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## **LDV measurements of the flow induced by an elongated bridge pier: the fixed bed case**

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### **ABSTRACT**

Elongated piers are a commonly found geometry in bridge pier design. This paper addresses the study of the flow around an elongated bridge pier, since not many studies exist concerning this geometry. To better understand the features of such pier geometry a set of measurements made upstream and downstream of an elongated bridge pier are presented. Mean and turbulent variables are presented and emphasis is given to the flow downstream of the elongated bridge pier. Results show a clockwise recirculation pattern downstream of the bridge pier and Strouhal numbers higher than those found for a circular cylinder. Along the flow axis, turbulent fluctuation clouds change in shape, when moving further downstream from the pier.