



EMAV - International Micro UAS Competition

By Guido de Croon, EMAV Organization Committee

The European Micro Air Vehicle conference and competition is one of the leading events concerning Micro Air Vehicles (MAVs). At previous editions, about 100-150 scientists from all over the world attended the EMAV, including experts from the USA, Turkey, Iran, Israel, China, and South Korea. As all EMAV and IMAV events in the past, the EMAV 2009 has both an emphasis on theoretical work and on the demonstration of actual MAV platforms in the competitions.

The objective of the conference part is to provide an effective and established forum for discussion and dissemination of original and recent advances in MAV technology. Articles presented at the conference address novel, challenging and innovative ideas, concepts or systems. This year's particular attention is on research that goes beyond MAV hardware, and addresses issues such as the collaboration of multiple MAVs, applications of computer vision, and non-GPS based navigation. The best articles will be eligible for publication in the novel International Journal of Micro Air Vehicles.

There will be four competitions.

1. Outdoor Endurance Competition: there is great interest in very small MAVs that can fly long distances. The endurance mission simulates a mission in which the MAV has to drop a payload (paintball) far from the launch zone.
2. Outdoor Autonomy Competition: one or more MAVs perform a variety of missions, including finding a truck in a search

area, flying through arches and against balloons, and dropping a paint ball in the right drop zone. The limited time to perform all of these tasks, is a stimulation for using multiple MAVs.

3. Indoor Dynamics Competition: the MAV has to fly figures of 8 around two poles in the indoor hall of the Technical University of Delft. This is a test for speed and agility, and a likely stepping stone for indoor autonomous flight.
4. Indoor Autonomy Competition: simulation of a complex mission. The MAVs should fly into and out of a small house, while recognising patterns, picking up a small object, and performing a precision landing.

EMAV 2009 is organised by both the Aerospace Software and Technologies Institute (Technical University of Delft) and the Decis lab (Thales research).

EMAV 2009 will take place in Delft, the Netherlands, from 14–17 September 2009. For more information on both the conference and competitions, please visit our web site: <http://www.emav2009.org>

THALES

TU Delft