

FLUENT ACTIVITIES AT TUDELFT  
TURBULENCE

|           |     |     |     |           |        |                    |
|-----------|-----|-----|-----|-----------|--------|--------------------|
| AHD       | k-e |     |     | Re stress |        |                    |
| Energy    | k-e |     |     | Re stress |        |                    |
| API       | k-e |     |     | Re stress |        |                    |
| SW        | k-e |     |     | Re stress |        |                    |
| Kramers   | k-e |     |     | Re stress | Durbin | Hanjalic, Kenjeres |
| Aerospace | k-e | RNG | k-e | k-w       |        |                    |
|           |     |     |     | Re stress |        |                    |

ACTIVITIES  
GRIDS, PARALLEL, USER SUBROUTINES

|           | # grid points | parallel | user subroutine |
|-----------|---------------|----------|-----------------|
| AHD       | $1E5 - 1E6$   |          | Y               |
| Energy    | $1E5 - 1E6$   |          | YY              |
| API       | $1E5 - 1E6$   |          |                 |
| SW        | $2E4 - 2E6$   |          |                 |
| Kramers   | $1E5 - 1E6$   | Y        |                 |
| Aerospace | $1E5 - 3E6$   |          |                 |

## SPECIAL ACTIVITIES

|           |                                       |                              |              |  |            |
|-----------|---------------------------------------|------------------------------|--------------|--|------------|
| AHD       | bluff bodies                          | micro flows                  | moving grids | multi-phase fluid-particle, VOF          | strong sw  |
| Energy    | turbines                              | complicated combustion (NOx) | fuel cells   | small coal furnace                       | nuclear re |
| API       | XXX                                   | XXX                          |              |  | strong sv  |
| SW        | grid generation for other codes       | combustion                   |              | multi-phase multi-fluid, part-fluid      |            |
| Kramers   | DNS, LES                              | porous media                 | mixers       | multi-phase multi-fluid, part-fluid, VOF |            |
| Aerospace | streamlined bodies (aeroplanes, cars) | incompressible               |              |  |            |

## EXPERIENCE WITH OTHER CODES

|           |            |          |  |
|-----------|------------|----------|--|
| AHD       | CFX4, CFX5 | FLOW3D   |  |
| Energy    |            |          |  |
| API       |            |          |  |
| SW        | X-STREAM   | BUOYFLOW |  |
| Kramers   |            |          |  |
| Aerospace |            |          |  |

## OTHER PRE-PROCESSOR, POST-PROCESSOR, SOLVER

|           | PRE  | POST                      | SOLVER |
|-----------|--|---------------------------|--------|
| AHD       |  | TECPLOT<br>tecplot export |        |
| Energy    |  |                           |        |
| API       |  |                           |        |
| SW        |  |                           | T-REX  |
| Kramers   |  |                           |        |
| Aerospace | Rhinoceros<br>surface modeler<br>IGES file exch<br>with gambit |                           |        |