

- *Safe Cycling at Intersections in Chicago (Nabil Nazha - University of Illinois at Chicago; Steven Vance - Grid Chicago)*

In the last two decades, we have seen the emergence of a broad literature both from the academic and professional world about climate change, reducing gas emission, promoting healthy habits and reducing obesity, incentivizing smart growth, and switching toward active modes of transportation. As such, cities are working to increase the number of their citizens who use the bicycle to get to work, school, and social activities. But the safety of cycling is a barrier to higher adoption and is progressively getting more attention. Making cycling safer represents a necessary tool in order to foster a change in people's transportation habits and, furthermore, help cope with bigger issues such as climate change and environmental quality. At the regional level, Chicago has an increasing bike population that needs attention from City administrators. The Bike 2015 Plan was written and adopted in 2005 to begin addressing the needs of cycling and includes specific goals and strategies on how to do so. Reducing injuries by 50% is one of the goals. Data analysis and roadway designs are two of over 150 strategies to meet this goal. This paper is an analysis of crash data collected by the Illinois Department of Transportation and identifies the intersections in Chicago with the highest frequency of bicycle crashes and injuries sustained in the crashes. It presents a compendium of best practices on mitigating crashes, and shows design guidelines and drawings on how the intersections can be modified. The paper develops a valuable method that planners might use in cities worldwide to address bike safety issues.