

# Omar Mohsen

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## EDUCATION

<b>Université Paris Cité</b> <i>PhD under the supervision of G. Skandalis. More details in <a href="https://theses.fr/2018USPCC200">https://theses.fr/2018USPCC200</a></i>	Paris, France <i>Sep. 2015 – Oct. 2018</i>
<b>Ecole Normale Supérieure Paris Ulm</b> <i>ENS Diploma</i>	Paris, France <i>Sep. 2012 – Aug. 2015</i>
<b>Paris-Saclay University</b> <i>Master's degree</i>	Orsay, France <i>Sep. 2013 – Aug. 2015</i>

## CAREER

<b>Maître de conference in Mathematics (Research and Teaching position)</b> <i>Paris-Saclay University</i>	Orsay, France <i>Sep. 2021 – Present</i>
<b>Research Postdoc</b> <i>Muenster University</i>	Muenster, Germany <i>Sep. 2019 – Aug. 2021</i>
<b>Temporary Teaching Position (ATER)</b> <i>Paris-Cité University</i>	Paris, France <i>Oct. 2018 – Aug. 2019</i>

## ARTICLES

Tangent groupoid and tangent cones in sub-Riemannian geometry	Duke Journal of mathematics
Witten deformation using Lie groupoids	Advances in mathematics
Index theorem for inhomogeneous hypoelliptic differential operators	Muenster Journal of mathematics
Chern Simons invariants in $KK$ theory	Journal of functional analysis
Differential operators on $C^*$ -algebras and applications to smooth functional calculus	Journal of functional analysis
On the deformation groupoid of the inhomogeneous pseudo-differential calculus	Bulletin of the L.M.S.
Remarks on a groupoid approach to the Wodzicki residue and the Kontsevich-Vishik trace	Submitted
The convolution algebra of Schwarz kernels on a singular foliation • Joint work with I. Androulidakis and R. Yuncken	Journal of Operator theory
A pseudodifferential calculus for maximally hypoelliptic operators and the Helffer-Nourrigat conjecture • Joint work with I. Androulidakis and R. Yuncken	Submitted
Blow-up groupoid of singular foliations	Submitted
On the index of maximally hypoelliptic differential operators	Submitted

## SUPERVISION

Moudrik Chamoux M2 thesis on deformation to the normal cone.	2024
Enzo Tanguide and Quentin Casella M1 thesis on singular homology	2024
Julie Capron M1 thesis on nuclear $C^*$ -algebras	2024
Oleskii Shulga M1 thesis on amenable groups	2024
Anatole Dedecker M1 thesis on amenable groups	2023
Matiss Brunel, Quentin Giton and Flore le Roux L3 thesis on Poincare's rotation number	2022

## TECHNICAL SKILLS

**Languages:** Java, C++  
**Human Languages:** English (C2), French (C2), Arabic (Fluent)  
**Developer Tools:** Git, VS Code, IntelliJ