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This No 3 of Volume 9 (2006)  
is dedicated to the 60th Anniversary  
of Professor Khalifa Trimèche

Many Happy Returns and Cheers!

On behalf of EB of “FCAA” Journal,

**Virginia Kiryakova**, MANAGING EDITOR OF “FCAA”

**LETTER TO THE EDITOR:  
CONGRATULATIONS TO PROF. Kh. TRIMÈCHE  
ON HIS 60th BIRTHDAY**

Professor Khalifa Trimèche (born June 20, 1946) met his 60th birthday in June this year, 2006.

Author of more than 100 scientific papers and 4 monographs, Professor Khalifa Trimèche is world known by his research in the field of harmonic analysis. One of his first research papers in the 70s was on the convergence of generalized Taylor series in the sense of Delsarte. His further studies have been related to harmonic analysis associated with partial differential operators, generalized translation operators, generalized convolution, mean periodic functions, integrals transforms, wavelets and hypergroups, Dunkl theory, and his famous result is about the so-called Chébli-Trimèche hypergroup.

I was happy to be one of his students and to collaborate with him in various topics, including partial differential operators, Lévy-Kintchine formulas, wavelets and Dunkl theory.

Professor Khalifa Trimèche has been adviser and examiner of several Ph.D. and D.Sc. theses, external referee of committees for international awards, referee and editor for many journals and publishers.

During the recent years he has been also the President of the Tunisian Mathematical Society ("TMS").

Professor Khalifa Trimèche is known as a very conversable person and a pleased interlocutor, liked by all people who contact him. Everyone who knows Professor Khalifa Trimèche highly appreciates his tenderness and readiness to help friends and colleagues.

I am pleased to wish to Professor Khalifa Trimèche many happy returns to this day and to pass my wishes for unceasing enthusiasm in all his deeds and new beautiful results, strong health and happiness to him and his family.

**Prof. Mohamed Sifi**

GENERAL SECRETARY OF TUNISIAN MATHEMATICAL SOCIETY  
Faculty of Sciences of Tunis, 2092 Tunis, TUNISIA

## CURRICULUM VITAE of Professor Khalifa Trimèche

Born on June 20, 1946, in Monastir, Tunisia.

### EDUCATION

1971 : Diplôme d'Etudes Approfondies (Spécialité Mathématiques) Adv. Pr. K. Harzallah and J. Faraut.

1974 : Docteur 3ème cycle : Spécialité Mathématiques.

**Thèse** : Convolution généralisée sur le disque unité. (Adv. Pr. J. Faraut).

1980 : Docteur d'Etat es-Sciences Mathématiques.

**Thèse** : Transformations intégrales de Riemann-Liouville et de Weyl associées à un opérateur différentiel singulier sur  $(0, \infty)$  et quelques applications à l'Analyse Harmonique. (Adv. Pr. J. Faraut).

### ACADEMIC EXPERIENCE

1971 : Assistant Professor, Faculty of Sciences of Tunis - TUNISIA.

1976 : Maître Assisant, Faculty of Sciences of Tunis - TUNISIA.

1980 : Maître de conférences, Faculty of Sciences of Tunis - TUNISIA.

1985 : Professor, Faculty of Sciences of Tunis - TUNISIA.

1985 - 1990 : Head of the Mathematical Department of the Faculty of Sciences of Tunis - TUNISIA.

1993 - 1995 : Vice President of the Tunisian Mathematical Society.

2003 President of the Tunisian Mathematical Society.

– Reviewer of Mathematical reviews.

– Reviewer of Zentralblatt für Mathematik.

– Member of Editorial Board of Mediterranean Journal of Mathematics.

### BOOKS PUBLISHED

1. *Transmutation Operators and Mean-periodic Functions Associated with Differential Operators.*  
Mathematical Reports, Vol. 4, N° 1 (1988), p. 1-282, Harwood Academic Publishers-Chur-London-Paris-New-York-Melbourne.
2. *Generalized Wavelet and Hypergroups.*  
Gordon and Breach Sciences Publishers (1997).
3. *Mathématiques* (Rappels de Cours, Exercices et Examens Corrigés) pour le Premier Cycle Universitaire et Préparatoire aux Ecoles d'Ingénieurs. (With A. JOUINI). C.P.U. (2000)
4. *Generalized Harmonic Analysis and Wavelet Packets.*  
Gordon and Breach Sciences Publishers (2001).

5. *Two Versions of Wavelets and Applications* (With A. JOUINI).  
Narosa Publishing House, New Delhi, Chennai, Mumbai, Kolkata, and  
Alpha Science International Ltd. Oxford, U.K. (2006).

## RESEARCH PUBLICATIONS

1. Convolution généralisée sur le disque unité.  
*Thèse de 3ème cycle soutenue le 22-5-1974, à la Faculté des Sciences de Tunis .*
2. Convolution généralisées sur le disque unité (With H. ANNABI).  
*C.R.A.S. Paris t. 278, série A, (1974), p. 21-24 .*
3. Convergence des séries de Taylor généralisées au sens de Delsarte.  
*C.R.A.S. Paris, t. 281, série A, (1975), p. 1015-1017.*
4. Opérateurs de translation généralisée associés à un opérateur différentiel singulier en plusieurs variables.  
*Séminaire d'Analyse Harmonique de Tunis (1978).*
5. Probabilité indéfiniment divisible et théorème de la limite centrale pour une convolution généralisée sur la demi-droite.  
*C.R.A.S. Paris, t. 186, série A, (1978), p. 63-66.*
6. Opérateurs de translation généralisée associés à un opérateur différentiel singulier sur un intervalle borné (with A. ACHOUR).  
*C.R.A.S. Paris, t. 288, série A, (1979), p. 399-402 .*
7. Transformations intégrales de Riemann-Liouville et de Weyl associées à un opérateur différentiel singulier sur  $(0, \infty)$  et quelques applications à l'analyse harmonique.  
*Thèse de Doctorat d'Etat soutenue le 17-6-1980, à la Faculté des Sciences de Tunis .*
8. Transformation de Meijer modifiée.  
*Séminaire d'Analyse Harmonique de Tunis, 6ème année 1979-1980, N° 23.*
9. Transformation intégrale de Weyl et théorème de Paley-Wiener associés à un opérateur différentiel singulier sur  $(0, \infty)$ .  
*J. Math. Pure et Appl. 60, (1981), p. 51-98.*
10. Transformation intégrale de Riemann-Liouville généralisée et convergence des séries de Taylor généralisées au sens de Delsarte.  
*Rev. Fac. Sc. de Tunis, 1, (1981), p. 7-15.*
11. La  $g$ -fonction de Littlewood-Paley associée à un opérateur différentiel singulier sur  $(0, \infty)$  (with A. ACHOUR).  
*Ann. Inst. Fourier, Grenoble, 33, (4), (1983), p. 203-226.*
12. Fonctions moyenne-périodiques associées à un opérateur différentiel singulier sur  $(0, \infty)$  et développement en série de Fourier généralisée.  
*J. Math. Pures et Appl. 65, (1986), p. 1-46.*

13. Fonctions moyenne-périodiques associées à un opérateur différentiel dans le domaine complexe.  
*Mathematical Analysis and its Applications-Proceedings of the International Conference on Mathematical Analysis and its Applications-Kuwait (1985-Pergamon Press, Oxford, New-York, Beijing, Frankfurt, Sao Paulo, Sydney, Tokyo, Toronto).*
14. Fonctions moyenne-périodiques associées à un opérateur différentiel singulier dans le domaine complexe.  
*Proceedings of the International Conference on Complex Analysis and Applications held in Varna May 5-11, 1985, N° 85-(1986).*
15. Opérateurs de transmutation en plusieurs variables.  
*Preprint. Faculty of Sciences of Tunis (1987).*
16. Transformation intégrale de Weyl généralisée associée à un opérateur différentiel singulier sur  $(0, \infty)$  et problème de radiation de Weinstein généralisé.  
*Portugaliae Math. Vol. 47, Fasc. 4, (1990), p. 371-389.*
17. Opérateurs de permutation et Analyse Harmonique associés à des opérateurs aux dérivées partielles.  
*J. Math. Pures et Appl. 70, (1991), p. 1-73.*
18. Opérateurs de permutation et théorème de la limite centrale associés à des opérateurs aux dérivées partielles.  
*X-Proceedings of the Conference held in Oberwolfach. Nov. 4-10, 1990, ed. H. Heyer, Plenum (1992).*
19. The Radon transform and its dual associated with partial differential operators and applications to polynomials on the unit disk.  
*Proceedings of the VII Simposium Sobre Polynomios ortogonales y aplicaciones held in Grenada. Sept. 23-27, 1991, ed. J. S. Dehesa. J. Comp. Appl. Math. 49, (1993), p. 271-280.*
20. Opérateur de transmutation de J. L. Lions et ondelettes généralisées (with A. FITOUHI).  
*Preprint. Faculty of Sciences of Tunis, (1993).*
21. Ondelettes associées à la moyenne sphérique.  
*Preprint, Faculty of Sciences of Tunis, (1990).*
22. Continuous wavelet transforms on Semi-simple Lie groups and on Cartan motion groups.  
*C.R. Math. Rep. Acad. Sci. Canada. Vol. XVI, N°4, (1994), p. 161-165.*
23. Analyses multirésolutions et Bases d'ondelettes.(With A. JOUINI).  
*Preprint, Faculty of Sciences of Tunis, (1994).*
24. Continuous multiscale analysis and partial reconstruction on semisimple Lie groups and on Cartan motion groups.  
*C.R.Math. Rep. Acad. Sci. Canada, Vol. XVI, N° 5, (1994), p. 173-176.*
25. Generalized transmutation and translation operators associated with partial differential operators.  
*Proceedings of the Conference on Application of hypergroups and related measure algebras held in Seattle (U.S.A) August 1-6, 1993, Contemporary Mathematics Vol. 183, p. 347-372.*

26. Ranges and inversion formulas for spherical mean operator and its dual.  
(With M.M.NESSIBI and L.T.RACHDI).  
*C.R.Math. Rep. Acad. Sci. Canada, Vol. XVII, N°1, (1995), p.17 - 21.*
27. Inversion of the spherical mean operator and its dual using spherical wavelets.  
*XI-Proceedings of the Conference held Oberwolfach Oct. 23-29, 1994, ed. H. Heyer, World Scientific-Singapore-New-Jersey-London-Hong Kong (1995).*
28. The Radon transform on the Laguerre hypergroup, (With M.M.NESSIBI). *C.R.Math. Rep. Acad. Sci. Canada, Vol XVII, N°2, (1995), p. 78-82.*
29. Generalized continuous wavelet transform and generalized continuous multi-scale analysis associated with Laguerre functions.  
(With M.M.NESSIBI and M.SIFI)  
*C.R.Math. Rep. Acad. Sci. Canada, Vol. XVII, N°2, (1995), p.73-77.*
30. Continuous wavelet transform on semisimple Lie groups and inversion of the Abel transform and its dual.  
*C.R.Math. Rep. Acad. Sci. Canada, Vol. XVII, N°2, (1995), p. 83-86.*
31. Convolution algebras and factorization of measures on Chébli-Trimèche hypergroups (with N. LAZHARI).  
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(With. M.M.NESSIBI and L.T.RACHDI).  
*J. Math. Anal. and Appl. 196, (1995) p. 861-884.*
33. Ondelettes sur l'intervalle et opérateurs d'extension (with A. JOUINI).  
*C.R.Math. Rep. Acad. Sci. Canada, Vol. XVII, N° 2, 3, (1996), p. 165-169.*
34. Théorème local et de renouvellement pour une convolution généralisée sur la demi-droite. (With L. GALLARDO).  
*C.R. Math. Rep. Acad. Sci. Canada, Vol. XVIII, N° 2, 3, (1996), p. 61-65.*
35. Range of the generalized Radon transform associated with partial differential operators. (With M. MILI).  
*Collect. Math. 47, 1, (1996) p. 1-21 .*
36. Inversion of the Weyl integral transform and the Radon transform on  $\mathbb{R}^n$  using generalized wavelet. (With M.A.MOUROU).  
*C.R.Math. Rep. Acad. Sci. Canada, Vol. XVIII, N° 2, 3, (1996), p. 80-84.*
37. Mehler integral transforms associated with Jacobi functions with respect to the dual variable (with N. BEN SALEM).  
*C.R. Math. Rep. Acad.Sci. Canada, Vol. XVII, N° 1, (1996), p. 22-26.*
38. La transformation intégrale de Sonnie et sa duale.  
*Preprint, Faculty of Sciences of Tunis, (1996).*
39. La transformation intégrale de Gegenbauer-Sonine et sa duale sur un intervalle borné.  
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40. Asymptotique expansion and generalized Schlafli integral representation for the eigenfunction of a singular second order differential operator. (With M. N. LAZHARI and L.T.RACHDI).  
*C.R.Math. Rep. Acad. Sci. Canada, Vol. XVIII, N° 4, (1996), p. 127-131.*
41. Inversion formulas for the generalized Radon transform and its dual. (With L. T. RACHDI).  
*C.R.Math. Rep. Acad. Sci. Canada, Vol. XVIII, N° 4, (1996), p. 137-142.*
42. Inversion of Lions transmutation operators using generalized Wavelets.  
*Applied and Computational Harmonic Analysis 4, (1997), p.1-16.*
43. L'équation de Poisson et les noyaux de Green associés à un opérateur différentiel singulier sur  $\mathbb{R}_+$ . (With L. GALLARDO).  
*C.R. Acad. Sci. Paris, t. 324, Série I, (1997), p. 259-264.*
44. Local and renewal theorem for a generalized convolution on the half line and applications to semigroup theory. (With L. GALLARDO).  
*Preprint. Faculty of Sciences of Tunis. (1997).*
45. Inversion of the Radon transform on the Laguerre hypergroup by using generalized wavelets. (With M.M.NESSIBI).  
*J. Math. Anal. and Appl. 208, (1997), p. 337-363.*
46. Generalized wavelet packets associated with a singular differential operator on  $]0, +\infty[$ .  
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47. Generalized wavelet packets and application to the inversion of the J. L.Lions transmutation operators.  
*Preprint. Faculty of Sciences of Tunis (1997).*
48. Continuous wavelet transform on semisimple Lie groups and inversion of the Abel transform and its dual.  
*Collect. Math. 47, 3, (1997), p. 231-268.*
49. Mehler integral transforms associated with Jacobi functions with respect to the dual variable. (With N. BEN SALEM).  
*J. Math. Anal. and Appl. 214, (1997), p. 691-720.*
50. Ergodic and miscing properties of measures on Laguerre hypergroup. (With M.SIFI).  
*Fourier Analysis, Approximation Theory and Applications. Editors Z.U.Ahmad, N.K.Govil, P.K.Jain. New Age International (P) Ltd, Publishers, (1997).*
51. Wavelets on the product of the Euclidean hypergroup and the Chébli-Trimèche hypergroups. (With L.JAAFAR).  
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52. Wavelets on hypergroups.  
*Proceedings of the International Conference on Harmonic. Analysis. New Delhi, India (1996). Harmonic Analysis and hypergroups-Birkhauser-Basel-Berlin (1998), p. 183-213.*

53. Calderon's formula associated with a differential operator on  $(0, +\infty)$  and inversion of the Abel transform. (With M.A.MOUROU).  
*J. Fourier Anal. and Appl.* Vol. 4, (2), (1998), p. 229-245.
54. The local central limit theorem on the product of the Chébli-Trimèche hypergroup and the euclidean hypergroup  $\mathbb{R}^n$ . (With M.M.NESSIBI and L.T.RACHDI). *J.Math. Sciences.* Vol. 9, N°2, (1998), p. 109-123.
55. Calderon's reproducing formula associated with the Bessel operator. (With M.A.MOUROU).  
*J. Math. Anal. and Appl.* 219, (1998), p. 97-109.
56. Results on Jacobi functions with respect to the dual variable as eigenfunctions and applications.  
*C.R.Math. Rep. Acad.Sci. Canada*, Vol. 20 (2), (1998), p. 56-61.
57. Inversion of the Weyl integral transform and the Radon transform on  $\mathbb{R}^n$  using generalized wavelet. (With M.A.MOUROU).  
*Mh. Math.* 126, (1998), p. 73-83.
58. Asymptotic expansion and generalized Schlöfli integral representation for the eigenfunction of a singular second order differential operator. (With M.N.LAZHARI and T.RACHDI).  
*J. Math. Anal. and Appl.* 217, (1998), p. 203-292.
59. Linear wavelet packets on the generalized Laguerre hypergroup (with L. JAAFAR).  
*Preprint. Faculty of Science of Tunis* (1998).
60. Inversion of the Radon transform on  $\mathbb{R}^n$  using Daubechies wavelets. (With M.A.MOUROU).  
*Preprint. Faculty of Sciences of Tunis.* (1998).
61. Generalized Laplacians and Levy-Khintchine formula for  $k$ -variable continuous hypergroups. (With K.MOKNI).  
*Integ. Transf. and Special Funct.* Vol. 8, N° 3-4, (1999), p. 245-260.
62. Asymptotic expansion and linear wavelet packets on certain hypergroups.  
*Analysis of Divergence. Control and Management of Divergent Processes.* Editors William O. Bray and Caslav V.Stanojevic. Birkäuser-Boston-Basel-Berlin (1999), p. 251-295.
63. Pseudo-differential operators associated with a singular differential operator on  $]0, +\infty[$ . (With A. DACHRAOUI).  
*Indian J. Pure Appl. Math.* 30, (6), (1999), p. 525-543.
64. Wavelet transform on compact Gelfand pairs and its discretization. (With K. MOKNI).  
*J. Math. Anal. and Appl.* 238, (1999), p. 234-258.
65. Convolution semigroups and Calderon's formula for compact  $k$ -variable continuous polynomial hypergroups.  
*Proceedings of the International Workshop on special functions held in Hong Kong June 21-25, 1999. Ed. Charles Dunkl, Mourad Ismail Roderick Wong-World Scientific-Singapore-New Jersey-London- Hong Kong* (2000).



66. The inverse problem of the generalized Radon transform and its dual by generalized wavelets. (With L. JAAFAR).  
*J. Math. Sciences Vol. 11, No1, (2000), p. 63-83.*
67. Lincar wavelet transform on compact Gelfand pairs. (With K. MOKNI).  
*J. Math. Sciences Vol. 11, No1, (2000), p. 53-62.*
68. Calderon's reproducing formula associated with a singular differential operator on the half line. (With M.A.MOUROU).  
*Integ. Transf. and Special Funct. Vol. 11, N° 2, (2000), p. 101-114.*
69. The Dunkl intertwining operator on spaces of functions and distributions and integral representation of its dual.  
*Integ. Trans. and Special Funct, Vol. 12, N° 4, (2001), p. 349-374.*
70. Harmonic Analysis associated with the Dunkl Bessel Laplace operator and a mean value property. (With H. MEJJAOLI).  
*F.C.A.A. Vol. 4, No 4, (2001), p. 443-480.*
71. On a mean value property associated with the Dunkl Laplacian operator and applications. (With H. MEJJAOLI).  
*Integ. Transf. and Special Funct. Vol. 12, N° 3, (2001), p. 279-302.*
72. Opérateurs de transmutation et théorème de Paley-Wiener associés à un opérateur aux dérivées et différences sur  $\mathbb{R}$ . (With M.A.MOUROU).  
*C.R.Acad. Sci. Paris, t. 332, Série I, (2001), p. 379-400.*
73. Biorthogonal multiresolutions analysis and decompositions of Sobolev spaces. (With A. JOUINI).  
*I.J.M.M.S. Vol. 28, N° 9, (2001), p. 517-534.*
74. Calderon's reproducing formula related to the Dunkl operator on the real line. (With M.A.. MOUROU).  
*Mh. Math. 136, (2002), p. 47-65.*
75. Lie theorem for one dimensional hypergroups. (With L. GALLARDO).  
*Integ. Transf. and Special Funct. Vol. 13, (2002), p. 71-92.*
76. Paley-Wiener theorem for the Dunkl transform and Dunkl translation operators.  
*Integ. Transf. and Special. Funct. Vol. 13, (2002) p. 17-38.*
77. Inversion of the Dunkl intertwining operator and its dual using Dunkl wavelets.  
*Rocky Mountain J. of Math. Vol. 32, N°2, (2002), p. 889-916.*
78. One dimensional diffusive hypergroups with asymptotic drift. (With L. GALLARDO).  
*Integ. Transf. and Special. Funct. Vol. 13, (2002), p. 101-108.*
79. Generalized wavelet packets and application to the inversion of the J. L. Lions operator. (With A. JOUINI).  
*F. C.A.A. Vol. 5, N° 1, (2002), p. 1-26.*
80. Un analogue d'un théorème de Hardy pour la transformation de Dunkl. (With L. GALLARDO).  
*C.R. Acad. Sci. Paris, t. 334, Ser. I. (2002), p. 849-854.*
81. Renewal theorems for singular differential operators.  
(With L. GALLARDO). *J. Theoretical Prob, Vol. 15, N°1 (2002), p. 161-205.*

82. Transmutation operators and Paley-Wiener theorem associated to a singular differential-difference operator on the real line.  
(With M.A.MOUROU). *Anal. and Appl. Vol. 1, N° 1, (2003), p. 43-70.*
83. New type Paley-Wiener theorems for the Dunkl transform on  $\mathbb{R}$ . (With C.CHETTAOUI).  
*Integ. Transf. and Special. Funct. Vol. 14 (2), (2003), p. 97-115.*
84. Weyl transforms associated with the spherical mean operator.  
(With L.T.RACHDI). *Anal. and Appl. Vol.1, N° 2, (2003)p. 141-164 .*
85. Positivity of the Jacobi-Dunkl intertwining operator and of its dual and applications. (With F. CHOUCANE and M.MILI).  
*Anal. and Appl. Vol. 1, N° 4, (2003), p. 387-412.*
86. An analogue of Hardy's theorem and its  $L^p$  version for the Dunkl Bessel transform (With H.MEJJAOLI).  
*J. Concr. Appl.Math.2, No4, (2004), p.397-417.*
87. The Dunkl intertwining operator on  $\mathbb{C}$  and mean-periodic functions. (With J.J.BETANCOR and M. SIFI).  
*Preprint. Faculty of Sciences of Tunis (2003).*
88. A new harmonic analysis related to the Dunkl operators theory.  
*Preprint. Faculty of Sciences of Tunis (2003).*
89. Spherical harmonics associated with the Dunkl-Bessel-Laplace operator.  
(With H.MEJJAOLI). *Math. Sci. Res. J. 7(4), (2003), p. 150-172.*
90. Hypercyclic and chaotic convolution operators associated to the Dunkl operator on  $\mathbb{C}$  (With J. J. BETANCOR and M. SIFI).  
*Acta Math. Hangar. 106, N° 1-2. (2005).*
91. Dunkl transform on  $\mathbb{R}$  and convolution product on new spaces of distributions. (With H. BEN MOHAMED).  
*Integ. Transf. and Special Funct. Vol. 14, N° 5, (2003), p. 437-458.*
92. Parabolic potentials associated with the product Dunkl operators. (With H. BEN MOHAMED and H. MEJJAOLI).  
*Math. Sci. Res. J. 7 (12), (2003), p. 446-468.*
93. An  $L^p$  version of Hardy's theorem for the Dunkl transform. (With L. GALLARDO).  
*J. Aust. Math. Soc. 77, (2004), p. 371-385.*
94. An  $L^p - L^q$  version of Hardy's theorem for spherical Fourier transform on semi-simple Lie groups. (With S. BEN FARAH and K. MOKNI).  
*I.J.M.M.S, 33, (2004), p. 1757-1769.*
95. An  $L^p$ -version of Hardy's theorem for the Jacobi-Dunkl transform. (With F. CHOUCANE and M. MILI)  
*Integ. Transf. and Special Funct. Vol. 15, N° 3, (2004), p. 225-237.*
96. An analogue of Cowling-Price's theorem and Hardy's theorem for the generalized Fourier transform associated with the spherical mean operator. (With C. CHETTAOUI and Y. OTHMANI).  
*Anal. and Appl. Vol. 2, N° 3, (2004) p. 177-192.*

97. An  $L^p - L^q$  version of Morgan's theorem for the Dunkl-Bessel transform. (With H. MEJJAOLI).  
*Mediterr. J. Math.* 1, (2004), p. 283-295.
98. On the range of the Dunkl transform on  $\mathbb{R}$ . (With CHETTAOUI and Y. OTHMANI).  
*Math. Sci. Res. J.* 8(3), (2004), p. 85-103.
99. Hypoellipticity and hypoanalyticity of the Dunkl Laplacian operator. (With H. MEJJAOLI).  
*Integ. Transf. and Special Funct. Vol. 15, N° 6, (2004), p. 523-548.*
100. Cowling-Price and Hardy theorems on Chébli-Trimèche hypergroups.  
*Global J. Pure and Appl. Math. Vol. 1, N3, (2005), p.286-305.*
101. Inversion formulas and geometrical form of Paley-Wiener-Schwartz theorem associated with the Dunkl operators.  
*To appear in Integ. Transf. and Special Funct. (2006).*
102. An analogue of Beurling-Hörmander's theorem associated with partial differential operators. (With L. KAMOUN).  
*Mediterr. J. Math. 2, (2005), p. 243-258.*
103. The Jacobi-Dunkl transform of  $W$ -spaces and applications. (With H. MEJJAOLI).  
*Preprint. Faculty of Sciences of Tunis (2005).*
104. Dunkl Wavelet Packets associated with the Dunkl operator on  $\mathbb{R}$ . (With A. JOUINI).  
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105. Unvertainty principle and  $(L^p - L^q)$  sufficient pairs on Chébli-Trimèche hypergroups. (With L. BOUATTOUT).  
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106. Real Paley-Wiener theorems associated with the Weinstein operator. (With Y. OTHMANI).  
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108. Hypoelliptic Dunkl convolution equations in the space of distributions on  $\mathbb{R}^d$ .  
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109. An  $L^p$ -version of Hardy's theorem associated with a Dunkl type differential-difference operator on the real line. (With M. A. MOUROU).  
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111. Hypoelliptic distributions on Chébli-Trimèche. Hypergroups.  
*Global J. Pure and Appl. Math. Vol.1, No 3, (2005), p. 251-271.*
112. Hypoelliptic Jacobi-Dunkl convolution of distributions (With M. MILI).  
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113. Beurling-Hörmander's theorem for the Chébli-Trimèche transform.  
(With L. BOUATTOR).  
*Global J. Pure and Appl. Math. Vol. 1, No 3, (2005), p. 342-357.*
114. Hypoelliptic convolution equations in the space of distributions on noncompact semisimple Lie groups.  
*To appear in Rocky Mountain Journal (2007).*
115. Absolute continuity of the representing measures of the Dunkl intertwining operator and of its dual and applications.  
*Preprint. Faculty of Sciences of Tunis (2006).*

## DOCTORAT / THESES SUPERVISED

### 1. THESES D'ETAT

- Opérateur de translation et  $g$ -fonctions de Littlewood-Paley associés à des opérateurs de Sturm-Liouville singuliers.  
(Thèse de A. ACHOUR soutenue le 2-11-1983).
- Formules d'inversion pour la moyenne sphérique et transformations en ondelettes et de Radon sur l'hypergroupe de Laguerre.  
(Thèse de M.M.NESSIBI soutenue le 2-3-1996).
- Analyse Harmonique associée à des opérateurs aux dérivées partielles.  
(Thèse de M. SIFI soutenue le 5-3-1996).
- Transformation de Mehler par rapport à la variable duale. Probabilité sur les hypergroupes, et Propriété de la moyenne pour l'opérateur de Weinstein.  
(Thèse de N. BEN SALEM soutenue le 27-6-1996)
- Développement asymptotique et transmutation pour une classe d'opérateurs différentiel et aux dérivées partielles singuliers-Applications.  
(Thèse de L.T.RACHDI, soutenue le 11-4-1997).
- Transformation de Radon exponentielle, Transformation intégrales et Probabilité sur des hypergroupes.  
(Thèse de M.N.LAZHARI soutenue le 21-5-1997).
- Opérateurs pseudo-différentiels et transformations de Weyl associés à des analyses harmoniques généralisées.  
(Thèse de A. DACHRAOUI soutenue le 14-5-2002).

## 2. THESE DE 3ème CYCLE

- Conjecture de Stein pour des opérateurs différentiels singuliers sur un intervalle borné.  
(Thèse de L.T.RACHDI soutenue le 9-6-1984).
- Formule de Levy-Kintchine et théorème de la limite centrale duales.  
(Thèse de N. BEN SALEM soutenue le 9-6-1988).
- Fonctions moyenne périodiques associées à un opérateur différentiel dans un disque.  
(Thèse de W. MASMOUDI soutenue le 9-6-1988).
- Propriété de convolution circulaire sur un anneau commutatif unitaire-Distributions presque-périodiques et formule de Poisson généralisée associées à un opérateur différentiel singulier sur  $(0, +\infty)$ .  
(Thèse de M. M. NESSIBI soutenue le 26-4-1989).
- Théorème de la limite centrale. Formule de Levy-Kintchine et probabilité indéfiniment divisible pour une convolution généralisée sur  $[0, +\infty[ \times \mathbb{R}$ . (Thèse de M. SIFI soutenue le 21-2-1992).
- Convolution généralisée et Formules de produit duales pour les fonctions de Laguerre.  
(Thèse de H. KORTAS soutenue le 17-5-1993).
- Fonctions harmoniques et propriété de la moyenne associées à l'opérateur de Weinstein.  
(Thèse de Z. BEN NAHIA soutenue le 22-3-1995).

## 3. THESES DE DOCTORAT

- Caractérisation de l'image pour une transformation de Radon généralisée associée à des opérateurs aux dérivées partielles. Comportement asymptotique des polynômes du demi disque et marches aléatoires sur un cône discret.  
(Thèse de M. MILI soutenue le 22-5-1997).
- Calderon reproducing formula associated with a singular differential operator on the half line and applications.  
(Thèse de M.A.MOUROU soutenue le 18-11-1998).
- Generalized Radon transform on hypergroups and linear wavelet packets on the generalized Laguerre hypergroup.  
(Thèse de L. JAAFAR soutenue le 20-11-1998).
- Propriété de la moyenne et Harmoniques sphériques associées à des opérateurs aux dérivées partielles et aux différences.

(Thèse de H. MEJJAOLI soutenue le 15-5-2003).

- Transformations de Jacobi-Dunkl et applications.

(Thèse de F. CHOUCANE soutenue le 4-1-2005).

- Nouveaux types de théorèmes de Paley-Wiener pour la transformation de Dunkl et théorèmes de Cowling-Price et de Hardy pour la moyenne sphérique.

(Thèse de C. CHETTAOUI soutenue le 6-1-2005).

- Nouveaux espaces de distributions et potentiels paraboliques associés à des opérateurs différentiels et aux différences.

(Thèse de H. BEN MOHAMED soutenue le 11-4-2005).

## HABILITATIONS

1. Habilitation Universitaire de K. MOKNI Intitulée : "Analyse harmonique sur des paires de Gelfand généralisées et transformation en ondelettes sur des paires de Gelfand compact". Soutenue le 8-12-1998.
2. Habilitation Universitaire de A. JOUINI. Intitulée : "Bases d'ondelettes dans des domaines bornés-Paquets d'ondelettes généralisées et applications". Soutenue le 7-5-2002.
3. Habilitation Universitaire de S. BEN FARAH intitulée : "Fonction moyenne et distributions coniques - Principe d'incertitude - Croissance de la trace d'un courant positif fermé". Soutenue le 31-3-2004.
4. Habilitation Universitaire de M. A. MOUROU intitulée "Formule de Calderon pour des convolutions généralisées. Opérateurs de transmutation et analyse harmonique associés à l'opérateur de Dunkl généralisé sur  $\mathbb{R}$ ". Soutenue le 6-6-2005.

## INVITED PROFESSOR and SYMPOSIUMS / WORKSHOPS

France, Marocco, Syria, S. Arabia, Germany, Poland, Spain, Kuwait, Bulgaria, India, USA, Finland, Luxembourg, Cote d'Ivoire, etc.