

***Interactive comment on* “Short communication:  
Multiscalar drag decomposition in fluvial systems  
using a transform-roughness correlation (TRC)  
approach” by David L. Adams and  
Andrea Zampiron**

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We would like to thank the reviewer for highlighting three aspects of the manuscript that required major modifications or additions. First, there were several areas where the presentation and interpretation of the TRC analysis was unclear, which stimulated us to modify the expression and provide a more clear and comprehensive explanation. Second, the description of the experimental methods provided was insufficient and detracted from the findings, which has compelled us to provide additional detail and importantly, a quantification of error. Third, upon recommendation, we calculated ks

values from the hydraulic data using a Colebrook-White type equation, which allowed us to demonstrate that the roughness correlation provides fairly accurate estimates of the total  $k_s$  (within a factor-of-two). We present general and specific comments in the supplement below.

Please also note the supplement to this comment:

<https://esurf.copernicus.org/preprints/esurf-2020-51/esurf-2020-51-AC1-supplement.pdf>

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Interactive comment on Earth Surf. Dynam. Discuss., <https://doi.org/10.5194/esurf-2020-51, 2020>.

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Discussion paper

