



Jun Zhang

Quantitative Tamarkin Theory

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- Collects current research on quantitative Tamarkin theory into one convenient, self-contained textbook
- Provides readers with an accessible categorical approach to microlocal sheaf theory that contrasts with established algebraic analysis methods
- Reviews key background material in the opening chapters, making it accessible to a wide audience of interested readers

This textbook offers readers a self-contained introduction to quantitative Tamarkin category theory. Functioning as a viable alternative to the standard algebraic analysis method, the categorical approach explored in this book makes microlocal sheaf theory accessible to a wide audience of readers interested in symplectic geometry. Much of this material has, until now, been scattered throughout the existing literature; this text finally collects that information into one convenient volume. After providing an overview of symplectic geometry, ranging from its background to modern developments, the author reviews the preliminaries with precision. This refresher ensures readers are prepared for the thorough exploration of the Tamarkin category that follows. A variety of applications appear throughout, such as sheaf quantization, sheaf interleaving distance, and sheaf barcodes from projectors. An appendix offers additional perspectives by highlighting further useful topics. Quantitative Tamarkin Theory is ideal for graduate students interested in symplectic geometry who seek an accessible alternative to the algebraic analysis method. A background in algebra and differential geometry is recommended. This book is part of the "Virtual Series on Symplectic Geometry" <http://www.springer.com/series/16019>

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