

# ASU, Berkeley researchers find cost to park is more than we think

February 3 2012, By Joe Kullman

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(PhysOrg.com) -- There's no such thing as a free lunch, according to the old adage. And there's no such thing as free parking, either.

Not when you factor in the economic [costs](#), energy consumption and environmental impacts of building and maintaining extensive parking [infrastructure](#) on the scale that exists in the United States.

Mikhail Chester offers an accounting of such costs in his research on large infrastructure systems, particularly transportation systems.

He's trying to provide data that can serve as a reliable guide for public policymakers to devise sustainable solutions to transportation-planning challenges.

Chester is an assistant professor in the School of Sustainable Engineering and the Built Environment, one of ASU's Ira A. Fulton Schools of Engineering.

He estimates that there are as many as 844 million parking lot and parking structure spaces in the United States, or roughly three spaces for every automobile. That amounts to paved surfaces for parking covering nearly one percent of the land in the country – an area about the size of West Virginia.

If the area used for curbside parking is added to the count – spaces that go unused most of the time – then there may be as many as 2 billion

parking spaces.

Chester examines the cumulative costs and environmental footprint of the country's parking infrastructure in an article he co-authored with engineering colleagues at the University of California, Berkeley – Arpad Horvath and Samer Madanat – published in the University of California Transportation Center's ACCESS magazine.

The article is discussed at length in the journal [Environmental Research Letters](#).

The authors look at the costs of parking facilities over their life cycles, considering the resources and energy expended in building and maintaining the infrastructure, as well as the cause-and-effect relationships between parking systems, air pollution, urban congestion, health risks and energy use.

Their studies show that with the amount of certain pollutants resulting from construction and maintenance of [parking](#) facilities, the environmental impact is more extensive than that resulting from driving automobiles.

Provided by Arizona State University

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