	1					1						3
	1,156,495	60,005					786,119						2,002,619
Chemical Engineering	4			2	3			6	1				16
	1,369,614			1,507,787	315,890			1,503,718	33,514				4,730,523
Computer Science	4	1	2	1	4	8	2		5	1			28
	2,921,249	98,247	491,945	5,708	1,943,701	3,551,023	637,144		12,761,540	1,499,850			23,910,407
Electrical and Computer Engr	2	1	2	1		1	5	1	9				22
	854,359	44,912	109,127	414,697		328,714	1,773,802	375,805	2,259,278				6,160,694
Fire Protection Engineering	1	1	1	1			2	2	1				9
	479,095	599,640	19,867	179,467			515,135	146,386	47,822				1,987,412
Humanities and Arts							1						1
							417,540						417,540
Interdisciplinary and Global		2					1						3
		166,573					6,500						173,073
Mathematical Science	2		1	2	2	1		2		1			11
	1,476,903		62,712	957,434	676,245	296,715		1,076,325		599,399			5,145,733
Mechanical Engineering	7	1	6	7	1	1		4	7	3			37
	2,489,649	73,643	1,032,447	2,660,889	13,050	334,152		1,062,162	772,407	2,531,471			10,969,870
Management			1	2				1					4
			69,983	444,991				749,985					1,264,959
Social Science & Policy Studies			1										1
			50,912										50,912
Physics		1		2	3	1	1	4	1	1			14
		89,998		560,764	689,084	512,179	275,628	646,050	31,168	11,250			2,816,121
Other				1			1		1	1			4
				14,000			9,109		30,000	10,000			63,109
SUBTOTALS	24	10	22	26	20	13	21	28	31	13	0	0	208
	\$11,666,585	\$1,231,480	\$3,173,596	\$8,994,567	\$5,436,761	\$5,097,699	\$9,102,219	\$6,808,401	\$16,707,450	\$5,289,207	\$0	\$0	\$73,507,965
Add: Earmarks									2				2
									1,708,000				1,708,000
TOTALS	24	10	22	26	20	13	21	28	33	13	0	0	210
	\$11,666,585	\$1,231,480	\$3,173,596	\$8,994,567	\$5,436,761	\$5,097,699	\$9,102,219	\$6,808,401	\$18,415,450	\$5,289,207	\$0	\$0	\$75,215,965

5/07/2009 kr

5/14/2009

Worcester Polytechnic Institute
Proposals Submitted by Department (12 Month Report Through April 2009)


Date: **April 2009**

Fiscal Year: **2008-2009**

05/07/09 kr

	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	Cumulative
Biology and Biotechnology	1	4	4	4		3	2	4		6	2		30
	640,952	944,176	3,962,154	1,472,774		5,821,862	16,402	196,923		6,892,954	702,176		20,650,373
Biomedical Engineering		6	2		2	1		1	2	1	1	1	17
		864,223	579,137		420,394	215,960		531,276	62,341	5,000	29,974	18,568	2,726,873
Bioengineering Institute				1		2						1	4
				150,000		894,588						431,344	1,475,932
Civil and Envir Engr	3	1	1		2	3	2	1	1	1	4	1	20
	216,337	26,953	139,951		386,053	698,446	204,834	26,953	128,771	174,968	1,500,157	399,935	3,903,358
Chemistry and Biochemistry	2	3	1		1	1	4				2	1	15
	846,754	2,206,455	786,119		264,205	100,000	501,565				449,506	284,071	5,438,675
Chemical Engineering	3	2			1	1	1	2	1	2	3	2	18
	453,359	479,532			6,114	19,007,473	5,000	74,092	198,870	38,116	133,805	44,200	20,440,561
Computer Science	4	3	2	2	2	4	3	6	2	3	1	4	36
	1,060,535	1,419,176	637,144	659,904	103,394	5,564,501	634,933	2,048,867	392,415	1,384,115	69,814	1,504,440	15,479,238
Electrical and Computer Engr	2		5	3	5	4	3	5	2	3	4	2	38
	115,229		1,773,802	415,718	1,100,678	862,504	905,138	340,113	139,962	764,366	1,458,178	63,675	7,939,363
Fire Protection Engineering	1		2	1	4				1	2	1		12
	1,533,121		515,135	313,261	584,811				570,762	375,395	195,827		4,088,312
Humanities and Arts			1	1		1							3
			417,540	221,355		215,333							854,228
Interdisciplinary and Global	1		1	3					2	1			8
	149,830		6,500	376,678					236,272	86,299			855,579
Mathematical Science	1	3			1	4	3	1	1	2	2	1	19
	759,434	156,116			265,000	2,744,300	217,773	408,590	99,523	1,959,819	173,434	295,268	7,079,257
Mechanical Engineering	6	8		6	15	7	2	3	3	3	8	2	63
	1,594,635	1,347,305		3,087,303	2,470,816	2,278,277	383,522	598,653	774,891	1,135,112	3,245,815	504,054	17,420,383
Management	1	1							1				3
	50,000	40,502							50,000				140,502
Social Science & Policy Studies				2								1	3
				252,848								287,568	540,416
Physics		2	1	1	1		4			1	1		11
		119,870	275,628	285,366	299,950		823,605			15,430	6,250		1,826,099
Other			1		2		2				1		6
			9,109		103,852		379,911				18,000		510,872
SUBTOTALS	25	33	21	24	36	31	26	23	16	25	30	16	306
	\$7,420,186	\$7,604,308	\$9,102,219	\$7,235,207	\$6,005,267	\$38,403,244	\$4,072,683	\$4,225,467	\$2,653,807	\$12,831,574	\$7,982,936	\$3,833,123	\$111,370,021
Add: Earmarks													0
													0
TOTALS	25	33	21	24	36	31	26	23	16	25	30	16	306
	\$7,420,186	\$7,604,308	\$9,102,219	\$7,235,207	\$6,005,267	\$38,403,244	\$4,072,683	\$4,225,467	\$2,653,807	\$12,831,574	\$7,982,936	\$3,833,123	\$111,370,021

Worcester Polytechnic Institute
Report of Awards Received
April 2009

Department	Principal Investigator	Co-PI	Project Title	Sponsor	Prime Sponsor (if Sub)	Amount Awarded	Cost Sharing	Voluntary Uncommitted CS	Award Type	Program Type	Proposal #
Academic Affairs	Cyr, M.		Women in Science Conference	University of Massachusetts Worcester	Mass. Board of Higher Education	18,000	0		New	Conference/Travel	9205
Subtotal: 1						18,000	0	0			
Computer Science	Heffernan, N.	Gobert, J., Lindeman, R., Rundensteiner, E., Ruiz, C., Pollice, G., Heineman, G., Mani, M.	PIMSE: A GK-12 Partnership Implementing Mathematics & Science Education (PIMSE): Assisting Middle School Use of Tutoring Technology in the Classroom	NSF		413,914	48,426		Con't.	Education/Training	8002
Subtotal: 1						413,914	48,426	0			
Fire Protection Eng'g.	Meacham, B.	Dembsey, N.	Rail Vehicle Fire Hazard Guidance	DHS		199,903	0		New	Research	9069
	Notarianni, K.		Quantitative Evaluation of Fire & EMS Mobilization Times & Identification of Key Factors Affecting Performance	The Fire Protection Research Foundation		30,177	0		New	Research	9178
Subtotal: 2						230,080	0	0			
Mechanical Engineering	Fischer, G.		Development of an MRI-Guided Intra-Prostatic Needle Placement System	Army		313,736	0		New	Research	8234
	Olinger, D.	Tryggvason, G.	An Integrated Study of Floating Wind Turbines	NSF		299,991	0	24,556	New	Research	9050
Subtotal: 2						613,727	0	24,556			
Physics	Iannacchione, G.		SURF Applications for Long Tong and Christopher Horgan	NIST		7,715	0		New	Education/Training	9173
Subtotal: 1						7,715	0	0			
 Total: 7						1,283,436	48,426	24,556			

**Worcester Polytechnic Institute
Awards Received by Department (FY 2009)**

Date: April 2009

Fiscal Year: 2008-2009

	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	Jun-09	Cumulative
Biology and Biotechnology	1 293,745	2 21,269	1 12,289				2 18,684	2 152,483					8 498,470
Biomedical Engineering	2 164,980	1 2,000		1 16,488	2 130,000			1 27,202	1 219,526				8 560,196
Bioengineering Institute		1 150,000					1 29,924						2 179,924
Civil and Envir Engr				1 42,000									1 42,000
Chemistry and Biochemistry	1 169,933					1 51,565			3 535,553				5 757,051
Chemical Engineering	2 278,341		1 128,000	1 6,114			1 34,642		1 218,032				6 665,129
Computer Science	3 777,475	4 514,681						1 393,496	2 28,649	1 413,914			11 2,128,215
Electrical and Computer Engr		3 343,814	4 648,209	4 279,616	2 311,696	4 142,224	1 79,962	2 53,900					20 1,859,421
Fire Protection Engineering	3 247,099					1 15,843				2 230,080			6 493,022
Humanities and Arts													0 0
Interdisciplinary and Global		2 42,475							1 137,749				3 180,224
Mathematical Science		2 361,037						1 30,935	2 411,750				5 803,722
Mechanical Engineering	3 132,367		4 199,600	3 83,400	1 4,642	1 30,000	1 10,000	4 203,381	3 276,600	2 613,727			22 1,553,717
Management		1 7,000	1 749,985	1 42,592									3 799,577
Social Science & Policy Studies													0 0
Physics		1 233,194	1 53,594			1 33,302				1 7,715			4 327,805
Other			1 9,000	2 124,852	1 66,000			1 9,109	2 120,411	1 18,000			8 347,372
SUBTOTALS	15 \$2,063,940	17 \$1,675,470	13 \$1,800,677	13 \$595,062	6 \$512,338	8 \$272,934	6 \$173,212	12 \$870,506	15 \$1,948,270	7 \$1,283,436	0 \$0	0 \$0	112 \$11,195,845
Add: Earmarks													0 \$0
TOTALS	15 \$2,063,940	17 \$1,675,470	13 \$1,800,677	13 \$595,062	6 \$512,338	8 \$272,934	6 \$173,212	12 \$870,506	15 \$1,948,270	7 \$1,283,436	0 \$0	0 \$0	112 \$11,195,845

**Worcester Polytechnic Institute
Awards Received by Department (FY 2008)**

Date: April 2009

Fiscal Year: 2007-2008

	Jul-07	Aug-07	Sep-07	Oct-07	Nov-07	Dec-07	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Cumulative
Biology and Biotechnology							1	1	1	2			5
							212,112	74,237	295,385	60,000			641,734
Biomedical Engineering		2				1	1	1					5
		223,880				59,299	2,191	24,527					309,897
Bioengineering Institute													0
													0
Civil and Envir Engr		1	1							1			3
		61,960	10,125							88,372			160,457
Chemistry and Biochemistry		1						1		1			3
		60,005						55,646		180,000			295,651
Chemical Engineering	2	1				1	3	1	1				9
	284,900	380,048				10,000	256,615	49,936	5,000				986,499
Computer Science	2	1	1	2	1		1	1	2	1			12
	572,896	13,500	19,500	176,863	95,492		15,000	25,000	413,731	58,635			1,390,617
Electrical and Computer Engr	2	3	1	2			3	1		1			13
	220,926	1,275,169	79,127	51,000			223,889	42,936		11,980			1,905,027
Fire Protection Engineering				1				1	1				3
				282,517				19,867	14,000				316,384
Humanities and Arts													0
													0
Interdisciplinary and Global	1	1											2
	60,733	6,000											66,733
Mathematical Science		2		1				1	2	1			7
		155,204		37,321				30,109	450,528	62,712			735,874
Mechanical Engineering	3	1	4	1	1	4	3	1	1				19
	183,071	60,000	298,900	107,000	15,000	169,482	173,051	34,000	70,000				1,110,504
Management													0
													0
Social Science & Policy Studies		1											1
		675,888											675,888
Physics		2			1		1	1	1				6
		210,000			30,001		29,665	59,997	31,168				360,831
Other	1		4	1						1			7
	66,212		842,525	14,000						1,000			923,737
SUBTOTALS	11	16	11	8	3	6	13	10	9	8	0	0	95
	\$1,388,738	\$3,121,654	\$1,250,177	\$668,701	\$140,493	\$238,781	\$912,523	\$416,255	\$1,279,812	\$462,699	\$0	\$0	\$9,879,833
Add: Earmarks			1							1			2
			839,000							848,000			\$1,687,000
TOTALS	11	16	12	8	3	6	13	10	9	9	0	0	97
	\$1,388,738	\$3,121,654	\$2,089,177	\$668,701	\$140,493	\$238,781	\$912,523	\$416,255	\$1,279,812	\$1,310,699	\$0	\$0	\$11,566,833

Worcester Polytechnic Institute
Awards Received by Department (12 Month Report Through April 2009)

Date: **April 2009**

Fiscal Year: **2008-2009**

	May-08	Jun-09	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	Cumulative
Biology and Biotechnology	1 122,231	1 6,125	1 293,745	2 21,289	1 12,289				2 18,684	2 152,483			10 626,846
Biomedical Engineering		2 130,000	2 164,980	1 2,000		1 16,488	2 130,000			1 27,202	1 219,526		10 690,196
Bioengineering Institute				1 150,000					1 29,924				2 179,924
Civil and Envir Engr	1 150,000					1 42,000							2 192,000
Chemistry and Biochemistry			1 169,933					1 51,565			3 535,553		5 757,051
Chemical Engineering	2 475,001	1 33,514	2 278,341		1 128,000	1 6,114			1 34,642		1 218,032		9 1,173,644
Computer Science	1 122,785	3 380,437	3 777,475	4 514,681						1 393,496	2 28,649	1 413,914	15 2,631,437
Electrical and Computer Engr	2 112,000	3 346,479		3 343,814	4 648,209	4 279,616	2 311,696	4 142,224	1 79,962	2 53,900			25 2,317,900
Fire Protection Engineering	1 7,515		3 247,099					1 15,843				2 230,080	7 500,537
Humanities and Arts													0 0
Interdisciplinary and Global				2 42,475							1 137,749		3 180,224
Mathematical Science				2 361,037						1 30,935	2 411,750		5 803,722
Mechanical Engineering	2 10,000	3 108,844	3 132,367		4 199,600	3 83,400	1 4,642	1 30,000	1 10,000	4 203,381	3 276,600	2 613,727	27 1,672,561
Management		1 87,000		1 7,000	1 749,985	1 42,592							4 886,577
Social Science & Policy Studies													0 0
Physics	1 7,615	2 35,625		1 233,194	1 53,594			1 33,302				1 7,715	7 371,045
Other		1 69,993			1 9,000	2 124,852	1 66,000			1 9,109	2 120,411	1 18,000	9 417,365
SUBTOTALS	11 \$1,007,147	17 \$1,198,017	15 \$2,063,940	17 \$1,675,490	13 \$1,800,677	13 \$595,062	6 \$512,338	8 \$272,934	6 \$173,212	12 \$870,506	15 \$1,948,270	7 \$1,283,436	140 \$13,401,029
Add: Earmarks		1 \$860,000											1 \$860,000
TOTALS	11 \$1,007,147	18 \$2,058,017	15 \$2,063,940	17 \$1,675,490	13 \$1,800,677	13 \$595,062	6 \$512,338	8 \$272,934	6 \$173,212	12 \$870,506	15 \$1,948,270	7 \$1,283,436	141 \$14,261,029