THE 25TH ANNUAL

#IGVC

INTELLIGENT GROUND VEHICLE COMPETITION

Oakland University

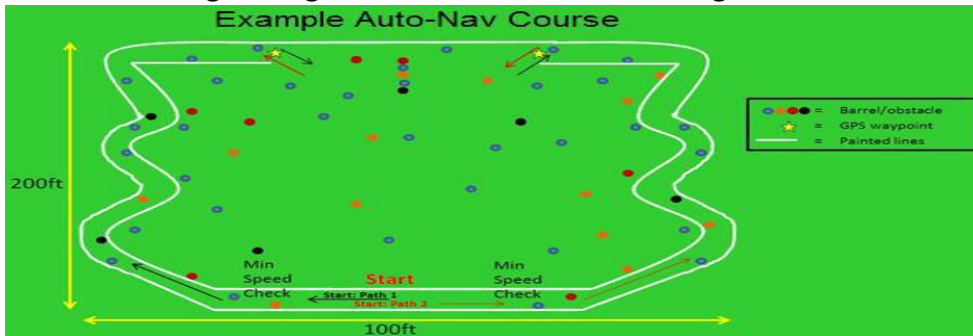Rochester, Michigan

June 2nd – 5th, 2017

www.IGVC.org

Objective

To challenge college engineering student teams to design autonomous vehicles and compete in a variety of unmanned mobility competitions.

Events and Awards

Auto-Nav Challenge:

Vehicles must complete an outdoor course in full autonomous mode while negotiating obstacles and maneuvering using GPS coordinates to target destinations. $3,000

Design Competition:

A written report is submitted, then an oral presentation and vehicle demonstration is presented to IGVC Design Judge Panel. $3,000

IOP Challenge:

Vehicles perform with the IOP open architecture for unmanned systems. $3,000

Spec 2 Demonstration/Meet (New for 2017):

A freelance event utilizing a FMVSS-500 vehicle equipped with automotive systems drive-by-wire and ADAS sensors, performing the following actions: lane keeping, lane switch, merging, avoiding crossing obstacles (pedestrians (mannequins) and vehicles), self-parking, right/left/intersection detection/logic. $2000

Rookie-of-the-Year:

The best performance for a team from a new school competing. $1,000

Grand Award:

The best overall performance in combined event scoring by a team. 1st-3rd Trophies

Real-World Applications

To advance and promote intelligent mobility for civilian and military ground vehicles. Intelligent mobility will provide the driver aids required for future Advanced Driver Assistance Systems (ADAS) and Active Safety and supplement Connected Vehicle Technology. For military systems, autonomous mobility will enable unmanned combat vehicles to perform high risk operations and multiply the force effectiveness of manned systems. IGVC objectives for military applications focus on goals established by the Department of Defense. IGVC promotes core intelligent mobility competencies in perception, planning, actuation and mechatronics.

Educational Benefits

IGVC has been highly praised by participating faculty advisors as an excellent multi-disciplinary design experience for student teams, and a number of engineering schools give credit in senior design courses for student participation.

Thursday, June 1st, 2017:
1600 - 1800 Hrs Early Registration
1600 - 2000 Hrs Equipment Drop Off

Friday, June 2nd, 2017:
0900 - 1800 Hrs Registration
0900 - 1800 Hrs Merchandise Sales Booth
0900 - 2000 Hrs Practice Course
1200 - 2000 Hrs Qualification Course
1400 - 1800 Hrs IOP Challenge
1700 - 1900 Hrs Sponsor VIP Reception (Design Tent) - Hosted by
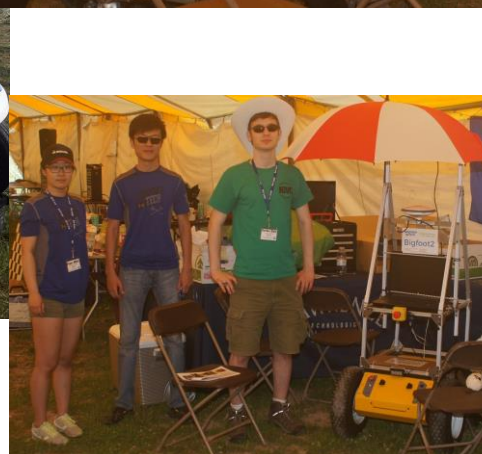Oakland University School of Engineering and Computer Science

Saturday, June 3rd, 2017:
0800 - 0900 Hrs IOP Briefing
0800 - 1800 Hrs Design Competition
0800 - 2000 Hrs Practice Course
0800 - 2000 Hrs Spec 2 Practice (When IGVC Official Available)
0900 - 1800 Hrs Registration
0900 - 1800 Hrs Qualification Course
0900 - 1800 Hrs Merchandise Sales Booth
0900 - 1800 Hrs IOP Challenge
Lunch: 1100 - 1300 Hrs Hippo's Hot Dogs - Hosted by Magna Electronics
1200 - 1230 Hrs Team Captains Meeting
1400 - 1700 Hrs Auto-Nav Heat 1
Dinner: 1800 - 1900 Hrs Pizza Team Social – Hosted by Hyundai Mobis

Sunday, June 4th, 2017:
0800 - 0900 Hrs IOP Briefing
0800 - 1400 Hrs Spec 2 Practice (When IGVC Official Available)
0800 - 2000 Hrs Practice Course
0900 - 1200 Hrs Design Competition Finals
0900 - 1700 Hrs Registration
0900 - 1700 Hrs Qualification Course
0900 - 1700 Hrs Merchandise Sales Booth
0900 - 1800 Hrs IOP Challenge
1000 - 1300 Hrs Auto-Nav Heat 2
Lunch: 1100 - 1300 Hrs Pizza - Hosted by Molex
1400 - 1700 Hrs Spec 2
1400 - 1700 Hrs Auto-Nav Heat 3
1800 - 1900 Hrs Faculty Meeting

Monday, June 5th, 2017:
0800 - 0830 Hrs Team Lineup
0830 - 0900 Hrs Opening Ceremony
0900 - 1200 Hrs Auto-Nav Heat 4
0900 - 1600 Hrs Qualification Course
0900 - 1600 Hrs Spec 2
0900 - 1700 Hrs Practice Course
0900 - 1700 Hrs Merchandise Sales Booth

Red events are mandatory for all teams

Vehicle	College/University
SeDriCa	Indian Institute of Technology - Bombay, INDIA
Sparky	Roger Williams University
Charlie	Michigan Technological University
Lazarus	Bob Jones University
Orange 2017	Hosei University
DOLLE	Embry-Riddle Aeronautical University
Daksh	Indian Institute of Technology - Kanpur
Night Owl	Kennesaw State University
Penguino	Oakland University
SubaRoo	The University of Akron
SQUIRREL	Trinity College
Betsy	Universite' de Moncton
Bender	Boise State University
Iggy	United States Military Academy
R.E.V.O.	University of Illinois at Chicago
Continental-OU (Spec 2)	Oakland University
Cilantro	Old Dominion University
Octagon v3.0	Oakland University

Vehicle	College/University
BEAST	Florida Institute of Technology
PANthAR (Spec 2)	Florida Institute of Technology
Jaymi	Georgia Institute of Technology
iWheels 3	Lawrence Technological University
MOBIS-Dataspeed-LTU (Spec 2)	Lawrence Technological University
AMOS III	Rochester Institute of Technology
Apollo II	CART, Inc. at Bluefield State College
M.A.S.K.	Lawrence Technological University
Acadia	The College of New Jersey
Dokalman	University of Cincinnati
OHM 5.0	University of Michigan Dearborn
Great Uncle ViktoRAS	University of Texas at Austin
Jack Frost	University of British Columbia
Abhiyaan	Indian Institute of Technology - Madras
Spec 2 Vehicle	Bob Jones University
Autobee	Istanbul Technical University
Lancebot	University of Detroit Mercy

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