

# Publications List

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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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://doi.org/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](https://arxiv.org/abs/2201.12060) [[math.AP](#)].
- [10] O. Mohsen. *Blow-up groupoid of singular foliations*. 2022. arXiv: [2105.05201](https://arxiv.org/abs/2105.05201) [[math.DG](#)].
- [11] O. Mohsen. *On the index of maximally hypoelliptic differential operators*. 2022. arXiv: [2201.13049](https://arxiv.org/abs/2201.13049) [[math.KT](#)].