Manual for Package: sediment-transport
Revision 1:3M

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```
bed load transport
method of van Rijn (1984)

function [Q_b q_b Phi_b] = bed_load_transport_rijn(C,d50,d90,U,d,b)

d50 [mm] (converted to m)
d90 [mm] (converted to m)

d : depth
b : width
```

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```
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d : [mm] diameter of sediment particle
ws : [m/s] settling velocity
          signed ws < 0 : falling
(Note: was R, radius in m)

valid for small particles
```

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    distribution

assumes that probability of suspension is inverse proportional to
    grain diameter
as in Engelund-Hansen transport relation
- no hiding effects considered
- no threshold for large grains applied
- no flocking considered
```

```
note: actual distribution varies with the depth

d    : [1xnd] grain size in arbitrary units (on linear, not on log
    scale)
h_bed : [nsxnd] fractions of sediment of size d
```

5.41 suspended_grain_size_non_linear

```
suspended grain size distribution based on bed material grain size
    distribution

assumes that probability of suspension is inverse proportional to
    grain diameter
as in Engelund-Hansen transport relation
- no hiding effects considered
- no threshold for large grains applied
- no flocking considered
note: actual distribution varies with the depth

d    : [1xnd] grain size in arbitrary units (on linear, not on log
    scale)
h_bed : [nsxnd] fractions of sediment of size d
```

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analysis and prediction of fluvial sediment transport and
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