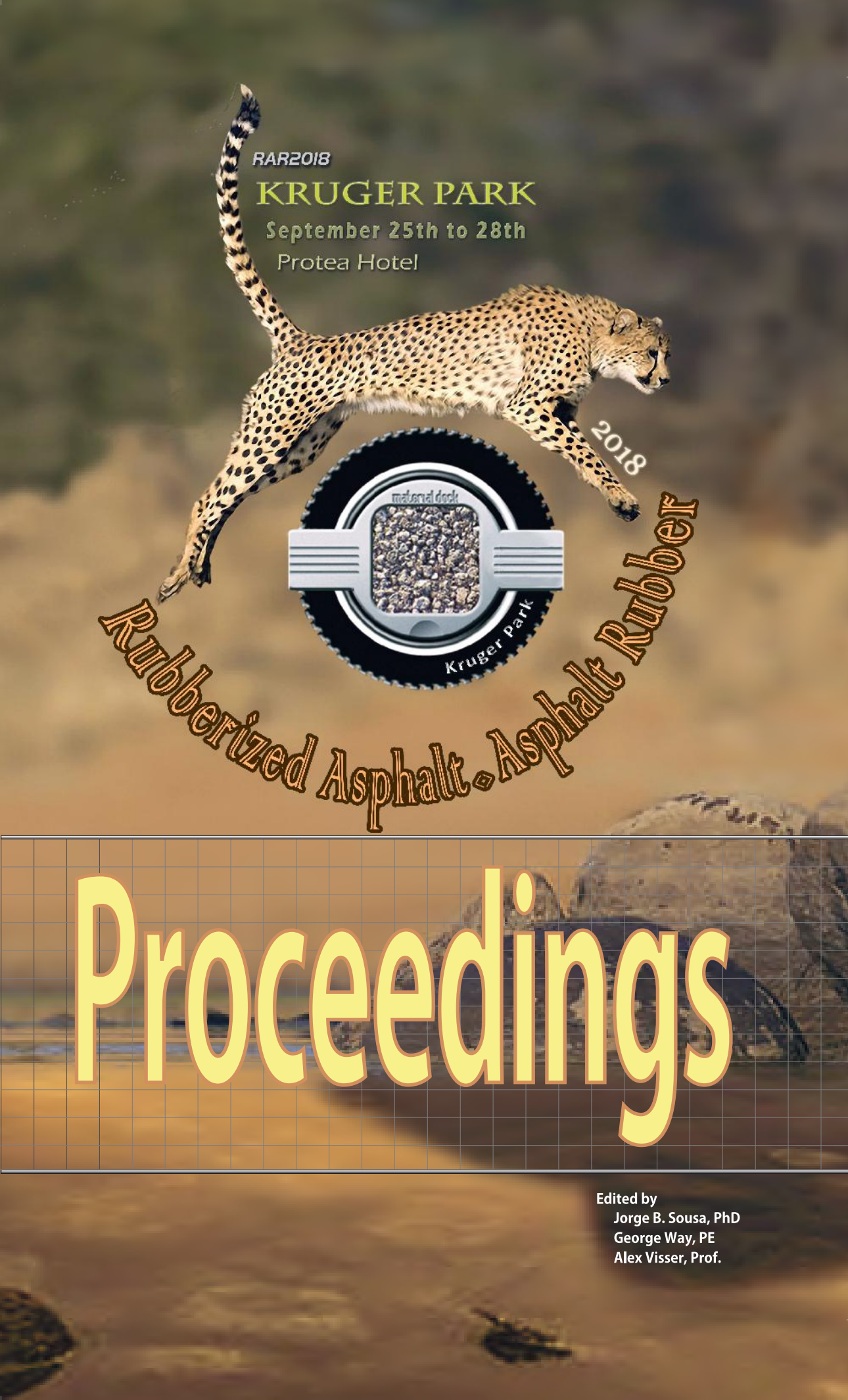

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A Three Solution Pavement Rehabilitation Case Study, Demonstrating Rubber-Modified Bitumen Cost and CO_2 Effective Solution for a Circular Sustainable Economy

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ABSTRACT. Addressing environmental issues are, increasingly, a requirement in engineering projects. In this context, the use of sustainable materials in constructions is of great importance. It is essential to find low environmental impact solutions that are cost effective. The pavements with bituminous mixture with addition of reacted and activated rubber (RAR), have demonstrated a great efficiency at structural, economic and environmental level.

With a focus on the various conditions currently required, this work consists of an analysis of 3 pavement rehabilitation solutions at an economic level, at the environmental level (CO_2 emissions produced in the execution of the Pavement and reused Tire quantities when using a sustainable blend of RAR).

KEYWORDS: Bituminous Mixtures with Rubber, Bituminous Mixtures with added RAR, CO_2 Emissions, Tires