


**Worcester Polytechnic Institute
Report of Proposals Submitted
December 2008**

Department	Principal Investigator	Co-PI	Project Title	Sponsor	Prime Sponsor (if Sub)	Program Type	Amount Requested	Cost Sharing	Voluntary Uncommitted CS Amount	Proposal #
Biology and Biotechnology	Dilorio, A.		50 L Fermentation and Processing of EpiKal2	Dyax Corporation		Research	13,184	0		9128
	Dominko, T.		De-differentiating Adult Human Fibroblasts into Stem Like Cells Using Defined Conditions	NIH		Research	104,069	0	8,751	08074s1
	Mathews, L.		The Ecological Impacts of Anthropogenic Interference: an Investigation of Phylogeography and Invasive Species Biology in Southern New England	National Geographic Society		Research	19,698	10,282		9132
	Weathers, P.	Dominko, T.	Mist Bioreactor Culture of 3-D Engineered Tissues	Caisson Laboratories	NIH	Research	59,972	0		9138
Subtotal: 4						196,923	10,282	8,751		
Biomedical Engineering	Mendelson, Y.		A Wearable and Remote Health Monitor for the Warfighter	Streamline Automation, LLC	Army	Research	531,276	0	52,659	9146
Subtotal: 1						531,276	0	0		
Chemical Engineering	Camesano, T.		Phase 1: Cranberry Compounds to Remove Biofilms from PMMA	NineSigma, Inc.		Research	39,450	0	1,949	9142
	Ma, Y.		Pd Membranes for Hydrogen Separations for UMD/Ballard FC Gen System	Ballard Material Products	University of Maryland	Research	34,642	0		9137
Subtotal: 2						74,092	0	1,949		
Civil and Computer Engineering	Mallick, R.		SBIR: Roadway Power Systems	Novotech, Inc.	NSF	Research	26,953	0	0	9147
Subtotal: 1						26,953	0	0		
Computer Science	Lindeman, R.		RTC: Development of an Instrument Glove with Haptic Feedback for Robot Control - "Haptic iGlove"	AnthroTronix, Inc.	Army	Research	79,631	0	9,213	9134
	Lindeman, R.		HCC: Small: Effective Use of Haptics in Real, Virtual, and Teleoperated Environments	NSF		Research	493,550	0	49,141	9145
	Mani, M.		III: Small: Integrating Automata for Efficient Data Processing	NSF		Research	227,995	0	30,733	9140
	Rundensteiner, E.		III: Small: Collaborative Research: Harnessing Collective Intelligence for Information Exploration	NSF		Research	263,669	0	30,733	9141
	Rundensteiner, E.		III-Small: Query Mesh - A Novel Paradigm for Query Processing	NSF		Research	488,556	0	61,468	9139
	Wills, C.	Doyle, J., Claypool, M., Ward, M.	NetSE: Small: Development of a User-Centered Network Measurement Platform	NSF		Research	495,466	0	61,467	9135
Subtotal: 6						2,048,867	0	242,755		
Electrical and Computer Eng'g.	Huang, X.	Wyganski, A.	Building a Reconfigurable System Platform for Cognitive Radio	NSF		Research	299,490	0	46,547	9131
	Huang, X.		MQP: A FPGA Design of Beamforming for MIMO Wireless Communications	The Mathworks, Inc.		Education/ Training	6,000	0		9130
	Makarov, S.		A Wide Si pn-junction as a U-Patch Antenna Prototype	Physical Sciences, Inc. (PSI)	NSF	Research	24,723	0		9144

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	Makarov, S.		A Wideband Low-Cost Array in the UHF Band	Lawrence Livermore National Laboratory	DOE	Research	3,900	0		9143
	Wyglinski, A.		Communication System Prototyping for Software-Defined Radio Platforms	The Mathworks, Inc.		Education/ Training	6,000	0		9129
Subtotal: 5							340,113	0	46,547	
Mathematical Sciences	Walker, H.		Anderson Acceleration for Fixed-Point Iterations	NSF		Research	408,590	0	27,660	9133
Subtotal: 1							408,590	0	27,660	
Mechanical Engineering	Fischer, G.		Robotic Assistant for Precision Image Guided Deep Brain Stimulation Probe Placement in High-Field MRI	Fox (Michael J.) Foundation for Parkinson's Research		Research	86,096	0		9127
	Henry, M.	Backman, D.	Hold Time Fatigue Crack Growth	General Electric Global Research		Other	15,000	0		08111s1
	Van De Ven, J.	Olinger, D.	Liquid Piston Stirling Engine Pump for Hydraulic Hybrid Vehicles	EPA		Research	497,557	0	55,270	9136
Subtotal: 3						598,653	0	55,270		
 Total: 23							4,225,467	10,282	435,591	

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

Date: **December 2008**

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							17
	3,962,154	1,472,774		5,821,862	16,402	196,923							11,470,115
Biomedical Engineering	2		2	1		1							6
	579,137		420,394	215,960		531,276							1,746,767
Bioengineering Institute		1		2									3
		150,000		894,588									1,044,588
Civil and Envir Engr	1		2	3	2	1							9
	139,951		386,053	698,446	204,834	26,953							1,456,237
Chemistry and Biochemistry	1		1	1	4								7
	786,119		264,205	100,000	501,565								1,651,889
Chemical Engineering			1	1	1	2							5
			6,114	19,007,473	5,000	74,092							19,092,679
Computer Science	2	2	2	4	3	6							19
	637,144	659,904	103,394	5,564,501	634,933	2,048,867							9,648,743
Electrical and Computer Engr	5	3	5	4	3	5							25
	1,773,802	415,718	1,100,678	862,504	905,138	340,113							5,397,953
Fire Protection Engineering	2	1	4										7
	515,135	313,261	584,811										1,413,207
Humanities and Arts	1	1		1									3
	417,540	221,355		215,333									854,228
Interdisciplinary and Global	1	3											4
	6,500	376,678											383,178
Mathematical Science			1	4	3	1							9
			265,000	2,744,300	217,773	408,590							3,635,663
Mechanical Engineering		6	15	7	2	3							33
		3,087,303	2,470,816	2,278,277	383,522	598,653							8,818,571
Management													0
													0
Social Science & Policy Studies		2											2
		252,848											252,848
Physics	1	1	1		4								7
	275,628	285,366	299,950		823,605								1,684,549
Other	1		2		2								5
	9,109		103,852		379,911								492,872
SUBTOTALS	21	24	36	31	26	23	0	0	0	0	0	0	161
	\$9,102,219	\$7,235,207	\$6,005,267	\$38,403,244	\$4,072,683	\$4,225,467	\$0	\$0	\$0	\$0	\$0	\$0	\$69,044,087
Add: Earmarks													0
													0
TOTALS	21	24	36	31	26	23	0	0	0	0	0	0	161
	\$9,102,219	\$7,235,207	\$6,005,267	\$38,403,244	\$4,072,683	\$4,225,467	\$0	\$0	\$0	\$0	\$0	\$0	\$69,044,087

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

Date: **December 2008**

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								8
	33,272		446,967	889,027	66,907								1,436,173
Biomedical Engineering	2	1	1	2	2								8
	885,949	16,518	296,274	411,660	583,409								2,193,810
Bioengineering Institute		1	1	1	1								4
		81,944	149,971	711,868	800,350								1,744,133
Civil and Envir Engr			3	2	2	1							8
			443,391	236,275	348,125	74,916							1,102,707
Chemistry and Biochemistry	1	1											2
	1,156,495	60,005											1,216,500
Chemical Engineering	4			2	3								9
	1,369,614			1,507,787	315,890								3,193,291
Computer Science	4	1	2	1	4	8							20
	2,921,249	98,247	491,945	5,708	1,943,701	3,551,023							9,011,873
Electrical and Computer Engr	2	1	2	1		1							7
	854,359	44,912	109,127	414,697		328,714							1,751,809
Fire Protection Engineering	1	1	1	1									4
	479,095	599,640	19,867	179,467									1,278,069
Humanities and Arts													0
													0
Interdisciplinary and Global		2											2
		166,573											166,573
Mathematical Science	2		1	2	2	1							8
	1,476,903		62,712	957,434	676,245	296,715							3,470,009
Mechanical Engineering	7	1	6	7	1	1							23
	2,489,649	73,643	1,032,447	2,660,889	13,050	334,152							6,603,830
Management			1	2									3
			69,983	444,991									514,974
Social Science & Policy Studies			1										1
			50,912										50,912
Physics		1		2	3	1							7
		89,998		560,764	689,084	512,179							1,852,025
Other				1									1
				14,000									14,000
SUBTOTALS	24	10	22	26	20	13	0	0	0	0	0	0	115
	\$11,666,585	\$1,231,480	\$3,173,596	\$8,994,567	\$5,436,761	\$5,097,699	\$0	\$0	\$0	\$0	\$0	\$0	\$35,600,688
Add: Earmarks													0
													0
TOTALS	24	10	22	26	20	13	0	0	0	0	0	0	115
	\$11,666,585	\$1,231,480	\$3,173,596	\$8,994,567	\$5,436,761	\$5,097,699	\$0	\$0	\$0	\$0	\$0	\$0	\$35,600,688

Worcester Polytechnic Institute
Proposals Submitted by Department (12 Month Report Through December 2008)


Date: **December 2008**

Fiscal Year: **2008-2009**

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	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Cumulative
Biology and Biotechnology	5	2	3	1	1	4	4	4		3	2	4	33
	1,154,895	302,520	267,789	30,029	640,952	944,176	3,962,154	1,472,774		5,821,862	16,402	196,923	14,810,476
Biomedical Engineering	3	1	1	3		6	2		2	1		1	20
	530,527	2,000	235,800	241,399		864,223	579,137		420,394	215,960		531,276	3,620,716
Bioengineering Institute			1					1		2			4
			25,000					150,000		894,588			1,069,588
Civil and Envir Engr		5	1	2	3	1	1		2	3	2	1	21
		943,450	243,132	365,809	216,337	26,953	139,951		386,053	698,446	204,834	26,953	3,251,918
Chemistry and Biochemistry	1				2	3	1		1	1	4		13
	90,000				846,754	2,206,455	786,119		264,205	100,000	501,565		4,795,098
Chemical Engineering		6	1		3	2			1	1	1	2	17
		1,503,718	33,514		453,359	479,532			6,114	19,007,473	5,000	74,092	21,562,802
Computer Science	6		5	1	4	3	2	2	2	4	3	6	38
	5,648,628		12,761,540	1,499,850	1,060,535	1,419,176	637,144	659,904	103,394	5,564,501	634,933	2,048,867	32,038,472
Electrical and Computer Engr	1	1	9		2		5	3	5	4	3	5	38
	42,936	375,805	2,259,278		115,229		1,773,802	415,718	1,100,678	862,504	905,138	340,113	8,191,201
Fire Protection Engineering		2	1		1		2	1	4				11
		146,386	47,822		1,533,121		515,135	313,261	584,811				3,140,536
Humanities and Arts							1	1		1			3
							417,540	221,355		215,333			854,228
Interdisciplinary and Global					1		1	3					5
					149,830		6,500	376,678					533,008
Mathematical Science	4	2		1	1	3			1	4	3	1	20
	975,421	1,076,325		599,399	759,434	156,116			265,000	2,744,300	217,773	408,590	7,202,358
Mechanical Engineering	5	4	7	3	6	8		6	15	7	2	3	66
	1,089,511	1,062,162	772,407	2,531,471	1,594,635	1,347,305		3,087,303	2,470,816	2,278,277	383,522	598,653	17,216,062
Management	1	1			1	1							4
	497,035	749,985			50,000	40,502							1,337,522
Social Science & Policy Studies								2					2
								252,848					252,848
Physics	1	4	1	1		2	1	1	1		4		16
	233,194	646,050	31,168	11,250		119,870	275,628	285,366	299,950		823,605		2,726,081
Other			1	1			1		2		2		7
			30,000	10,000			9,109		103,852		379,911		532,872
SUBTOTALS	27	28	31	13	25	33	21	24	36	31	26	23	318
	\$10,262,147	\$6,808,401	\$16,707,450	\$5,289,207	\$7,420,186	\$7,604,308	\$9,102,219	\$7,235,207	\$6,005,267	\$38,403,244	\$4,072,683	\$4,225,467	\$123,135,786
Add: Earmarks		2											2
		1,708,000											1,708,000
TOTALS	27	30	31	13	25	33	21	24	36	31	26	23	320
	\$10,262,147	\$8,516,401	\$16,707,450	\$5,289,207	\$7,420,186	\$7,604,308	\$9,102,219	\$7,235,207	\$6,005,267	\$38,403,244	\$4,072,683	\$4,225,467	\$124,843,786

Worcester Polytechnic Institute
Report of Awards Received
December 2008

Department	Principal Investigator	Co-PI	Project Title	Sponsor	Prime Sponsor (if Sub)	Action Type	Amount Awarded	Cost Sharing	Voluntary Uncommitted CS Amount	Program Type	Proposal #
Chemistry and Biochemistry	Connors, R.		Light-Activated Decontaminating Surfaces (LADS) for Individual and Collective Protection	Ventana Research Corporation	Air Force	Con't.	51,565	0	461	Research	08022c1
Subtotal: 1							51,565	0	461		
Electrical and Computer Eng'g.	Brown, D.		CAREER: Cooperative Communication Systems: Resource Allocation, Self-Organization, and Synchronization	NSF		Con't.	114,995	22,320		Research	5008
	Huang, X.		MQP: A FPGA Design of Beamforming for MIMO Wireless Communications	The Mathworks, Inc.		New	6,000	0		Education/ Training	9130
	Wygliniski, A.		International Workshop on the Future of Mobile Wireless Networking	University of Kansas	NSF	New	15,229	0		Research	8210
	Wygliniski, A.		Communication System Prototyping for Software-Defined Radio Platforms	The Mathworks, Inc.		New	6,000	0		Education/ Training	9129
Subtotal: 4						142,224	22,320	0			
Fire Protection Eng'g.	Rangwala, A.		Material Flammability Using a B Number	Schirmer Engineering		New	15,843	0		Research	9071
Subtotal: 1						15,843	0	0			
Mechanical Engineering	Pryputniewicz, R.		Metrology System for Defense Freedom Optics	MetroLaser, Inc.	Missile Defense Agency	New	30,000	0	19,020	Research	8238
Subtotal: 1						30,000	0	19,020			
Physics	Quimby, R.		A Novel Broad-Band Light Source for FOG Systems	Boston University	Draper Laboratory	New	33,302	0		Research	8235
Subtotal: 1						33,302	0	0			
 Total: 8							272,934	22,320	19,481		

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

Date: **December 2008**

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										4 327,303
Biomedical Engineering	2 164,980	1 2,000		1 16,488	2 130,000								6 313,468
Bioengineering Institute		1 150,000											1 150,000
Civil and Envir Engr				1 42,000									1 42,000
Chemistry and Biochemistry	1 169,933					1 51,565							2 221,498
Chemical Engineering	2 278,341		1 128,000	1 6,114									4 412,455
Computer Science	3 777,475	4 514,681											7 1,292,156
Electrical and Computer Engr		3 343,814	4 648,209	4 279,616	2 311,696	4 142,224							17 1,725,559
Fire Protection Engineering	3 247,099					1 15,843							4 262,942
Humanities and Arts													0 0
Interdisciplinary and Global		2 42,475											2 42,475
Mathematical Science		2 361,037											2 361,037
Mechanical Engineering	3 132,367		4 199,600	3 83,400	1 4,642	1 30,000							12 450,009
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							3 320,090
Other			1 9,000	2 124,852	1 66,000								4 199,852
SUBTOTALS	15 \$2,063,940	17 \$1,675,470	13 \$1,800,677	13 \$595,062	6 \$512,338	8 \$272,934	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	72 \$6,920,421
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	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	0 \$0	72 \$6,920,421

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

Date: **December 2008**

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													0
													0
Biomedical Engineering		2				1							3
		223,880				59,299							283,179
Bioengineering Institute													0
													0
Civil and Envir Engr		1	1										2
		61,960	10,125										72,085
Chemistry and Biochemistry		1											1
		60,005											60,005
Chemical Engineering	2	1				1							4
	284,900	380,048				10,000							674,948
Computer Science	2	1	1	2	1								7
	572,896	13,500	19,500	176,863	95,492								878,251
Electrical and Computer Engr	2	3	1	2									8
	220,926	1,275,169	79,127	51,000									1,626,222
Fire Protection Engineering				1									1
				282,517									282,517
Humanities and Arts													0
													0
Interdisciplinary and Global	1	1											2
	60,733	6,000											66,733
Mathematical Science		2		1									3
		155,204		37,321									192,525
Mechanical Engineering	3	1	4	1	1	4							14
	183,071	60,000	298,900	107,000	15,000	169,482							833,453
Management													0
													0
Social Science & Policy Studies		1											1
		675,888											675,888
Physics		2			1								3
		210,000			30,001								240,001
Other	1		4	1									6
	66,212		842,525	14,000									922,737
SUBTOTALS	11	16	11	8	3	6	0	0	0	0	0	0	55
	\$1,388,738	\$3,121,654	\$1,250,177	\$668,701	\$140,493	\$238,781	\$0	\$0	\$0	\$0	\$0	\$0	\$6,808,544
Add: Earmarks			1										1
			839,000										\$839,000
TOTALS	11	16	12	8	3	6	0	0	0	0	0	0	56
	\$1,388,738	\$3,121,654	\$2,089,177	\$668,701	\$140,493	\$238,781	\$0	\$0	\$0	\$0	\$0	\$0	\$7,647,544

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Awards Received by Department (12 Month Report Through December 2008)

Date: December 2008

Fiscal Year: 2008-2009

	Jan-08	Feb-08	Mar-08	Apr-08	May-08	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Cumulative
Biology and Biotechnology	1	1	1	2	1	1	1	2	1				11
	212,112	74,237	295,385	60,000	122,231	6,125	293,745	21,289	12,289				1,097,413
Biomedical Engineering	1	1				2	2	1		1	2		10
	2,191	24,527				130,000	164,980	2,000		16,488	130,000		470,186
Bioengineering Institute								1					1
								150,000					150,000
Civil and Envir Engr				1	1					1			3
				88,372	150,000					42,000			280,372
Chemistry and Biochemistry		1		1			1					1	4
		55,646		180,000			169,933					51,565	457,144
Chemical Engineering	3	1	1		2	1	2		1	1			12
	256,615	49,936	5,000		475,001	33,514	278,341		128,000	6,114			1,232,521
Computer Science	1	1	2	1	1	3	3	4					16
	15,000	25,000	413,731	58,635	122,785	380,437	777,475	514,681					2,307,744
Electrical and Computer Engr	3	1		1	2	3		3	4	4	2	4	27
	223,889	42,936		11,980	112,000	346,479		343,814	648,209	279,616	311,696	142,224	2,462,843
Fire Protection Engineering		1	1		1		3					1	7
		19,867	14,000		7,515		247,099					15,843	304,324
Humanities and Arts													0
													0
Interdisciplinary and Global								2					2
								42,475					42,475
Mathematical Science		1	2	1				2					6
		30,109	450,528	62,712				361,037					904,386
Mechanical Engineering	3	1	1		2	3	3		4	3	1	1	22
	173,051	34,000	70,000		10,000	108,844	132,367		199,600	83,400	4,642	30,000	845,904
Management						1		1	1	1			4
						87,000		7,000	749,985	42,592			886,577
Social Science & Policy Studies													0
													0
Physics	1	1	1		1	2		1	1			1	9
	29,665	59,997	31,168		7,615	35,625		233,194	53,594			33,302	484,160
Other				1		1			1	2	1		6
				1,000		69,993			9,000	124,852	66,000		270,845
SUBTOTALS	13	10	9	8	11	17	15	17	13	13	6	8	140
	\$912,523	\$416,255	\$1,279,812	\$462,699	\$1,007,147	\$1,198,017	\$2,063,940	\$1,675,490	\$1,800,677	\$595,062	\$512,338	\$272,934	\$12,196,894
Add: Earmarks				1		1							2
				\$848,000		\$860,000							\$1,708,000
TOTALS	13	10	9	9	11	18	15	17	13	13	6	8	142
	\$912,523	\$416,255	\$1,279,812	\$1,310,699	\$1,007,147	\$2,058,017	\$2,063,940	\$1,675,490	\$1,800,677	\$595,062	\$512,338	\$272,934	\$13,904,894