

## *Replication Dataset for*

# **Application of a line laser scanner for bed form tracking in a laboratory flume**

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## *Table of contents and brief description of dataset files (RF)*

### **RF1: Matlab code for data processing <RF1\_scripts.tar.gz>**

This RF contains the script to process line laser scanner data and make a contour plot of the results. The main file laser\_calibration2.m should be called. All files are written to work correctly in Matlab R2015a on Ubuntu 14.04 LTS.

### **RF2: Matlab code for statistical analysis <RF2\_scripts.tar.gz>**

This RF contains scripts to create bootstrap profiles based on processed line laser scanner data (output of RF1), and to perform statistical analysis on those. All files are written to work correctly in Matlab R2015a on Ubuntu 14.04 LTS.

### **RF3: Empty flume data <RF3\_data.tar.gz>**

This RF contains bed level data of an empty flume measurements in plain text format, used to calculate correction parameters. These files are input to RF1.

### **RF4: Still water data <RF4\_data.tar.gz>**

This RF contains data (bed level and water level) of a flume with still water in plain text format. These files are input to RF1.

### **RF5: Flowing water data <RF5\_data.tar.gz>**

This RF contains data (bed level and water level) of a flume with flowing water in plain text format. These files are input to RF1.

### **RF6: Sand bed data <RF6\_data.tar.gz>**

This RF contains data (bed level and water level) of the sand bed experiments in plain text format. These files are input to RF1.

### **RF7: Polystyrene bed data <RF7\_data.tar.gz>**

This RF contains data (bed level and water level) of the sand bed experiments in plain text format. Additionally, empty flume data for calculating correction parameters for the polystyrene experiment are present. These files are input to RF1.

### **RF8: Figures <RF8\_figures.tar.gz>**

This RF contains the final figures as they can be found in the paper.