



MOHAMED MAJDOUB

FULL PROFESSOR

Personal Data

Nationality | **Tunisian**

Department | **Mathematics**

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https://www.researchgate.net/profile/Mohamed_Majdoub

<https://scholar.google.com/citations?user=ApvB1acAAAAJ&hl=en>

Language Proficiency

Language	Read	Write	Speak
Arabic	✓	✓	✓
English	✓	✓	✓
French	✓	✓	✓

Academic Qualifications

Date	Academic Degree	Place of Issue	Address
2006	HDR	Tunisia	University Tunis El Manar
2000	PhD	Tunisia	University Tunis El Manar
1992	BSM	Tunisia	University Tunis El Manar

PhD, Master, or Fellowship Research Title

PhD	On some evolutive nonlinear partial differential equations
Master	
Fellowship	

Professional Record

Job Rank	Place and Address of Work		Date
Professor	Tunisia	University Tunis El Manar	2012-2016
Associate Professor	Tunisia	University Tunis El Manar	2006-2011
Assistant Professor	Tunisia	University Tunis El Manar	2001-2006

Scientific Achievements

Published Refereed Scientific Papers (In Chronological Order Beginning with the Most Recent)

#	Investigator(s)	Research Title	Publisher and Date
1	Mohamed Majdoub	On the Fujita exponent for a Hardy-Henon equation with a spatial-temporal forcing term	La Matematica (2023) DOI: 10.1007/s44007-023-00049-y
2	M.Majdoub and T.Saanouni	Long time dynamics for the radial focusing fractional INLS	Mathematical Methods in the Applied Sciences (2023) DOI: 10.1002/mma.9620
3	Makram Hamouda & Mohamed Majdoub	Existence and nonexistence of global solutions for time dependent damped NLS equations	Communications on Pure and Applied Analysis (2023) DOI: 10.3934/cpaa.2023100
4	A.Alshehri, N. Aljaber, H.Altamimi, R.Alessa, and M.Majdoub	Nonexistence of global solutions for a nonlinear parabolic equation with a forcing term	Opuscula Mathematica (2023) DOI:10.7494/opmath.2023.43.6.741
5	V.D. Dinh, M. Majdoub, and T. Saanouni	Long time dynamics and blow-up for the focusing inhomogeneous nonlinear Schrodinger equation with spatially growing nonlinearity	J. Math. Phys. (2023) DOI: 10.1063/5.0143716
6	Mohamed Majdoub & Nasser-eddine Tatar	Global existence and asymptotic behavior for a reaction-diffusion system with unbounded coefficients	Mediterr. J. Math. (2023) DOI: 10.1007/s00009-023-02394-2
7	Makram Hamouda & Mohamed Majdoub	Vanishing viscosity limit of a linearized magnetohydrodynamic system in a square	Discrete and Continuous Dynamical Systems – S (2023) Doi: 10.3934/dcdss.2022178
8	T. Alarfaj, L. Al-Essa, F. Alkathiri & M. Majdoub	Global existence and blow-up for one-dimensional wave equation with weighted exponential nonlinearity	Journal of Applied Analysis & Computation (2023) Doi: 10.11948/20220305
9	Mohamed Majdoub & Slim Tayachi	Existence and regularity of source-type self-similar solutions for stable thin-film equations	Interfaces Free Bound. 24, No. 3, 431-457 (2022).
10	Svetlin Georgiev & Mohamed Majdoub	Two nonnegative solutions for two-dimensional nonlinear wave equations	Cubo, A Mathematical Journal Vol. 24 (2022)
11	Mohamed Majdoub & Slim Tayachi	Global existence and decay estimates for the heat equation with exponential nonlinearity	Funkc. Ekvacioj, Ser. Int. 64, No. 2, 237-259 (2021)
12	Eadah Ahmad Alzahrani &	Remarks on blow-up phenomena in p-Laplacian heat equation	J. Partial Differ. Equations 34, No. 1, 42-50

	Mohamed Majdoub	with inhomogeneous nonlinearity	(2021).
13	Mohamed Majdoub	Well-posedness and blow-up for an inhomogeneous semilinear parabolic equation	Differ. Equ. Appl. 13, No. 1, 85-100 (2021).
14	M. Majdoub, N. Masmoudi & S. Tayachi	Relaxation to equilibrium in the one-dimensional thin-film equation with partial wetting and linear mobility	Commun. Math. Phys. 385, No. 2, 837-857 (2021).
15	Mohamed Majdoub & Ezzedine Mliki	Well-posedness for Hardy-Hénon parabolic equations with fractional Brownian noise	Anal. Math. Phys. 11, No. 1, Paper No. 20, 12 p. (2021).
16	S. G. Georgiev, M. Majdoub & K. Mebarki	Multiple nonnegative solutions for a class IVPS for second order ODES	Filomat, Vol. 35 (2021).
17	Svetlin Georgiev & Mohamed Majdoub	Existence of solutions for a class of IBVP for non nonlinear hyperbolic equations	SN Partial Differ. Equ. Appl. 1, No. 4, Paper No. 22, 20 p. (2020).
18	Van Duong Dinh, Sahbi Keraani & Mohamed Majdoub	Long time dynamics for the focusing nonlinear Schrödinger equation with exponential nonlinearities	Dyn. Partial Differ. Equ. 17, No. 4, 329-360 (2020).
19	A. Bensouilah, D. Draouil & M.Majdoub	A 2D Schrödinger equation with time-oscillating exponential nonlinearity	Dyn. Partial Differ. Equ. 17, No. 4, 307-327 (2020).
20	Rasha Alessa, Aisha Alshehri, Haya Altamimi & Mohamed Majdoub	Local well-posedness and blow-up for an inhomogeneous nonlinear heat equation.	Math. Methods Appl. Sci. 43, No. 8, 5264-5272 (2020).
21	Thanaa Alarfaj, Noha Aljaber, Manal Alshammari & Mohamed Majdoub	A remark on blow-up solutions for nonlinear wave equation with weighted nonlinearities	Journal of Mathematical Analysis, Vol. 10 (2019), 69-78.
22	Abdelwahab Bensouilah, Van Duong Dinh & Mohamed Majdoub	Scattering in the weighted L ₂ -space for a 2D nonlinear Schrodinger equation with inhomogeneous exponential nonlinearity	Communications on pure and applied analysis, 5 (2019), 2735-2755
23	Abdelwahab Bensouilah, Dhouha Draouil & Mohamed Majdoub	Energy critical Schrodinger equation with weighted exponential nonlinearity: Local and global well-posedness	J. Hyperbolic Differ. Equ. 15(2018), 599-621.
24	Mohamed Majdoub, Sarah Otsmane & Slim Tayachi	Local well-posedness and global existence for the biharmonic heat equation with exponential nonlinearity	Advances in Differential Equations, 23(2018), 489-522.
25	Najoua El Ghani & Mohamed Majdoub	Global well posedness for a 2D drift-diffusion-Maxwell system	Applicable Analysis, 97 (2018), 2573-2593.
26	Mohamed Majdoub, Nader Masmoudi & Slim Tayachi	Uniqueness for the thin-film equation with a Dirac mass as initial data	Proceedings of the AMS, 146(2018), 2623-2635.
27	Bousbih Hafedh & Majdoub Mohamed	Weak solutions for generalized stationary Oldroyd-B fluid with a diffusive stress.	Georgian Math. J. 23 (2016), no. 4, 469–475.
28	Bousbih Hafedh & Majdoub Mohamed	Existence and uniqueness of strong-weak solutions for chemically reacting generalized second grade fluids in 2 space dimensions	Math. Methods Appl. Sci. 39 (2016), no. 12, 3243–3254.
29	Majdoub, Mohamed; Masmoudi, Nader	On uniqueness for supercritical nonlinear wave and Schrödinger equations	Int. Math. Res. Not. IMRN 2015, no. 9, 2386–2405
30	Bousbih, Hafedh; Majdoub, Mohamed	Existence and uniqueness of strong solution for shear thickening fluids of second grade	J. Partial Differ. Equ. 27 (2014), no. 2, 95–114
31	Ibrahim, Slim; Jrad, Rym; Majdoub,	Local well posedness of a 2D semilinear heat equation	Bull. Belg. Math. Soc. Simon Stevin 21 (2014), no. 3,535–551

	Mohamed; Saanouni, Tarek		
32	Bahouri, Hajer; Majdoub, Mohamed; Masmoudi, Nader	Lack of compactness in the 2D critical Sobolev embedding, the general case	J. Math. Pures Appl. (9) 101 (2014), no. 4, 415–457
33	Bejaoui, Olfa; Majdoub, Mohamed	Global weak solutions for some Oldroyd models	J. Differential Equations 254 (2013), no. 2, 660–685
34	S.Ibrahim, M.Majdoub, N.Masmoudi, K.Nakanishi	Scattering for the two-dimensional NLS with exponential nonlinearity	Nonlinearity 25 (2012), no. 6, 1843–1849
35	H.Bahouri, M. Majdoub, N. Masmoudi	Lack of compactness in the 2D critical Sobolev embedding, the general case	C. R. Math. Acad. Sci. Paris 350 (2012), 177–181
36	Ibrahim, Slim; Majdoub, Mohamed; Masmoudi, Nader	Well- and ill-posedness issues for energy supercritical waves	Anal. PDE 4 (2011), no. 2, 341–367
37	Bahouri, Hajer; Majdoub, Mohamed; Masmoudi, Nader	On the lack of compactness in the 2D critical Sobolev embedding	J. Funct. Anal. 260 (2011), no. 1, 208–252
38	Bulíček, Miroslav; Majdoub, Mohamed; Málek, Josef	Unsteady flows of fluids with pressure dependent viscosity in unbounded domains	Nonlinear Anal. Real World Appl. 11 (2010), no. 5, 3968–3983
39	Ibrahim, Slim; Majdoub, Mohamed; Masmoudi, Nader; Nakanishi, Kenji	Scattering for the two-dimensional energy-critical wave equation	Duke Math. J. 150 (2009), no. 2, 287–329
40	Colliander, J.; Ibrahim, S.; Majdoub, M.; Masmoudi, N.	Energy critical NLS in two space dimensions	J. Hyperbolic Differ. Equ. 6 (2009), no. 3, 549–575
41	Majdoub, Mohamed; Paicu, Marius	Uniform local existence for inhomogeneous rotating fluid equations	J. Dynam. Differential Equations 21 (2009), 21–44
42	Ibrahim, Slim; Majdoub, Mohamed; Masmoudi, Nader	Ill-posedness of H ¹ -supercritical waves	C. R. Math. Acad. Sci. Paris 345 (2007), no. 3, 133–138
43	Ibrahim, S.; Majdoub, M.; Masmoudi, N.	Double logarithmic inequality with a sharp constant	Proc. Amer. Math. Soc. 135 (2007), no. 1, 87–97
44	Ibrahim, Slim; Majdoub, Mohamed; Masmoudi, Nader	Global solutions for a semilinear, two-dimensional Klein-Gordon equation with exponential-type nonlinearity	Comm. Pure Appl. Math. 59 (2006), 1639–1658
45	Benameur, J.; Ghazel, M.; Majdoub, M.	About MHD system with small parameter	Asymptot. Anal. 41 (2005), 1–21
46	Benameur, J.; Ibrahim, S.; Majdoub, M.	Asymptotic study of a magneto-hydrodynamic system	Differential Integral Equations 18 (2005), 299–324
47	Majdoub Mohamed	Qualitative study of the critical wave equation with a subcritical perturbation	J. Math. Anal. Appl. 301 (2005), 354–365
48	Ibrahim, Slim; Majdoub, Mohamed	Comparaison des ondes linéaires et non-linéaires à coefficients variables (French)	Bull. Belg. Math. Soc. Simon Stevin 10 (2003), no. 2, 299–312
49	Ibrahim, Slim; Majdoub, Mohamed	Solutions globales de l'équation des ondes semi-linéaire critique à coefficients variables (French)	Bull. Soc. Math. France 131 (2003), no. 1, 1–22
50	Gallagher, Isabelle; Ibrahim, Slim; Majdoub, Mohamed	Existence et unicité de solutions pour le système de Navier-Stokes axisymétrique (French)	Comm. Partial Differential Equations 26 (2001), 883–907
51	I.Gallagher, S.Ibrahim, M. Majdoub	Solutions axisymétriques des équations de Navier-Stokes (French)	C. R. Acad. Sci. Paris Sér. I Math. 330 (2000), 791–794
52	S. Ibrahim, M. Majdoub	Existence globale de solutions pour l'équation des ondes semi-linéaire critique à coefficients variables (French)	C. R. Acad. Sci. Paris Sér. I Math. 328 (1999), 579–584.

Current Research

#	Research Title	Name of Investigator(s)
1	Heat equations associated to harmonic oscillator with exponential nonlinearity	Divyang G. Bhimani, Mohamed Majdoub & Ramesh Manna
2	A complete characterization of local existence for semilinear heat equations associated to harmonic oscillator	Divyang G. Bhimani, Mohamed Majdoub & Ramesh Manna
3	Well-posedness and large time behavior for strong solutions of the partial wetting thin film equation	Mohamed Majdoub, Nader Masmoudi & Slim Tayachi
4	Global and non-global solutions for a class of Schrodinger equations with combined non-linearities	T. Gou, Mohamed Majdoub & Tarek Saanouni
5	Well-posedness and scattering for a 2D inhomogeneous NLS with Aharonov-Bohm magnetic potential	Mohamed Majdoub & Tarek Saanouni
6	Existence of weak solutions for the incompressible Navier-Stokes equations with biharmonic damping term	Michael Adeyemo & Mohamed Majdoub
7	Existence of Solutions for Impulsive Parabolic Equations	Svetlin Georgiev Georgiev and Mohamed Majdoub
8	Scattering for the time dependent damped NLS equations	Makram Hamouda & Mohamed Majdoub
9	-Well-posedness for fractional Hardy-Henon parabolic equations with fractional Brownian noise - Subordinators and generalized heat kernels: Random time change and longtime dynamics	Noha Aljaber, Rasha Alessa, Aisha Alshehri, Haya Altamimi, Maram Alwohaibi, Reem Alsubaie & Ezeddine Mliki

Contribution to Scientific Conferences and Symposia

#	Conference Title	Place and Date of the Conference	Extent of Contribution
1	Seminar of PDE	Polytechnical School of France (2005)	Talk
2	Analysis Seminar	Courant Institute of Mathematical Sciences, New York University (2009)	Talk
3	Nonlinear PDE conference	Beijing, China (2010)	Talk
4	Seminar of PDE	Czech Technical University in Prague (2009)	Talk
5	International Congress of Mathematicians – ICM2018	Rio de Janeiro, RJ, Brazil (2018)	Talk
6	Analysis seminar	Lille University, France (2019)	Talk
7	Research Center on Stability, Instability, and Turbulence (SITE)	New York University Abu Dhabi (NYUAD), March 2023	Talk

Membership of Scientific and Professional Societies and Organizations

- Head of the laboratory of PDEs, University Tunis El Manar, 2010 to 2016
- General secretary of the Tunisian Mathematical Society, 2014 to 2016
- Co-organiser of "Colloque EDP et applications", Hammamet, Tunisia 2008

Teaching Activities

#	Course/Rotation Title	No./Code	Extent of Contribution
1	Partial Differential Equations	MATH 401	Lecture & Laboratory
2	Applied Mathematics	MATH 511	Lecture & Laboratory
3	Special Functions	MATH 402	Lecture & Laboratory
4	Advanced PDEs	MATH 524	Lecture & Laboratory
5	Real Analysis 1	MATH 403	Lecture & Laboratory
6	Real Analysis 2	MATH 502	Lecture & Laboratory
7	Measure Theory & Integration	MATH 507	Lecture & Laboratory
8	Functional Analysis	MATH 484	Lecture & Laboratory
9	Integral Equations & Transforms	MATH 554	Lecture & Laboratory
10	Mathematical Modeling	MATH 535	Lecture & Laboratory
11	Complex Analysis	MATH531	Lecture & Laboratory
12	Harmonic Analysis	MATH583	Lecture & Laboratory
13	Advanced PDE's	MATH524	Lecture & Laboratory
14	Applied Matrix Theory	MATH504	Lecture & Laboratory

Supervision of Master and/or PhD Thesis

#	Degree Type	Title	Institution	Date
1	PhD	On some Oldroyd models	University Tunis El Manar	2013
2	PhD	Semilinear Schrödinger Equations	University Tunis El Manar	2011
3	PhD	On some partial differential equations arising from non-newtonian fluid mechanics	University Tunis El Manar	2016
4	PhD	Trudinger-Moser inequalities and applications	University Tunis El Manar	2016
5	PhD	Asymptotic analysis for Vlasov-Navier-Stokes system in bounded domain	University Tunis El Manar	2010
6	Master	Semilinear Heat Equation	Imam Abdulrahman bin Faisal University	2017
7	Master	Semilinear Wave Equation	Imam Abdulrahman bin Faisal University	2017
8	Master	Standing waves for nonlinear Schrödinger equation	Imam Abdulrahman bin Faisal University	2019

Last Update

February 19, 2024