

Transportation Center Seminar.....

## “Microscopic Simulation and Safety Analysis of Roundabouts”

### Nezamuddin

Associate Professor of  
Civil Engineering  
**Valparaiso University**



**Thursday –Feb. 19, 2015**

**4:00 - 5:00 pm**

**Location:**

Transportation Center  
Chambers Hall  
600 Foster, Evanston  
Lower level

**Abstract:** Although circular junctions are usually associated with the British, their presence in the United States dates back to at least 1905 when Columbus Circle was built near Central Park in New York. Those early twentieth century circular junctions, called *traffic circles*, were designed for high-speed entries into the circular area and gave priority to the entering vehicles over the circulating vehicles. That was a recipe for disaster. High crash experience and choked traffic circles meant that circular junctions will never gain ground in the United States again. In the 1960s, the United Kingdom introduced the mandatory yield-at-entry rule at circular junctions, which led to the birth of the *modern roundabout*. Safety is the hallmark of modern roundabouts and they are popular in certain parts of Europe and Australia. The first modern roundabout in the United States was built in Nevada in 1990 and their number is steadily rising since then: 38 in 1997, more than 2,000 in 2010, and over 3,700 at present. There's still initial resistance from the public, but public attitude toward a roundabout changes favorably after the construction. Hundreds of roundabouts are expected to be built each year in the United States. This study presents a microscopic simulation modeling and safety analysis of the modern roundabouts.

**Bio:** Dr. Nezamuddin is an assistant professor of civil engineering at Valparaiso University in northwest Indiana. Prior to joining Valparaiso University in August 2013, he was a research fellow at the Center for Transportation Research at the University of Texas at Austin from 2011 to 2013, where he worked in the areas of dynamic network modeling, traffic operations and microscopic simulation. Currently, he is working on microscopic simulation modeling and safety analysis of roundabouts. Dr. Nezamuddin received a Ph.D. (civil engineering) from the University of Texas at Austin and B.Tech. (civil engineering) from the Indian Institute of Technology Delhi, New Delhi.