Publications List

Omar Mohsen

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Publications

[1] I. Androulidakis, O. Mohsen, and R. Yuncken. "The convolution algebra of Schwartz kernels along a singular foliation". In: *J. Operator Theory* 85.2 (2021), pp. 475–503. ISSN: 0379-4024,1841-7744. DOI: `10.7900/jot`.

[2] O. Mohsen. "Chern-Simons invariants in KK-theory". In: *J. Funct. Anal.* 277.11 (2019), pp. 108253, 17. ISSN: 0022-1236,1096-0783. DOI: `10.1016/j.jfa.2019.05.023`.

[3] O. Mohsen. "On the deformation groupoid of the inhomogeneous pseudo-differential calculus". In: *Bull. Lond. Math. Soc.* 53.2 (2021), pp. 575–592. ISSN: 0024-6093. DOI: `10.1112/blms.12443`.

[4] O. Mohsen. "Index theorem for inhomogeneous hypoelliptic differential operators". In: *Muenster journal of mathematics* (2022). DOI: `10.48550/ARXIV.2001.00488`.

[5] O. Mohsen. "Witten deformation using Lie groupoids". In: *Adv. Math.* 398 (2022), Paper No. 108142, 33. ISSN: 0001-8708,1090-2082. DOI: `10.1016/j.aim.2021.108142`.

[6] O. Mohsen. "A groupoid approach to the Wodzicki residue and the Kontsevich–Vishik trace". In: *Journal of Noncommutative Geometry* (2024). DOI: `10.4171/JNCG/601`.

[7] O. Mohsen. "Differential operators on C*-algebras and applications to smooth functional calculus and Schwartz functions on the tangent groupoid". In: *Journal of Functional Analysis* 287.11 (2024), p. 110615. ISSN: 0022-1236. DOI: `https://doi.org/10.1016/j.jfa.2024.110615`.

[8] O. Mohsen. "Tangent groupoid and tangent cones in sub-Riemannian geometry". In: *Duke Mathematical Journal* 173.16 (2024), pp. 3179–3218. DOI: `10.1215/00127094-2024-0013`.

Prépublications

[9] I. Androulidakis, O. Mohsen, and R. Yuncken. *A pseudodifferential calculus for maximally hypoelliptic operators and the Helffer-Nourrigat conjecture.* 2022. arXiv: `2201.12060 [math.AP]`.

[10] O. Mohsen. *Blow-up groupoid of singular foliations.* 2022. arXiv: `2105.05201 [math.DG]`.

[11] O. Mohsen. *On the index of maximally hypoelliptic differential operators.* 2022. arXiv: `2201.13049 [math.KT]`.

[12] Omar Mohsen. *Abstract maximal hypoellipticity and applications.* 2026. arXiv: `2601.13741 [math.OA]`.

[13] Omar Mohsen. *Microlocal maximal hypoellipticity from the geometric viewpoint: I.* 2026. arXiv: `2601.22122 [math.AP]`.