



100 Years of Ludwig Prandtl's Mixing Length Model

Special Session on Turbulence Modeling (as part of the STAB-Workshop 2025)

10 November 2025 - DLR Göttingen (in cooperation between DLR and STAB)

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In April 1925, Ludwig Prandtl published his seminal work entitled “Bericht über Untersuchungen zur ausgebildeten Turbulenz” in the journal *Zeitschrift für angewandte Mathematik und Mechanik*, in which he proposed a novel approach to computing the mean flow field of turbulent fluid motion. This approach – later known as the turbulent mixing length model – became the starting point for one hundred years of research in statistical turbulence modeling.

The aim of this event is to review the various ways in which Prandtl's work has influenced and inspired the development of statistical turbulence models over the last hundred years and to discuss future perspectives for turbulence modeling and turbulent flow computation. The event is planned as a hybrid event.

Tentative Agenda

13.45 – 14.00: Introductory words
Implications of Prandtl's mixing length work on turbulence modeling

14.00 – 14.35: Florian Menter (Ansys GmbH)

14.35 – 15.10: Suad Jakirlic (TU Darmstadt)

15.10 – 15.45: Tobias Knopp (DLR)

15.45 – 16.20: Paola Cinnella (Sorbonne Université)

Coffee break

16.40 – 17.20: Panel discussion

17.20 – 17.55: *Ludwig Prandtl and the Turbulence* - Eberhard Bodenschatz (MPI-DS)

17.55 – 18.10: Closing remarks

Come together: Traditional dinner “Eintopf und Bier”(soup and beer) in the DLR canteen

Please use the provided form to register for the event.

