

USF Chem-E-Car Qualifies for the 2018 AIChE National Competition in Pittsburg, PA

The USF Chem-E-Car team led by USF undergraduates Rajeev Gopal and Casey Monroe competed in the AIChE Southern Regional Student Meeting held at Louisiana State University (April 7, 2018). The competition requires students to design and build a small autonomous vehicle whose propulsion system and control mechanism rely on chemical reactions. The goal is for the car to travel a defined distance and to stop without outside intervention. The distance is announced 1 hour before the start of the competition. The USF car, called the Phoenix, was propelled by a hydrogen fuel cell and electric motor. The stopping mechanism relied on an iodine clock reaction, in which the solution turned opaque after a specific time that is controlled by the reactants. A photodiode detects the change in the opacity of the solution and shuts off the hydrogen fuel cell.

The USF car was amongst 23 teams competing. Only the top 5 teams qualify for the national competition. The USF missed the target distance of 54 feet by only 3 feet and placed 5th in the competition, thus qualifying for the National Competition to be held in Pittsburg, PA.

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