

Professor Thorsten Stoesser

DIRECTOR OF FLUID MECHANICS RESEARCH GROUP

Department of Civil, Environmental and Geomatic Engineering, University College London, UK

Professional Preparation

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| 2002 | Ph.D., Civil Engineering, University of Bristol, Bristol, UK |
| 1998 | Diplom Ingenieur, Civil Engineering, University of Karlsruhe, Germany |

Appointments

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| since 2018 | Professor, Department of Civil, Environmental & Geomatic Engineering, UCL, London, UK |
| 2012 – 2018 | Professor, Cardiff School of Engineering, Cardiff University, Cardiff, UK |
| 2006 – 2012 | Associate Professor, School of Civil and Environmental Engineering, Georgia Institute of Technology, Atlanta, Georgia, USA |
| 2002 – 2006 | Postdoctoral Research Associate, Institute for Hydromechanics, University of Karlsruhe, Karlsruhe, Germany |

Professor Thorsten Stoesser is the Director of the Fluids Engineering Research Centre at the University College London. His research interest is in developing advanced Computational Fluid Dynamics (CFD) tools and their application to solve environmental fluid mechanics problems. Thorsten has published over 100 peer reviewed journal papers on developing, testing and applying advanced CFD methods to predict the hydrodynamics and transport processes in rivers, estuaries and coastal waters, fluid-structure interaction of marine turbines, and the near-field dynamics of jets and plumes. For his research Prof. Stoesser received twice the American Society of Civil Engineers (ASCE) Karl Emil Hilgard Hydraulic Prize (2012 and 2016), in 2015 he won the International Association of Hydro-environmental Research (IAHR) Harold Shoemaker Award and in 2016 he won the Institution of Civil Engineers' George Stephenson medal.

Synergistic Activities and Recognition

- American Society of Civil Engineers (ASCE) Karl Emil Hilgard Hydraulic Prize, 2012, 2016
- IAHR Harold Shoemaker Award, 2015
- Associate Editor J. Hydr. Res., Int. J. Sediment Res., J. Hydraul. Eng.
- Member Inter. Assoc. Hydro-Environment Eng. & Res. (IAHR), American Soc. Civil Eng. (ASCE)

Selected Research Grants

- Distributed Fibre-optic Cable Sensing for Buried Pipe Infrastructure, PI, EPSRC, November, 2019 – October, 2021, £371,330
- Rapid monitoring of river hydrodynamics and morphology using acoustic holography, PI, EPSRC, September, 2018 – December, 2021, £410,620
- Water Informatics: Science and Engineering (WISE), Centre for Doctoral Training, Co-PI, EPSRC, September, 2014 – August, 2022, £1,411,100
- NCHRP 24-37 - Combining Individual Scour Components to Determine Total Scour, subcontract to Georgia Tech. January, 2014 - September, 2016, £72,000.
- Bed friction in rough-bed free-surface flows: a theoretical framework, roughness regimes, and quantification, PI, EPSRC, £340,787
- Reducing uncertainty in flood prediction: the representation of vegetation in hydraulic models, NERC, PI, September, 2013 – August, 2016, £84,900
- Gulf of Mexico Integrated Response (GoMIR), PI, British Petroleum, January, 2012 – December, 2015, \$655,000

Representative Publications (5 selected out of 100+)

Ouro, P., **Stoesser, T.** (2017). An immersed boundary-based large-eddy simulation approach to predict the performance of vertical axis tidal turbines. *Computers & Fluids* 152, 74-87.

Gualtieri, C., Angeloudis, A., Bombardelli, F., Jha, S., **Stoesser, T.** (2017). On the Values for the Turbulent Schmidt Number in Environmental Flows. *Fluids* 2 (2), 17.

Fraga Bugallo B., **Stoesser T.**, Lai, C., Socolofsky, S. (2016). A large-eddy simulation-based Eulerian-Lagrangian approach to predict bubble plume dynamics. *Ocean Modelling*, 97, 27-36.

Stoesser T., McSherry, R., Fraga Bugallo B. (2015). Secondary Currents and Turbulence over a Non-Uniformly Roughened Open-Channel Bed. *Water*, 7(9), 4896-4913.

Stoesser, T. (2014). Large-eddy simulation in hydraulics: Quo vadis?. *IAHR J. Hydr. Res.*, 52(4), 441–452.