

Curriculum Vitae

Name: **IMED BACHAR**

Date/Place of Birth: October, 17 1967 / Jerba-Tunisia

Sex: Male

Nationality: Tunisian

Marital status: Married with three children.

Current Academic Position: Professor.

Current Address: **Department of Mathematics, College of Sciences
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Academic Qualifications:

- 2006: Habilitation (Post-doctoral Degree),
Faculty of Sciences, Tunis-Tunisia.
- 2003: Ph. D, in Mathematics, Faculty of Sciences, Tunis-Tunisia.
- 1994: Master of Science in Mathematics,
Faculty of Sciences, Tunis-Tunisia.
- 1991: Bachelor of Science in Mathematics,
Faculty of Sciences, Monastir-Tunisia.
- 1989: Diploma of Higher Education,
Faculty of Sciences, Monastir-Tunisia.
- 1987: General Certificate of Secondary Education,
Secondary school, Jerba-Tunisia.

Employment:

- **June 2014- to present: Professor: College of Sciences King Saud University.**
- **2008--May, 2014: Associate Professor: College of Sciences King Saud University.**
- **2007--2008: Associate Professor: Tunis Preparatory Engineering Institute.**
- **2004--2007: Assistant Professor: Tunis Preparatory Engineering Institute.**
- **Fall 2006: Assistant Professor: National Institute of Applied Sciences Technology.**
- **2002--2004: Assistant: Tunis Preparatory Engineering Institute.**
- **1996--2002: Assistant: Gabes Preparatory Engineering Institute.**
- **1995--1996: Research Assistant: Tunis Preparatory Engineering Institute.**
- **1994--1995: Research Assistant: Higher School of Sciences and Techniques, Tunis.**

Research interests:

- **Nonlinear Partial and Fractional Differential Equations.**
- **Harmonic Functions and Classical Potential Theory.**

Scientific Publications:

1. **Bachar, I.,** Mâagli, H.: *Positive solutions for some Riemann-Liouville fractional boundary value problems*, [Journal of Nonlinear Sciences and Applications](#), Vol. 9 (7) (2016), pp. 5093-5106 (ISI)
2. **Bachar, I.** Mâagli, H: *Existence and Global Asymptotic Behavior of Positive Solutions for Superlinear Fractional Dirichlet Problems on the Half-line*, [Fractional Calculus and Applied Analysis](#), Vol. 19 (4) (2016), pp. 1031-1049. (ISI)
3. **Bachar, I.,** Mâagli, H.: *Superlinear singular fractional boundary value problems*, [Electronic Journal of Differential Equations](#), Vol. 2016 (2016), No. 108, pp. 1-15. (ISI)
4. **Bachar, I.,** Mâagli, H.: *Existence and global asymptotic behavior of positive solutions for combined second-order differential equations on the half-line*, [Advances in Nonlinear Analysis](#). Vol. 5 (3) (2016), pp. 205–222 (ISI)
5. **Bachar, I.,** Mâagli, H., V.D. Radulescu: *Fractional Navier boundary value problems* , [Boundary value problems](#), (2016) 2016:79 DOI 10.1186/s13661-016-0586-7 (ISI)
6. **Bachar, I.,** Mâagli, H.: *Global Asymptotic Behavior of Positive Solutions with Blow-up at the Boundary for Fractional Nonlinear Problems*, [Proceedings of the Romanian Academy, Series A](#), Vol. 17 (1) (2016), pp. 16-23. (ISI)
7. **Bachar, I.,** Mâagli, H.: *Sharp estimates on the solution of combine fractional boundary value problems on the half-line*, [Journal of Nonlinear Sciences and Applications](#), Vol. 9 (5) (2016), pp. 2331-2346. (ISI)
8. **Bachar, I.** Mâagli, H, Toumi, F, Zine el Abidine, Z: *Existence and Global Asymptotic Behavior of Positive Solutions for Sublinear and Superlinear Fractional Boundary Value Problems*, [Chinese Annals of Mathematics, Series B](#), Vol. 37 (1) (2016), pp. 1-28. (ISI)
9. Eltayeb, H., Klicman, A., **Bachar, I.:** *Modified Sumudo Decomposition Method for Lane-Emden Type Differential Equations*, [Advances in Mechanical Engineering](#), Vol. 7 (12) (2015), pp. 1-6. (ISI)
10. **Bachar, I.:** *Combined effects in nonlinear singular second-order differential equations on the half-line*, [Electronic Journal of Differential Equations](#), Vol. 2015 (2015), No. 235, pp. 1-12. (ISI)
11. **Bachar, I.,** Mâagli, H.: *Exact boundary behavior of the unique positive solution for singular second-order differential equations*, [Electronic Journal of Qualitative Theory of Differential Equations](#) 2015, No. 37, 1–15; doi: 10.14232/ejqtde.2015.1.37 (ISI)
12. **Bachar, I.,** Mâagli, H.: *Existence and Uniqueness for Superlinear Second-Order Differential Equations on the Half-Line*, [Electronic Journal of Differential Equations](#), Vol. 2015 (2015), No. 08, pp. 1-14. (ISI)
13. **Bachar, I:** *On some fractional Dirichlet problems in bounded domains*, [Mathematical Reports](#) .Vol. 17 No. 1, (2015), (ISI)
14. **Bachar, I.,** Mâagli, H.: *Positive solutions for superlinear fractional boundary value problems* [Advances in Differences Equations](#) (2014), 2014:240 (ISI)
15. **Bachar, I.,** Mâagli, H.: *Existence of Positive Solutions for Some Superlinear Fourth-Order Boundary Value Problems* [Journal of Function Spaces](#) Volume 2014, Article ID 384958, 9 pages (2014), (<http://dx.doi.org/10.1155/2014/384958>) (ISI)
16. **Bachar, I.,** Mâagli, H.: *Existence and global asymptotic behavior of positive solutions for nonlinear fractional Dirichlet problems on the half-line* [Abstr. Appl. Anal.](#) Volume 2014, Article ID 537971, 9 pages (2014) (<http://dx.doi.org/10.1155/2014/537971>) (ISI)

17. **Bachar, I:** *Time-independent Schrödinger Polyharmonic Equation and Applications* [Bull. Math. Soc. Sci. Math. Roumanie](#). Tome 57 (105) No. 2, (2014), 163-179.
18. **Bachar, I., Mâagli, H.:** *Existence and global asymptotic behavior of positive solutions for nonlinear problems on the half-line* [J. Math. Anal. Appl.](#) Volume **416**, (2014), 181-194. (ISI)
19. **Bachar, I., Mâagli, H.:** *Positive bounded solutions for semilinear elliptic equations in smooth domains* [Bulletin of the Belgian Mathematical Society -- Simon Stevin](#), Vol. **20**, no. 4 (2013), 707-714. (ISI)
20. **Bachar, I., Mâagli, H.:** *Combined effects in nonlinear singular fractional Dirichlet problem in bounded domains* [Differential and Integral Equations](#), Volume **26**, Nb 11-12 (2013), 1361-1378. (ISI)
21. **Bachar, I., Mâagli, H.:** *Existence and uniqueness of positive solution for a fractional Dirichlet problem with combined nonlinear effects in bounded domains*, [Abstr. Appl. Anal.](#) Volume 2013, (2013), Article ID 295480, 9 pages (<http://dx.doi.org/10.1155/2013/295480>) (ISI)
22. **Bachar, I., Mâagli, H., Zeddini, N.:** *Positive solutions for some Competitive systems in bounded domains*, [Journal of Function Spaces and applications](#) Volume 2013 (2013), Article ID 140130, 6 pages <http://dx.doi.org/10.1155/2013/140130>. (ISI)
23. **Bachar, I:** *Existence of positive solutions for nonlinear fractional systems in bounded domains* [Electronic Journal of Differential Equations](#), Vol. 2012 (2012), No. 208, pp. 1–11. (ISI)
24. **Bachar, I., Mâagli, H.:** *On some quasi-metrics and their Applications*, [Journal of Inequalities and Applications](#) Volume 2009 (2009), Article ID 167403, 12 pages doi:10.1155/2009/167403 (ISI)
25. **Bachar, I., Ben Othman, S., Mâagli, H.:** *Radial solutions for the p -Laplacian equation*, [Nonlinear Analysis](#) **70** (2009), 2198-2205. (ISI)
26. **Bachar, I., Ben Othman, S., Mâagli, H.:** *Existence results of positive solutions for the radial p -Laplacian*, [Nonlinear Stud.](#) **15** no. 2, (2008), 177-189.
27. **Bachar, I., Mâagli, H., Zeddini, N.:** *Estimates on the Green Function and Existence of Positive Solutions for Some Nonlinear Polyharmonic Problems Outside the Unit Ball* , [Analysis and Applications](#) vol. **6**, no. 2 (2008), 121-150. (ISI)
28. **Bachar, I.:** *Estimates for the Green function and Existence of positive solutions for higher order elliptic equations*, [Abstr. Appl. Anal.](#), vol. **2006**, Article ID 89491, 22 pages, 2006. doi:10.1155/AAA/2006/89491 (ISI)
29. **Bachar, I.:** *Existence of positive solutions for higher order singular sublinear elliptic equations*, [Electron. J. Differential. Equations.](#) **2006** (102), (2006), 1-9 (ISI)
30. **Bachar, I., Zribi, M.:** *Existence results for some polyharmonic problems in the half space*, [J. Math. Anal. Appl.](#) **322**, (2006), 610-620 (ISI)
31. **Bachar, I.:** *Estimates for the Green function and existence of positive solutions of polyharmonic nonlinear equations with Navier boundary conditions*, [New Trends in Potential Theory](#), 101-113, Theta, (2005).
32. **Bachar, I.:** *Estimates for the Green function and characterization of a certain Kato class by the Gauss semigroup in the half space*, [J. Inequal. Pure and Appl. Math.](#) **6** (4) Art. 119, (2005)
33. **Bachar, I.:** *Positive solutions blowing up at infinity for singular nonlinear problem*, [Nonlinear Stud.](#) **12** (2005), no. 4, 343-359
34. **Bachar, I., Mâagli, H.:** *Estimates on the Green's function and Existence of Positive Solutions of Nonlinear Singular Elliptic Equations in the Half Space*, [Positivity.](#) **9** (2005), no. 2, 153-192 (ISI)
35. **Bachar, I., Mâagli, H., Zribi, M.:** *Existence of positive solutions to nonlinear elliptic problem in the half space*, [Electron. J. Differential. Equations.](#) **2005** (44), (2005), 1-16 (ISI)
36. **Bachar, I., Mâagli, H., Zribi, M.:** *Estimates on the Green function and existence of positive solutions for some polyharmonic nonlinear equations in the half space*, [Manuscripta Math.](#) **113** (2004), no. 3, 269-291 (ISI)

37. **Bachar, I.**, Mâagli, H., Zeddini, N.: *Estimates on the Green function and Existence of Positive Solutions of Nonlinear Singular Elliptic Equations*, *Commu. Contemp Math.* **5** (2003), no. 3, 401-434 (ISI)
38. **Bachar, I.**, Zeddini, N.: *On the existence of positive solutions for a class of semilinear elliptic equations*, *Nonlinear Anal.* **52** (2003), 1239-1247 (ISI)
39. **Bachar, I.**, Mâagli, H., Masmoudi, S., Zribi, M.: *Estimates for the Green function and singular solutions for polyharmonic nonlinear equation*, *Abstr. Appl. Anal.* **2003** (2003), no.12, 715-741 (ISI)
40. **Bachar, I.**, Mâagli, H., Mâatoug, L.: *Positive solutions of nonlinear elliptic equations in a half space in IR^2* , *Electron. J. Differential. Equations.* **2002** (41), (2002),1-24 (ISI)
41. **Bachar, I.**: *On exit laws for semigroups in weak duality*, *Commentationes. Math. Univ. Carolinae* **42**, 4 (2001), 711-719
42. **Bachar, I.**: *Sur les lois de sortie des semi-groupes de convolution*, *Annales Mathematicae Silesianae* **15** (2001), 7-15

Conferences and workshops:

- 3rd international Conference on Mathematical Sciences and their Applications, 9-11 November 2015, College of Science, King Saud University, Riyadh (Kingdom of Saudi Arabia)
- Workshop on “ The Experience of College of Science in e-Learning”, 7 May 2015, College of Science, King Saud University, Riyadh (Kingdom of Saudi Arabia)
- Workshop on New Methods in Partial Differential Equations, 18-20 November 2013, College of Science, King Saud University, Riyadh (Kingdom of Saudi Arabia)
- 12th International Workshop on Dynamical Systems and Applications, 12-15 August 2013, Ankara, Turkey. (Conference website: <http://iwdsa2013.atilim.edu.tr>) (Turkey)
- 7th Annual International Conference on Mathematics, 17-20 June 2013, Athens, Greece (Conference website: <http://www.atiner.gr/mathematics.htm>) (Greece)
- Second Annual Math Days of King Saud University, Riyadh (Kingdom of Saudi Arabia), Mars 14-15, 2012.
- Second Workshop Series on Applied Mathematics, Pitesti (Romania), November 2 -4, 2007. (<http://www.imar.ro>)
- IMAR Workshops, Bucharest (Romania), November 06, 2007. (<http://www.imar.ro>)
- Workshop of Potential Theory, IMAR (Romania), November 13-26, 2006.
- Workshop of Probability Theory, University of Evry-Val Essonne (Paris, France) December 12-25, 2005.
- Conference Proceedings, Bucharest (Romania), September 23-27, 2003.
- Seminar of Probability Theory, University of Evry-Val Essonne (Paris, France), November 05-19, 2001 <http://www.maths.univ-evry.fr/prepubli/index.html> (preprint 152, 2001)
- International Conference of Potential Analysis (Tunisia), November 2-7, 1998
- Seminar of Probability Theory, University of Evry-Val Essonne (Paris, France), December 01-30, 1997.
- Colloquial of the Mathematical Society of Tunisia (S.M.T) (Tunisia) March 1997, 1998, 1999, 2002, 2003 and 2004. <http://www.tms.rnu.tn>
- From 1994 to 2008, a regular attendance (weekly) at my research group seminar organized at the Faculty of Sciences, Tunis-(Tunisia).

Activities

1. Principle investigator of the research group (**RG-1435-043**), Deanship of Scientific Research, King Saud University.
2. Principle investigator of the NSTIP strategic technologies program number (13-MAT2137-02) in the Kingdom of Saudi Arabia.
3. Member of the NSTIP strategic technologies program number (13-MAT1813-02) in the Kingdom of Saudi Arabia.
4. Member of the NSTIP strategic technologies program number (11-MAT1716-02) in the Kingdom of Saudi Arabia (closed).
5. Member of the e-learning Committee in King Saud University (Coordinator of the Mathematics Department).
6. Member of the Digital Content Development Project by King Saud University [Responsible to develop the lecture: Math 106 (done), Math 203 (done), Math 111 (done), Math 204 (done), Math 107 (working on)].
7. Coordinator of Math 106 (Integral calculus) Lecture in the Mathematics Department (From 2008 to 2010).
8. Responsible for the Schedule of the Mathematics Faculty Members of King Saud University (From 2010 to present).
9. Member of the Community Service Committee at the Mathematics Department of King Saud University.
10. Member of Analysis Committee at the Mathematics Department of King Saud University.
11. Member of Applied Mathematics Committee at the Mathematics Department of King Saud University.
12. Member of the Mathematical Society of Tunisia.