



Cessna Aircraft Company Raytheon Missile Systems AIAA Foundation

The 2011 Cessna Aircraft Company/Raytheon Missile Systems Design/Build/Fly Competition Flyoff was held at TIMPA Field in Tucson, AZ on the weekend of April 15-17, 2011. This was the 15th year the competition was held. Of the record 94 entries this year, 82 teams submitted written reports to be judged. 70 teams attended the flyoff, all of which completed the technical inspection. Over 700 students, faculty, and guests were present. The weather was sunny and warm allowing for non-stop flying. Of the 207 official flight attempts, 133 resulted in a successful score divided among 55 teams. Thirty-three teams successfully completed all three missions. The quality of the teams, their readiness to compete, and the execution of the flights continues to improve each year. This year's requirement to pre-inspect the airplanes with an advisor before the competition sped up the technical inspections and expedited teams getting to a flight attempt.

The contest theme this year was a Soldier Portable UAV. The airplane had to fit in a commercially available suitcase meeting airline carry-on requirements. The first mission was a "dash to critical target" with no payload followed by an Ammo Re-supply mission (steel bar payload) and a Medical Supply mission (golf balls). As usual, the total score is the product of the flight score and written report score. More details on the mission requirements can be found at the competition website: <http://www.aiaadbf.org>.

First Place went to Georgia Tech University Team *ThereWillBeBuzz*, Second Place went to University of Southern California Team *The RFB* and Third Place went to Purdue University Team *Golfstream*. A full listing of the results is included below. The Best Paper Award, sponsored by the Design Engineering TC for the highest report score, went to Technion University Team *GolfiTech* with a score of 98.50.

We owe our thanks for the success of the DBF competition to the efforts of many volunteers from Cessna Aircraft, Raytheon Missile Systems, and the AIAA sponsoring technical committees: Applied Aerodynamics, Aircraft Design, Flight Test, and Design Engineering. These volunteers collectively set the rules for the contest, publicize the event, gather entries, judge the written reports, and organize the flyoff. Thanks also go to the corporate Sponsors: Raytheon Missile Systems and Cessna Aircraft Company, and also to the AIAA Foundation for their financial support. Special thanks go to Raytheon Missile Systems for hosting the flyoff this year.

Finally, this event would not be nearly as successful without the hard work and enthusiasm from all the students and advisors. If it weren't for you, we wouldn't keep doing it.

Russ Althof
For the DBF Governing Committee

2011 Design/Build Fly Competition Final Results

Place	University	Entry Name	Report Score	RAC	Mission 1 Score	Mission 2 Score	Mission 3 Score	Total Flight Score	Final Score
1	GeorgiaTech	ThereWillBeBuzz	92.55	0.42	0.4	1.8	0.1	2.3	331
2	University of Southern California	The RFB	90.50	0.40	0.7	1.5	0.0	2.2	321
3	Purdue University	Golfstream	97.50	0.31	0.6	1.1	0.0	1.7	305
4	Wichita State University	MiniWheat	90.50	1.38	0.7	2.0	0.8	3.5	270
5	California Polytechnic State University (SLO)	Balls Deep	88.00	0.49	0.6	1.4	0.1	2.1	261
6	Middle East Technical University	Anatolian Craft	91.23	1.88	1.0	1.9	1.0	3.9	260
7	University of Texas at Austin	TX-11	90.75	1.13	0.7	1.8	0.5	3.0	253
8	Technion	GolfiTech	98.50	4.13	0.6	1.8	2.0	4.4	213
9	Sapienza University of Rome	SF150-T	95.85	2.88	0.7	1.7	1.3	3.7	207
10	MIT	Air Fore One	91.00	3.75	0.7	1.8	1.9	4.4	206
11	University of Colorado, Boulder	Unmanned Aerial Buffalo	93.00	3.13	0.7	1.8	1.4	3.9	204
12	West Virginia University	WVU Blue	94.50	2.38	0.7	1.7	0.8	3.3	202
13	San Jose State University	Page Seven	90.00	2.38	0.7	1.7	0.8	3.1	184
14	University of Ljubljana	EdvardRusjanSlovenian	86.50	2.75	0.1	1.9	1.4	3.4	176
15	University of Texas at Austin	SteelBalls	90.15	1.88	0.7	1.4	0.5	2.6	171
16	Middle East Technical University	OwlTamers	88.00	2.50	0.4	1.6	0.9	2.9	164
17	University of Florida	Agent Blue	92.00	2.75	0.9	1.4	0.7	2.9	162
18	Virginia Polytechnic Institute and State University	Victor	93.25	2.38	0.9	1.8	0.0	2.6	159
19	Florida A&M University - Florida State University	Air Hercules	87.50	2.13	0.6	1.5	0.5	2.5	151
20	University of California, San Diego	TLAR XI	82.00	1.38	0.6	1.2	0.3	2.0	142
21	Rensselaer Polytechnic Institute	Redhawks	92.00	3.50	0.4	1.4	1.0	2.8	138
22	Concordia University	Stingers	86.50	3.13	0.7	1.2	0.5	2.5	121
23	Pennsylvania State University	Penn State Espionage	91.50	0.12	0.4	0.0	0.0	0.4	114
24	University of Washington	Puget Sound Barrier	76.50	3.25	0.9	1.8	0.0	2.7	114
25	TOBB University of Economics and Technology	HEZARFEN	75.50	3.75	0.6	1.1	0.8	2.5	98
26	Istanbul Technical University	Istanbul	91.00	3.13	0.4	1.5	0.0	1.9	97
27	University of Strathclyde	Raiden	76.00	2.63	0.6	1.5	0.0	2.1	97
28	University of Notre Dame	NelsonsGrandkids	79.50	3.88	0.4	0.9	0.7	2.1	84
29	RoseHulman	Zephyrus	79.00	3.00	0.6	0.9	0.3	1.8	82
30	Anadolu University	Kasif Team	73.00	3.25	0.7	0.8	0.5	2.0	80
31	GeorgiaTech	AirBuzzA380	91.50	0.44	0.6	0.0	0.0	0.6	79
32	North Dakota State University	Flyin' Bison	67.00	2.50	0.4	0.9	0.4	1.7	73
33	University of Arizona	Double Bogey	74.00	2.75	0.7	0.9	0.0	1.6	71
34	City College of New York	CCNY UAV	57.00	3.50	0.6	1.2	0.6	2.3	70
35	University of Tennessee - Knoxville	Volts	70.35	2.88	0.7	0.7	0.2	1.7	69
36	University of Illinois at Urbana-Champaign	Team Phoenix	88.25	4.38	0.6	1.1	0.0	1.6	69
37	University of Dayton	UD Flyers	63.50	4.25	0.7	1.4	0.0	2.1	66
38	Johns Hopkins University	The Blue Jays	78.50	2.75	0.4	0.7	0.2	1.4	64
39	University of Nebraska - Lincoln	Black Storm	74.50	2.25	0.4	0.7	0.2	1.3	63
40	Western Michigan University	Bronco Aircraft	74.00	4.13	0.6	1.0	0.0	1.5	56
41	Monroe Community College	MCCAirCaddy	45.54	2.88	0.6	1.1	0.5	2.1	56
42	University of California Irvine	CaddyShack	91.00	2.38	0.9	0.0	0.0	0.9	51
43	San Diego State University	Monty's Bayfinder	83.50	3.25	1.0	0.0	0.0	1.0	46
44	Chulalongkorn University	Night Hawk	62.76	3.38	0.6	0.5	0.2	1.3	46
45	Virginia Polytechnic Institute and State University	Tango	79.50	3.00	0.7	0.0	0.0	0.7	33
46	University of Illinois at Urbana-Champaign	The Caddy Masters	84.00	3.00	0.6	0.0	0.0	0.6	28
47	Washington State	Crimson Phoenix	87.50	4.88	0.6	0.0	0.0	0.6	23
48	Ohio State University	OSUBuckFly	56.00	4.75	0.4	0.3	0.1	0.8	20
49	University of Kentucky	Blue Dawn	82.75	3.25	0.4	0.0	0.0	0.4	20
50	University of Arkansas	Swine Flew	90.00	4.13	0.1	0.3	0.0	0.4	19
51	Sapienza University of Rome	Archimede	67.00	5.38	0.4	0.0	0.0	0.4	12
52	Embry-Riddle	Eagles	72.50	3.13	0.3	0.0	0.0	0.3	12
53	Columbia University	CUintheAir	71.50	4.38	0.3	0.0	0.0	0.3	10
54	Erciyes University	AirErciyes	50.00	3.38	0.3	0.0	0.0	0.3	8
55	University of Oklahoma	Crimson Skies	83.00	3.38	0.1	0.0	0.0	0.1	6
56	University of Kansas	Crimson and Blue	95.00	0.00	0.0	0.0	0.0	0.0	0
57	University of California, Los Angeles	Spirit of Westwood	93.50	0.00	0.0	0.0	0.0	0.0	0
58	Clarkson University	KnightHawks	93.00	0.00	0.0	0.0	0.0	0.0	0
59	University of Central Florida	UCFKnights	90.00	0.00	0.0	0.0	0.0	0.0	0
60	University of Alabama	Crimson Hawx	87.00	0.00	0.0	0.0	0.0	0.0	0

2011 Design/Build Fly Competition Final Results (cont)

Place	University	Entry Name	Report Score	FAC	Mission 1 Score	Mission 2 Score	Mission 3 Score	Total Flight Score	Final Score
61	University of Strathclyde	Strathclyde Aero Systems	84.00	0.00	0.0	0.0	0.0	0.0	0
62	Auburn University	Just Plane Ausome	82.75	0.00	0.0	0.0	0.0	0.0	0
63	Syracuse University	Syracuse Orange	80.75	0.00	0.0	0.0	0.0	0.0	0
64	Case Western Reserve University	suit Case	80.50	0.00	0.0	0.0	0.0	0.0	0
65	University at Buffalo The State Univeresity of New York	Blue Steel	80.25	0.00	0.0	0.0	0.0	0.0	0
66	New Mexico State University	Crimson Jett	77.00	0.00	0.0	0.0	0.0	0.0	0
67	Arizona State University	Sparrow Hawk	75.50	0.00	0.0	0.0	0.0	0.0	0
68	Parks College at Saint Louis University	Spirit of Saint Louis	74.50	0.00	0.0	0.0	0.0	0.0	0
69	The American University of Sharjah	AUS	73.50	0.00	0.0	0.0	0.0	0.0	0
70	California Polytechnic State University (Pomona)	Ultra Force	69.00	0.00	0.0	0.0	0.0	0.0	0
71	Duke University	TeamBravo	64.00	0.00	0.0	0.0	0.0	0.0	0
72	Swansea University	SU-Team Eyr	64.00	0.00	0.0	0.0	0.0	0.0	0
73	Arizona State University	Team Merica	63.00	0.00	0.0	0.0	0.0	0.0	0
74	New Mexico Tech	Aero Design Team	62.77	0.00	0.0	0.0	0.0	0.0	0
75	New Mexico State University	AARES	62.34	0.00	0.0	0.0	0.0	0.0	0
76	University of Massachusetts Lowell	River Hawk	59.25	0.00	0.0	0.0	0.0	0.0	0
77	Khalifa University	KUSTAR	56.38	0.00	0.0	0.0	0.0	0.0	0
78	UCBerkeley	AirBears	50.00	0.00	0.0	0.0	0.0	0.0	0
79	Istanbul Technical University	ATA-12	45.08	0.00	0.0	0.0	0.0	0.0	0
80	Drexel University	DrexelAIRalpha	35.00	0.00	0.0	0.0	0.0	0.0	0
81	Lehigh University	Lehigh Mountain Hawks	33.83	0.00	0.0	0.0	0.0	0.0	0
82	MIT	Mulligan	2.50	0.00	0.0	0.0	0.0	0.0	0

First Place – Georgia Tech University Team *ThereWillBeBuzz*



Second Place – University of Southern California Team *The RFB*



Third Place – Purdue University Team *Golfstream*

