

# Seminar on Microlocal Analysis

Winter term 2026/27

Prof. Bernd Ammann

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**Goal:** An introduction to microlocal analysis and applications to hyperbolic partial differential equations on manifolds  
Tuesday 16–18, M101

## Talks

The following talks correspond to chapters of the new book [Hin25] on microlocal analysis written by Peter Hintz.

**Talk no. 1: Schwartz functions and tempered distributions.** *13.10.*

**Talk no. 2: Symbols.** *20.10.*

**Talk no. 3: Pseudodifferential operators.** *27.10. + 3.11.*

**Talk no. 4: Pseudodifferential operators on manifolds.** *17.11. + 24.11.*

**Talk no. 5: Microlocalization.** *1.12. + 8.12.*

**Talk no. 6: Hyperbolic evolution equations and Egorov's theorem.**  
*15.12. + 22.12.*

**Talk no. 7: Real principal type propagation of singularities.** *12.1.*

**Talk no. 8: Solving wave-type equations.** *19.1.*

**Talk no. 9: Propagation of singularities at radial sets.** *26.1.*

**Talk no. 10: Late time asymptotics of linear waves on de Sitter space.**  
*2.2.*

## Seminar-Homepage

[https://ammann.app.uni-regensburg.de/lehre/2026w\\_MLA/](https://ammann.app.uni-regensburg.de/lehre/2026w_MLA/)

## Intranet, accessible with NDS account

[https://ammann.app.uni-regensburg.de/lehre/2026w\\_MLA/intranet/  
program-intranet.pdf](https://ammann.app.uni-regensburg.de/lehre/2026w_MLA/intranet/program-intranet.pdf)

## References

[Hin25] Peter Hintz. An introduction to microlocal analysis, volume 304 of Graduate Texts in Mathematics. Springer, Cham, [2025] ©2025.