Photos by Douglas Yazell for AIAA Houston Section GN&C Technical Committee L&L of 3/31/15

GN&C TC Chair: Dr. Steven E. Everett

L&L Presenter: Chris D'Souza, PhD, NASA/JSC

Just in Case Someone Writes a Newsletter Article

www.aiaahouston.org

www.aiaahouston.org/newsletter

http://www.aiaahouston.org/gnc_technical_committee/

douglas.yazell@me.com

AIAA Houston Section Councilor

30 photos

Flickr.com

Douglas Yazell will email a link (Flickr) to Steve Everett & Michael Martin, Section Chair

Events Link, www.aiaahouston.org

Lunch and Learn: Fundamentals of Kalman Filtering and Estimation in Aerospace Engineering

March 31 @ 11:30 am - 1:00 pm

Bring your lunch and join AIAA Houston and Dr. Chris D'Souza on a presentation on Kalman Filtering.

About the Author

Chris D'Souza received his BS and MS degrees in Aerospace Engineering at the University of Illinois, Urbana-Champaign and his Ph.D. in aerospace engineering from the University of Texas at Austin. He began his career at the Jet Propulsion Laboratory working on the Magellan Mission to Venus. From 1990-1996, he worked for the US Air Force Research Laboratory at Eglin AFB, focusing on optimization of trajectoriesand the very first implementation of differential GPS-aided guided munition navigation design. He left the Air Force in 1996 and accepted a position at The Charles Stark Draper Laboratory in Cambridge and Houston specializing in autonomous rendezvous and docking, linear covariance analysis and pseudospectral methods for trajectory optimization. Since 2005, he has been with the Johnson Space Center, first working on the Orion Navigation, Guidance and Targeting design for both rendezvous and cislunar operations. He is currently the deputy chief of the GNC Autonomous Flight Systems Branch.

About the Presentation

Kalman Filtering and Least Squares Estimation have been at the heart of the GNC system design within the US Space Program since it's inception. Yet, there is a great deal of mystique surrounding the subject because it requires a modicum of familiarity with linear analysis, nonlinear analysis, optimization, and statistics. This goal of this seminar is to present a gentle introduction to Kalman Filtering and estimation to those who aren't familiar with the topic, or who have viewed it with fear and trepidation. Beginning with linear systems, the basic concepts will be introduced, and several examples will serve to flesh out the concepts. There will be an emphasis on practical implications and implementations of these concepts, with an eye toward helping develop intuition and demystifying the field.

Details

Date:
March 31, 2015

Time:
11:30 am - 1:00 pm

Event Category:
Lunch and Learn

Venue

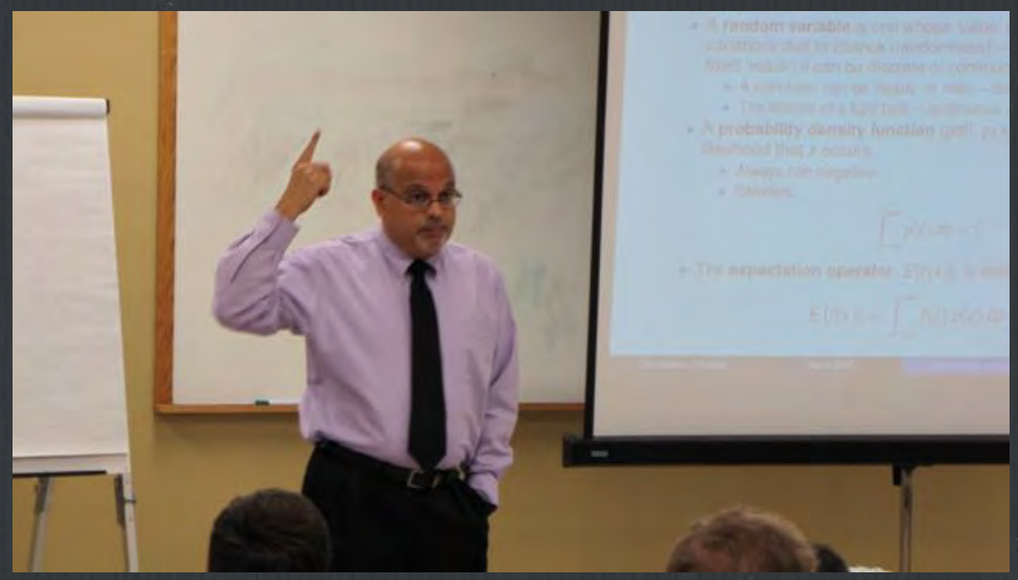
NASA/JSC Gilruth Center Longhorn Room

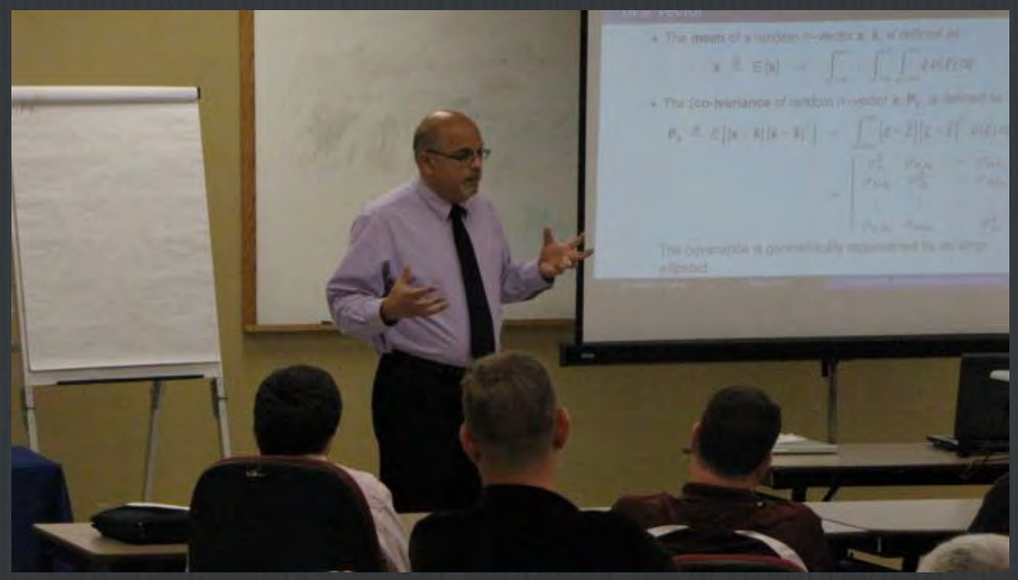
Organizer

Dr. Steve Everett

Email:
gnc2014@aiaahouston.org

Chris D'Souza, PhD, NASA/JSC





Chris D'Souza

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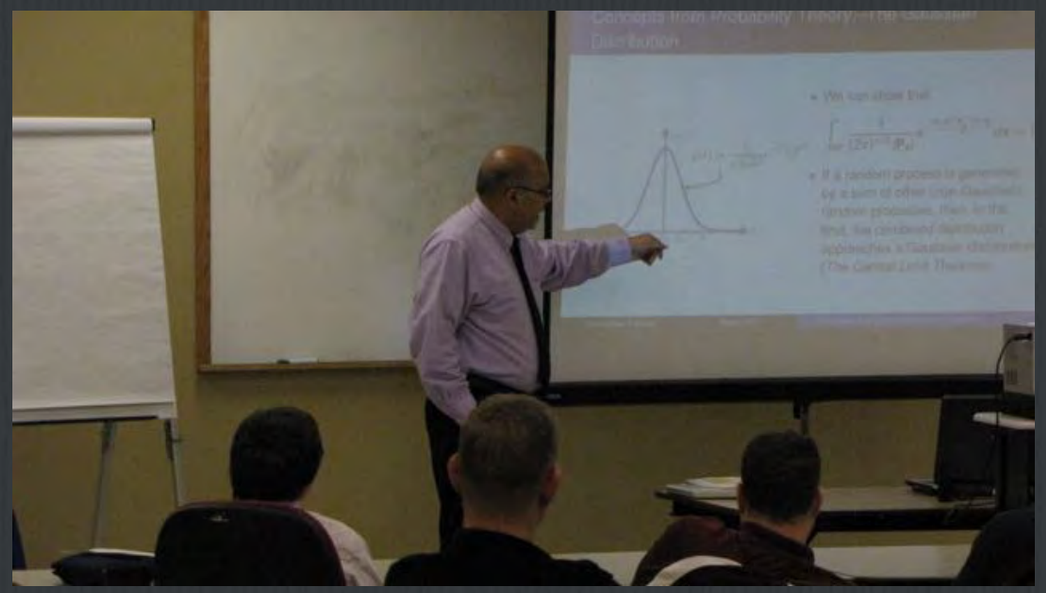
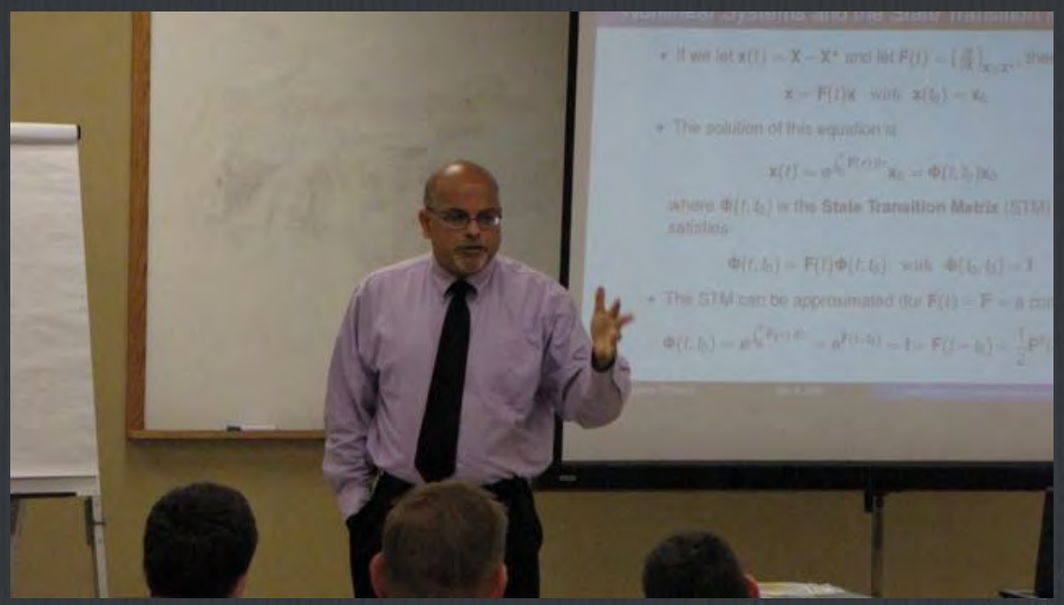


Chris D'Souza



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