Instructor: Professor Rama Chellappa (chella@umd.edu)
GTA: Mr. Bill Churma (churma@umd.edu)

Meeting times:

Students are required to attend all lectures in the Booz Allen Hamilton Distinguished Colloquium in Electrical and Computer Engineering fall 2015 series. The colloquium schedule is available at http://www.ece.umd.edu/events/colloquium.

You must sign-in at each colloquium to receive credit for attending.

Assignments:

After each colloquium, students must visit https://elms.umd.edu to submit their feedback in the “Assignment” section. The feedback should be a brief written response (approximately 100-150 words) that critiques the lecture. Assignments are due one week following each colloquium. Two sample assignments follow the first page of the syllabus.

Grading Method:

This course will be graded S-F. Grades will be based on attendance of the colloquium lectures and submission of assignments. Students who attend all colloquia and complete all assignments to satisfaction will earn a grade of S.

Academic Integrity:

The University of Maryland, College Park has a nationally recognized Code of Academic Integrity, administered by the Student Honor Council. This Code sets standards for academic integrity at Maryland for all undergraduate and graduate students. As a student you are responsible for upholding these standards for this course. It is very important for you to be aware of the consequences of cheating, fabrication, facilitation, and plagiarism. For more information on the Code of Academic Integrity or the Student Honor Council, please visit http://shc.umd.edu.

Excused absences:

It is required that you attend every colloquium to earn a grade of S in the course. If you must miss colloquium due to an academic commitment (conference presentation, interview, etc.), you must request permission from Professor Chellappa or Mr. Churma in advance of the missed class.

For absences due to illness or other medical reasons, the class will comply with University policy. Please see: http://www.president.umd.edu/policies/docs/V-100G.pdf.
1 Summary of the talk

The talk was on tracking and location mapping in the absence of synchronized mapping systems such as GPS etc. This can happen in different situations such as in mountains, or indoor environments. One of the ideas that I liked in the talk was using indoor signals such as wifi for location mapping. This tries to use the fixed location of wifi transmitters communication with person’s cell phone for location mapping in a way similar to GPS. This requires some central synchronization unit of course. The challenge that this method faces is the low signal to noise ratio of such signals which makes them distorted and hard to process. The other problem is the changes in how the cell phone is handled, a phenomenon called fading, which makes it even harder for these signals to be processed.
1 Summary of the Talk

Autism is a developmental disorder that appears in the first 3 years of life, and affects the brain’s normal development of social and communication skills. Treatments are very costly for the families of those who suffer. People with autism experience a tough life and are 20 times more likely to attempt suicide.

The talk was about a theory that might help explain “what” is autism and “why” it happens: people with autism have trouble with ‘temporal integration’, or drawing upon information learned in the past to anticipate the future. The basic idea is that meaningful social interactions, which are difficult for people with autism, depend on precisely synchronized events [1]. Technically speaking they tried to model states of mind of autism using a three state Markov model which consists of ”social interactions”, ”communication” and ”play”. The interesting thing about the model was that it was consistent with clinical experiments.

References