Dr. Toka Diagana

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Education

1995–1999	**PhD in Mathematics**, *Claude Bernard University–Lyon 1*, France
1993–1995	**DEA (M.S.) in Mathematics**, *Claude Bernard University–Lyon 1*, France

Employment

08/2018–	**Professor** & **Chair**, *Department of Mathematical Sciences*, University of Alabama in Huntsville
2007–2018	**Professor**, *Department of Mathematics*, Howard University
2004–2007	**Associate Professor**, *Department of Mathematics*, Howard University
2002–2004	**Assistant Professor**, *Department of Mathematics*, Howard University
2000–2002	**Lecturer III**, *Department of Mathematics*, Howard University
1998–2000	**Math Instructor**, *College de Thoissey*, l'Ain, France
1998–1999	**ATER (Lecturer)**, *Claude Bernard University - Lyon 1*, France

Administrative and Leadership Positions

2023–	**College of Science Curriculum Committee**, *University of Alabama in Huntsville*
2022-2024	**Mathematics Program Advisory Committee**, *University of Sharjah*, UAE
2021-2022	**Ibni Oumar Mahamat Saleh Prize Selection Committee**, *CIMPA*
2020-2022	**Centennial Fellowship Selection Committee**, *American Mathematical Society*
2019-2020	**College of Science Dean Search Committee**, *University of Alabama in Huntsville*
2018–	**Department Chair**, *Department of Mathematical Sciences*, University of Alabama in Huntsville
2015-2017	**Chairman**, *Graduate Committee*, Mathematics Department, Howard University
2015-2017	**Director of Graduate Studies**, *Mathematics Department*, Howard University
2015-2017	**In Charge of the Graduate Schedule**, *Mathematics Department*, Howard University

2014-2017	**Mathematics Department Executive Committee (Elected)**, *Howard University*
2014-2015	**Hiring Committee**, *Mathematics Department*, Howard University
2013-2017	**Academic Policy Standard and Education Committee**, *Howard University*
2011-2013	**Committee on Human Rights of Mathematicians**, *American Mathematical Society*
2010-2013	**Books and Journal Donations Steering Committee**, *American Mathematical Society*
2009-2013	**Ibni Oumar Mahamat Saleh Prize Selection Committee**, *CIMPA*
2008-2012	**Mathematics Department Executive Committee (Elected)**, *Howard University*
2008-2010	**Hiring Committee**, *Mathematics Department*, Howard University
2007-2010	**Howard University Mathematics Department Representative at MSRI**
2006-2012	**Chairman**, *Graduate Committee*, Mathematics Department, Howard University
2006-2012	**Director of Graduate Studies**, *Mathematics Department*, Howard University
2006-2012	**In Charge of the Graduate Schedule**, *Mathematics Department*, Howard University
2002-2018	**Graduate Faculty**, *Mathematics Department*, Howard University

Honors and Awards

April 2016	**Faculty Excellence Award**, *Howard University*
2009-present	**The African Academy of Sciences Fellow (Elected)**
October 2006	**Prix Chinguitt**
April 2006	**Emerging Scholar Award**, *Howard University*
2003-2011	**Merit-Based Award**

Research Visits (2015-2023)

Oct 2023	**Visiting Professor**, *Shanghai Jiao Tong University*, China
Oct 2023	**Colloquium Talk**, *Shanghai Jiao Tong University*, China
Oct 2023	**Visiting Professor**, *Fudan University*, China
Oct 2023	**Colloquium Talk**, *Fudan University*, China
Oct 2023	**Visiting Professor**, *Wuhan University*, China
Oct 2023	**Colloquium Talk**, *Wuhan University*, China
Jun 2023	**Visiting Professor**, *University Cheikh Anta Diop of Dakar*, Senegal

Mar 2023	**Visiting Professor**, *University of Lorraine*, Metz, France
Aug 2022	**Organized a Follow-up NSF-CBMS Conference**, *University of Alabama in Huntsville*
Jul 2022	**Visiting Professor**, *University of Lorraine*, Metz, France
Jul 2022	**Colloquium Talk**, *University of Lorraine*, Metz, France
Jul 2022	**Difference Equations Conference**, *CentraleSupelec*, France
Jun 2022	**Visited three Universities and Institutes in Ivory Coast**
Jun 2022	**Visited the University Cheikh Anta Diop of Dakar**
Mar 2022	**Visiting Professor**, *University of Sharjah*, UAE
Mar 2022	**Colloquium Talk**, *University of Sharjah*, UAE
Feb 2022	**Visiting Professor**, *West Georgia University*
Dec 2021	**Visiting Professor**, *University of Lorraine*, Metz, France
Aug 2021	**Organized an NSF-CBMS Conference**, *University of Alabama in Huntsville*
Jan 2020	**Joint Mathematics Meetings**, *Denver*, Colorado
Jun 2019	**Participated in a PhD Defense**, *University Cadi Ayyad*, Marrakesh, Morocco
Jun 2019	**Visiting Professor**, *University Cadi Ayyad*, Marrakesh, Morocco
Apr 2019	**Colloquium talk**, *Alabama A&M University*
Mar 2019	**Attended the PhD defense of my student**, *Howard University*
Mar 2019	**Colloquium talk**, *University of Alabama at Birmingham*
Dec 2018	**Visiting Professor**, *KAUST*, KSA
Dec 2018	**Visiting Professor**, *KFUPM*, KSA
Feb 2022	**Participated in a PhD defense**, *KFUPM*, KSA
Nov 2018	**Attended the Field of Dreams Conference**, *Saint Louis*, Missouri
Oct 2018	**Visiting Professor**, *University of Manitoba*, Manitoba, Canada
Oct 2018	**Participated in a PhD defense**, *University of Manitoba*, Manitoba, Canada
Apr 2018	**Visiting Professor**, *West Georgia University*
Mar 2018	**Visiting Professor**, *University of Nouakchott*
Jan 2018	**Visiting Professor**, *KAUST*, KSA
Dec 2017	**Visiting Professor**, *KFUPM*, KSA
July 2017	**Visiting Professor**, *University of Abomey-Calavi*, Cotonou, Benin
Apr 2017	**Colloquium talk**, *West Georgia University*
Mar 2017	**Organization of the Prix Yahya O. Hamidoune**, *Nouakchott*
Dec 2016	**Visiting Professor**, *KFUPM*, KSA
Dec 2016	**Visiting Professor**, *King Abdulaziz University*, KSA
Nov 2016	**Visiting Professor**, *AIMS*, Mbour, Senegal

Oct 2016	**Visiting Professor**, *University of Abomey-Calavi*, Cotonou, Benin
May 2016	**Visiting Professor**, *Faculté des Sciences de Bamako*, Bamako, Mali
Dec 2015	**Visiting Professor**, *KFUPM*, KSA
Nov 2015	**Visiting Professor**, *University Cadi Ayyad*, Marrakesh, Morocco
Jul 2015	**Visiting Professor**, *University of Chile*, Santiago, Chile
Mar 2015	**Visiting Professor**, *Université Paris 1*, Paris, France
Jan 2015	**Visiting Professor**, *Université Gaston Berger*, Saint Louis, Senegal

Courses Taught at Howard University

- Math 006 College Algebra I (Undergrad)
- Math 007 Precalculus (Undergrad)
- Math 009 Introduction to Statistics (Undergrad)
- Math 010 College Algebra II (Undergrad)
- Math 026 Applied Calculus (Undergrad)
- Math 156 Calculus I (Undergrad)
- Math 157 Calculus II (Undergrad)
- Math 158 Calculus III (Undergrad)
- Math 159 Introduction to Differential Equations (Undergrad)
- Math 180 Introduction to Linear Algebra (Undergrad)
- Math 236 Partial Differential Equations I (Grad)
- Math 237 Partial Differential Equations II (Grad)
- Math 430 Topics in Analysis I (Grad)
- Math 439 Topics in Analysis II (Grad)
- Math 231 Functional Analysis I (Grad)
- Math 232 Functional Analysis II (Grad)

Courses Taught at the University of Alabama in Huntsville

- MA 538 Metric Spaces and Applications (Grad)
- MA 490 & MA 690 Topics in p-adic Analysis (Undergrad & Grad)
- MA 544 Linear Algebra (Grad)
- MA 490 & MA 690 Differential Calculus (Undergrad & Grad)
- MA 460 & MA 561 Intro to Fourier Analysis (Undergrad & Grad)
- MA 690 Advanced PDEs (Grad)

Editorship

Editor-in-Chief of 'Nonautonomous Dynamical Systems'

Associate Editor for 'Fractional Differential Equations'

Associate Editor for 'Research in Mathematics'

Associate Editor for 'Afrika Matematika'

Associate Editor for 'International Journal of Differential Equations'

Publications

Books

1. T. Diagana, Semilinear Evolution Equations and Their Applications. Springer, New York, 2018.
2. T. Diagana and F. Ramaroson, Non-archimedean Operator Theory. Springer, New York, 2016. xiii+156 pp. ISBN: 2191-8198.
3. T. Diagana, Almost Automorphic Type and Almost Periodic Type Functions in Abstract Spaces. Springer, New York, 2013. xvi+303 pp. ISBN: 978-3-319-00848-6.
4. T. Diagana (with P. H. Bezandry) Almost Periodic Stochastic Processes. Springer, New York. April, 2010. Springer, New York, 2011. xvi+235 pp. ISBN: 978-1-4419-9475-2.
5. T. Diagana, Pseudo-Almost Periodic Functions in Banach Spaces. Nova Science Publishers, Inc., New York, 2007. xiv+132 pp. ISBN: 978-1-60021-637-4; 1-60021-637-4.
6. T. Diagana, Non-Archimedean Linear Operators and Applications. Nova Science Publishers, Inc., Huntington, NY, 2007. xiv+92 pp. ISBN: 978-1-60021-405-9; 1-60021-405-3.
7. T. Diagana, An Introduction to Classical and P-adic Theory of Linear Operators and Applications. Nova Science Publishers, Inc., Hauppauge, NY, 2006. x+116 pp. ISBN: 1-59454-424-7.

Published Articles

8. T. Diagana, The long-term behavior of the p-adic Sigmoid Beverton-Holt dynamical systems in the projective line $P^1(Q_p)$. Journal of Mathematical Analysis and Applications, July 2023. (In press). https://doi.org/10.1016/j.jmaa.2023.127638
9. T. Diagana (with W. Khulaifi and A. Guesmia), Well-posedness and stability results for some nonautonomous abstract linear hyperbolic equations with memory. Semigroup Forum 105 (2022), pp. 351–373.
10. T. Diagana (with J. H. Hassan and S. A. Messaoudi, Salim), Existence of asymptotically almost periodic solutions for some second-order hyperbolic integrodifferential equations. Semigroup Forum 102 (2021), no. 1, pp. 104–119.
11. T. Diagana (with M. Kostic), Almost periodic and asymptotically almost periodic type functions in Lebesgue spaces with variable exponents $L^{p(x)}$. Filomat 34 (2020), no. 5, pp. 1629-1644.
12. T. Diagana (with C. Buse, L. T. Nguyen, and D. O'Regan), Exponential stability for solutions of continuous and discrete abstract Cauchy problems in Banach spaces. Electron. J. Differential Equations, Vol. 2019 (2019), No. 78, pp. 1-16.
13. T. Diagana (with Denis Pennequin), Almost periodic solutions for some semilinear singular difference equations. Journal of Difference Equations and Applications. Vol. 24 (2018) - Issue 1, pp. 138–147.
14. T. Diagana, Spectral analysis for infinite rank perturbations of unbounded diagonal operators.

p-Adic Numbers Ultrametric Anal. Appl. 9 (2017), no. 3, pp. 242–246.

15. T. Diagana (with S. Araci, M. Acikgoz, and H. M. Srivastavad), A novel approach for obtaining new identities for the λ extension of q-Euler polynomials arising from the q-umbral calculus. Journal of Nonlinear Sciences and Applications 10 (2017), pp. 1316-1325.

16. T. Diagana, Well-Posedness for Some Damped Elastic Systems in Banach Spaces. Applied Mathematics Letters 71 (2017), pp. 70–80.

17. T. Diagana (with H. Maïga), Some new identities and congruences for Fubini numbers. Journal of Number Theory 173 (2017), pp. 547–569.

18. T. Diagana (with F. Ramaroson), Spectral theory for finite rank perturbations of unbounded diagonal operators in non-Archimedean Hilbert space. Advances in non-Archimedean analysis, 29–40, Contemp. Math., 665, Amer. Math. Soc., Providence, RI, 2016.

19. T. Diagana, Existence Results for Some Nonautonomous Integro-differential Equations. J. Nonlinear Convex Anal. 17 (2016), no. 8, pp. 1465–1483.

20. T. Diagana (with A. Ammar and A. Jeribi), Perturbations of Fredholm Linear Relations in Banach Spaces with Applications to $3X3$–Block Matrices of Linear Relations. Arab J. Math. Sci. 22 (2016), no. 1, pp. 59–76.

21. T. Diagana (with M. M. Mbaye) Square-mean Almost Periodic Solutions to some Singular Stochastic Differential Equations. Appl. Math. Lett. 54 (2016), pp. 48–53.

22. T. Diagana (with H. Zhou) Existence of Positive Almost Periodic Solutions to the Hematopoiesis Model. Appl. Math. Comput. 274 (2016), pp. 644–648.

23. T. Diagana (with M. M. Mbaye) Existence Results for Some Nonlinear Hyperbolic Partial Differential Equations. Electronic J. Differential Equations. Vol. 2015 (2015), no. 241, pp. 1–10.

24. T. Diagana (with M. M. Mbaye) Leslie-Gower Competition Model with Survival Rate in an Almost Automorphic Environment. International Journal of Difference Equations. Vol. 10 (2015), pp. 167-179.

25. T. Diagana, Existence Results for Some Higher-Order Evolution Equations with Time-Dependent Unbounded Operator Coefficients. Mathematica Slovaca. 65 (2015), no. 1, 121–140.

26. T. Diagana, Perturbations of Unbounded Fredholm Linear Operators. Handbook in Operator Theory, Springer (2015), pp. 875–880.

27. T. Diagana (with M. Zitane), Stepanov-like Pseudo-Almost Periodic Functions in Lebesgue Spaces with Variable Exponents $L^{p(x)}$. In: Toni, B. (eds) New Frontiers of Multidisciplinary Research in STEAM-H (Science, Technology, Engineering, Agriculture, Mathematics, and Health). Springer Proceedings in Mathematics Statistics, vol 90. Springer, Cham.

28. T. Diagana (with R. Kerby, T. H. Miabey, and F. Ramaroson), Spectral Analysis for Finite Rank Perturbations of Diagonal Operators in Non-Archimedean Hilbert Space. P-adic Numbers, Ultrametric Analysis, and Applications. Vol. 6 (2014), no. 3, pp. 171–187.

29. T. Diagana (with K. Ezzinbi and M. Miraoui), Weighted Pseudo-Almost Periodic Solutions of Neutral Functional Differential Equations Using Measure Theory. Cubo: A Mathematical Journal. Vol. 16 (2014), no. 2, pp. 1–31.

30. T. Diagana, Almost Automorphic Solutions to a Beverton-Holt Dynamic Equation with Survival Rate. Applied Mathematics Letters. Vol. 36 (2014), pp. 19–24.

31. T. Diagana, Existence Results for Some Damped Second-Order Velterra Integro-Differential Equations. Appl. Math. Comput. 237 (2014), 304–317.
32. S. Abbas, M. Benchohra, and T. Diagana, Existence and attractivity results for some fractional order partial integro-differential equations with delay. Afr. Diaspora J. Math. 15 (2013), no. 2, 87–100.
33. T. Diagana, Existence of Pseudo-Almost Automorphic Mild Solutions to Some Nonautonomous Second-Order Differential Equations. Rocky Mountain Journal of Mathematics. Vol. 43 (2013), no. 3, pp. 793–824.
34. T. Diagana, Existence of Globally Attracting Almost Automorphic Solutions to Some Nonautonomous Higher-Order Difference Equations. Applied Mathematics and Computations. 219 (2013), pp. 6510–6519.
35. T. Diagana, Bounded Solutions to Some Classes of Nonautonomous Higher-Order Differential Equations. Afrika Matematika. 24 (2013), no. 1, pp. 33–53.
36. T. Diagana (with M. Arienmughare) Existence of Almost Periodic Solutions to Some Singular Differential. Nonlinear Dyn. Syst. Theory 13 (2013), no. 1, pp. 1–12.
37. T. Diagana (with M. Zitane) Stepanov-like Pseudo-Almost Automorphic Functions in Lebesgue Spaces with Variable Exponents $L^{p(x)}$. Electron. J. Diff. Equ., Vol. 2013 (2013), No. 188, pp. 1–20.
38. T. Diagana (with M. Zitane), Weighted Stepanov-Like Pseudo-Almost Periodic Funcitons in Lebesgue Spaces with Variable Exponents $L^{p(x)}$. Afr. Diaspora J. Math. 15 (2013), no. 2, pp. 56–75.
39. T. Diagana, Corrigendum on "Almost Automorphic Mild Solutions to Some Classes of Higher-Order Differential Equations. Semigroup Forum. 87 (2013), no. 1, pp. 275–276.
40. T. Diagana (with P. H. Bezandry), Square-Mean Almost Periodic Solutions to Some Classes of Nonautonomous Stochastic Evolution Equations With Finite Delay. J. Appl. Funct. Anal. 7 (2012), no. 4, 345–366.
41. T. Diagana, A note on nonautonomous systems of second-order differential equations. Bridging mathematics, statistics, engineering and technology, 17—27, Springer Proc. Math. Stat., 24, Springer, New York, 2012.
42. T. Diagana (with Valerie Nelson), Existence Results for some Higher-Order Evolution with Operator Coefficients. Applied Mathematics and Computation. 219 (2012), Issue 6, pp. 2923–2931.
43. T. Diagana, Almost Automorphic Solutions to Some Damped Second-Order Differential Equations. Communications in Nonlinear Science and Numerical Simulation. 17 (2012), Issue 11, PP. 4074–4084.
44. T. Diagana, Evolution Equations in Generalized Stepanov-Like Pseudo Almost Automorphic Spaces. Electronic J. Differential Equations. 2012 (2012), no. 49, pp. 1-19.
45. T. Diagana (with Najja S. Al-Islam and Saud M. Alsulami), Existence of Weighted Pseudo Anti-Periodic Solutions to Some Nonautonomous Differential Equations. Applied Mathematics and Computation. 218 (2012), 6536-6548.
46. T. Diagana (with Valerie Nelson and Gaston M. N'Guérékata), Stepanov-Like $C^{(n)}$-Pseudo Almost Automorphy and Applications to Some Nonautonomous Higher-Order Differential Equations. Opuscula Math. 32/3 (2012), 455-471.

47. T. Diagana (with Valerie Nelson), C^n-Pseudo Almost Almost Automorphy and Its Applications to Some Higher-Order Differential Equations. Nonlinear Studies Vol. 19 (2012), no. 3, pp. 443–455.
48. T. Diagana, Almost Periodic Solutions for Some Higher-Order Nonautonomous Differential Equations with Operator Coefficients. Mathematical and Computer Modelling. 54 (2011), Issues 11–12, 2672-2685.
49. T. Diagana, Almost Periodic Solutions to Some Second-Order Nonautonomous Differential Equations. Proceedings of the American Mathematical Society 140 (2012), 279–289.
50. T. Diagana, Pseudo Almost Periodic Solutions for Some Classes of Nonautonomous Partial Evolution Equations. Journal of the Franklin Institute. 348 (2011), Issue 8, 2082–2098.
51. T. Diagana, Existence of Almost Periodic Solutions to Some Third-Order Nonautonomous Differential Equations. Electronic Journal of Qualitative Theory of Differential Equations No. 66 (2011), pp. 1–12.
52. T. Diagana, Existence of Pseudo Almost Automorphic Solutions to a Nonautonomous Heat Equation. Cubo: A Mathematical Journal. Vol. 13 (2011), no. 1, pp. 67–95.
53. T. Diagana, Doubly-Weighted Pseudo Almost Periodic Functions. African Diaspora Journal of Mathematics. Special Volume in Honor of Profs. C. Corduneanu, A. Fink, and S. Zaidman. Vol. 12 (2011), no. 1, pp. 121–136.
54. T. Diagana, The existence of a weighted mean for almost periodic functions. Nonlinear Analysis 74 (2011), no. 12, 4269–4273.
55. T. Diagana, Existence of Doubly-Weighted Pseudo-Almost Periodic Solutions to Some Classes of Nonautonomous Differential Equations. Electronic Journal of Differential Equations. 2011 (2011), No. 28, pp. 1-15.
56. T. Diagana, Existence of Pseudo Almost Automorphic Mild Solutions to Some Nonautonomous Partial Evolution Equations. Advances in Difference Equations. 2011, Art. ID 895079, 23 pp.
57. T. Diagana, Almost Automorphic Mild Solutions to Some Classes of Nonautonomous Higher-Order Differential Equations. Semigroup Forum. 82 (2011) no. 3, 455–477.
58. T. Diagana, Existence of Weighted Pseudo Almost Periodic Solutions to Some Classes of Nonautonomous Partial Evolution Equations. Nonlinear Analysis 74(2011), no. 2, 600–615.
59. T. Diagana (with G. M. Mophou and G. M. N'Guerekata), On the existence of mild solutions to some semilinear fractional integro-differential equations, Electronic Journal of Qualitative Theory of Diff. Equ. No. 58. (2010), pp. 1–17.
60. T. Diagana (with P. H. Bezandry), Existence of square-mean almost periodic mild solutions to some nonautonomous stochastic second-order differential equations, Electronic Journal of Differential Equations, Vol. 2010(2010), No. 124, pp. 1–25.
61. T. Diagana (G. M. NGuerekata and A. Pankov) Abstract differential and difference equations. Advances in Difference Equations 2010 Art. ID 857306, 2 pp (MR 2774245)
62. T. Diagana, Existence of Almost Automorphic Solutions to Some Classes of Nonautonomous Higher-Order Differential Equations. Electronic Journal of Qualitative Theory of Differential Equations, No. 22. (2010), pp. 1–26.
63. T. Diagana (with A. Mohamed), Pseudo Almost Automorphic Solutions to Some Second-Order Differential Equations. Cubo: A Mathematical Journal. Vol. 13 (2011), n. 3,

127–137.

64. T. Diagana (with P. H. Bezandry), P-th Mean Pseudo Almost Automorphic Mild Solutions to Some Nonautonomous Stochastic Differential Equations. African Diaspora Journal of Mathematics. (Special Volume in Honor of Constantin Corduneanu, Arlington Fink, and Samuel Zaidman). Vol. 12 (2011), no. 1, pp. 60–79.

65. T. Diagana (with D. Attimu), Representation of Bilinear Forms by Linear Operators in non-Archimedean Hilbert Space Equipped with a Krull Valuation. Seminario Matematico Universita e Politecnico di Torino. Vol. 68 (2010), no. 2, pp. 139–159.

66. T. Diagana (with G. M. Mophou and G. M. N'Guerekata), Existence of weighted pseudo-almost periodic solutions to some classes of differential equations with S^p-weighted pseudo-almost periodic coefficients. Nonlinear Analysis 72 (2010), no. 1, 430—438.

67. T. Diagana (with P. H. Bezandry), Existence of Square-Mean Almost Periodic Solutions to Some Stochastic Hyperbolic Differential Equations with Infinite Delay. Communications in Mathematical Analysis 8 (2010), no. 2, pp. 103–124.

68. T. Diagana, On the Existence of Almost Automorphic Solutions to Some Abstract Hyperbolic Differential Equations. Bulletin of the Belgian Mathematical Society. Simon Stevin 17(2010), no. 2, 219–234.

69. T. Diagana, Pseudo-Almost Automorphic Solutions to Some Classes of Nonautonomous Partial Evolution Equations. Differential Equations and Applications. 1 (2009), no. 4, pp. 561–582.

70. T. Diagana (with Paul H. Bezandry), Existence of quadratic-mean almost periodic solutions to some stochastic hyperbolic differential equations. Electronic Journal of Differential Equations. Vol. 2009(2009), no. 111, pp. 1–14.

71. T. Diagana, Pseudo Almost Automorphic Solutions to Some Neutral Delay Integral Equations of Advanced Type. African Diaspora Journal of Mathematics 8(2009), No. 2, pp. 90–99.

72. T. Diagana (with R. Agarwal), Existence of Pseudo Almost Automorphic Solutions for the Heat Equation with Sp-Pseudo Almost Automorphic Coefficients. Boundary Value Problems 2009, Art. ID 182527, 19 pp.

73. T. Diagana (with G. D. McNeal), Corrigendum to "Spectral Analysis for Rank One Perturbations of Diagonal Operators in Non-Archimedean Hilbert Space. Commentationes Mathematicae. Univ. Carolin. 50 (2009), no. 4, 637—638.

74. T. Diagana (with G. D. McNeal), Spectral Analysis for Rank One Perturbations of Diagonal Operators in Non-Archimedean Hilbert Space. Commentationes Mathematicae. Univ. Carolin. 50(2009), no. 3, 385–400.

75. T. Diagana, Erratum to "Existence of Solutions to Some Classes of Partial Fractional Differential Equations". Advances in Dynamical Systems and Applications. 4 (2009), no. 2, pp. 25–26.

76. T. Diagana, Existence of Solutions to Some Classes of Partial Fractional Differential Equations. Nonlinear Analysis 71 (2009), no. 11, 5296–5300.

77. T. Diagana (with D. Attimu), Functional Calculus for a Class of Unbounded Linear Operators on Some Non-Archimedean Banach Spaces. Commentationes Mathematicae Univ. Carolin. 50 (2009), no. 1, 37–60.

78. T. Diagana (with E. Hernandez, and J. P. C. dos Santos), Existence of Asymptotically Almost Automorphic Solutions to Some Abstract Partial Neutral Integro-Differential Equations. Nonlinear Analysis 71 (2009), no. 1-2, 248—257.

79. T. Diagana, Existence of Weighted Pseudo Almost Periodic Solutions to Some Classes of Hyperbolic Evolution Equations. Journal of Mathematical Analysis and Applications 350 (2009), Issue 1, Pages 18–28.

80. T. Diagana (with M. Baroun, S. Boulite, and L. Maniar), Almost Periodic Solutions to Some semilinear non-autonomous Thermoelastic Plate Equations. Journal of Mathematical Analysis and Applications 349(2009), Issue 1, Pages 74–84.

81. T. Diagana, Existence of Almost Automorphic Solutions to Some Partial Hyperbolic Differential Equations with S^p-Almost Automorphic Coefficients. Dynamics Continuous Discrete Impulsive Systems. Ser. A Math. Anal. 16 (2009), Differential Equations and Dynamical Systems, suppl. S1, 109–115.

82. T. Diagana, Existence of Pseudo Almost Automorphic Solutions to Some Abstract Differential Equations with S^p-Pseudo Almost Automorphic Coefficients. Nonlinear Analysis 70 (2009), no. 11, 3781–3790.

83. T. Diagana, Weighted Pseudo Almost Periodic Solutions to Some Neutral Delay Integral Equation of Advanced Type. Nonlinear Analysis 70 (2009), Issue 1, Pages 298–304.

84. T. Diagana, Stepanov-like Pseudo Almost Periodicity and Its Applications to Some Nonautonmous Differential Equations. Nonlinear Analysis 69 (2009), Issue 12, Pages 4277–4285.

85. T. Diagana, Existence of Almost Automorphic Solutions to Some Neutral Functional Differential Equations with Infinite Delay. Electronic Journal of Differential Equations Vol. 2008(2008), No. 129, pp. 1–14.

86. T. Diagana (with H. Henriquez and E. Hernandez M), Asymptotically Almost Periodic Solutions to Some Classes of Second-Order Functional Differential Equations. Differential and Integral Equations 21(2008), nos. 5-6, 575–600.

87. T. Diagana (with H. Henriquez and E. Hernandez M), Almost Automorphic Solutions to Some Partial Neutral Functional Differential Equations. Nonlinear Analysis 69(2008), 1485–1493.

88. T. Diagana, Existence of weighted pseudo almost periodic solutions to some non-autonomous differential equations. International Journal of Evolution Equations 2(2008), no. 4, 397–410.

89. T. Diagana (P. Bezandry), Existence of S^2-Almost Periodic Solutions to a Class of Nonautonomous Stochastic Evolution Equations. Electronic Journal of Qualitative Theory of Differential Equations, No. 35. (2008), pp. 1–19.

90. T. Diagana, Weighted pseudo-almost periodic solutions to some differential equations. Nonlinear Analysis 68 (2008), no. 8, 2250–2260.

91. T. Diagana (with P. Bezandry and S. Elaydi), On the stochastic Beverton-Holt equation with survival rates. Journal of Difference Equations and Its Applications 14(2008), no. 2, 175–190.

92. T. Diagana (with R. P. Agarwal and E. Hernandez M), Weighted pseudo almost periodic solutions to some partial neutral functional differential equations. Journal of Nonlinear Convex Analysis 8 (2007), no. 3, 397–415.

93. T. Diagana (D. Attimu), Representation of bilinear forms in non-Archimedean Hilbert space

by linear operators. II. Commentationes Mathematicae. Univ. Carolin. 48(2007), no. 3, 431–442.

94. T. Diagana (with P. Bezanadry), Existence of almost periodic solutions to some stochastic differential equations. Applicable Analysis 86 (2007), no. 7, 819–827.

95. T. Diagana (with P. H. Bezandry), Square-mean almost periodic solutions nonautonomous stochastic differential equations. Electronic Journal of Differential Equations 2007, No. 117, 10 pp.

96. T. Diagana, Stepanov-like pseudo almost periodic functions and their applications to differential equations. Communications in Mathematical Analysis 3 (2007), no. 1, 9–18.

97. T. Diagana (with E. Hernández), On pseudo almost periodic solutions to some neutral functional-differential equations. Australian Journal of Mathematical Analysis and Applications 4(2007), no. 2, Art. 12, 7 pp.

98. T. Diagana (with G. M. NGuerekata), Stepanov-like almost automorphic functions and applications to some semilinear equations. Applicable Analysis 86 (2007), no. 6, 723–733.

99. T. Diagana, Existence results for pseudo almost periodic differential, functional, and neutral integral equations. International Journal of Evolution Equations 2(2007), no. 2, 205–233.

100. T. Diagana, Pseudo almost periodic solutions to some partial functional differential equations with reflecting arguments. Functional Differential Equations 14 (2007), no. 2-4, 231–244.

101. T. Diagana (with C. M. Mahop), Pseudo almost periodic solutions to a neutral delay integral equation. Cubo: A Mathematical Journal 9 (2007), no. 1, 47–55.

102. T. Diagana (with S. Elaydi and A. A. Yakubu), Population models in almost periodic environments. Journal of Difference Equations and Its Application 13 (2007), no. 4, 239–260.

103. T. Diagana (with E. Hernandez and M. Rabello), Pseudo almost periodic solutions to some non-autonomous neutral functional differential equations with unbounded delay. Mathematical and Computer Modelling 45 (2007), no. 9-10, 1241–1252.

104. T. Diagana (with G. M. N'Guerekata), Almost automorphic solutions to some classes of partial evolution equations. Applied Mathematics Letters 20 (2007), no. 4, 462–466.

105. T. Diagana, Existence of pseudo almost periodic solutions to some classes of partial hyperbolic evolution equations. Electronic Journal of Qualitative Theory of Differential Equations 2007, No. 3, 12 pp.

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Other Publications

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Edited Books

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152. (Editor: T. Diagana) Focus on African Diaspora Mathematics. Nova Science Publishers, 2008.

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Directed PhD

Sandra Farrier– Department of Mathematics, Howard University, January 2005

Thesis Title: Fixed-Point and Ergodic Theorems for Nonexpansive Mappings on Ultrametric Banach Spaces

Dodzi K. Attimu – Department of Mathematics, Howard University, February 2008

Thesis Title: Linear Operators on Some Non-Archimedean Hilbert Spaces and Their Spectral Theory

Najja S. Al-Islam – Department of Mathematics, Howard University, January 2009

Thesis Title: Pseudo Almost Periodic Solutions to Some Systems of Nonlinear Hyperbolic Second-Order Partial Differential Equations

George D. McNeal – Department of Mathematics, Howard University, November 2009

Thesis Title: Spectral Analysis for Rank-One Perturbations of Diagonal Operators in Non-Archimedean Hilbert Space

Valerie Nelson – Department of Mathematics, Howard University, November 2013

Thesis Title: Existence Results for Some Higher-Order Abstract Differential Equations with Applications to PDEs

Mohamed Zitane – Department of Mathematics, Université Ibn Tofail, Morocco, December 2013

Thesis Title: Existence Results for Some Nonautonomous Neutral Functional Differential Equations with Applications to PDEs

TeyLama H. Miabey – Department of Mathematics, Howard University, April 2014

Thesis Title: Spectral Analysis for Finite Rank Perturbations of Diagonal Operators in non-Archimedean Hilbert Space

Ahmed H. Mohamed – Department of Mathematics, Howard University, June 2014

Thesis Title: Existence Results for Some Second-Order Evolution Equations with Damping

Demba Sy – Department of Mathematics, Howard University, March 2019

Thesis Title: Piecewise Stepanov-Like Pseudo-Almost Periodic Solutions To Abstract Impulsive Differential Equations

Jason Knight – Department of Mathematical Science, University of Alabama in Huntsville, March 2022

Thesis Title: Dynamical Systems of p-adic (3,3)-Rational Functions

▬▬▬ Paticipating in PhD and HDR Committees

- Sean D. Brooks (Howard University) — 2003
- Barbara Tankersley (Howard University) — 2004
- Sandra N. Farrier (Howard University) — 2005
- Simeao Joao (Howard University) — 2006
- Lakeshia Legette (Howard University) — 2008
- Dodzi K. Attimu (Howard University) — 2008
- Lifoma Salaam (Howard University) — 2008
- Najja S. Al-Islam (Howard University) — 2009
- George D. McNeal (Howard University) — 2009
- Shari Wiley (Howard University) — 2010
- Kendall Williams (Howard University) — 2010
- Chinenye Ofodile (Howard University) — 2011
- Adebukola Gbade-Oyelakin (Howard University) — 2011
- Lois Simon (Howard University) — 2011
- Fred Nelson (Howard University) — 2011
- Henry Jordan (Howard University) — 2011
- Nianpeng Li (Howard University) — 2012
- Evelyn Thomas (Howard University) — 2012
- Ralph Twum (Howard University) — 2012
- Valerie Nelson (Howard University) — 2013
- Oliver Kayande (Howard University) — 2013

- Mohamed Zitane (Ibn Tofail University, Kenitra, Morocco) — 2013
- Teylama Herve Miabey (Howard University) — 2014
- Ahmed Hassan Mohamed (Howard University) — 2014
- Denis Pennequin (University of Paris 1, France) — HDR — 2014
- Mamamdou M. Mbaye (Gaston Berger University, Saint-Louis, Senegal) — 2015
- Philippe Cieutat (University of Versailles, France) — HDR — 2015
- Francis Erebholo (Howard University) — 2015
- Abdelkarim Nidal Akdad (University of Cadi Ayyad, Morocco) — 2015
- Aril Milce (University of Guadeloupe, France) — 2015
- Genesis Alberto (Howard University) — 2016
- Tongobé Mounkoro (Faculté des Sciences de Bamako, Mali) — 2016
- Haleemah Ghazwani (Howard University) — 2017
- Angel Barria Comicheo (University of Manitoba, Canada) — 2018
- Jamilu H. Hashim (King Fahd University of Petroleum and Minearals, KSA) — 2018
- Demba Sy (Howard University) — 2019
- Nadia Drissi (University of Cadi Ayyad, Morocco) — 2019
- Jason Knight (University of Alabama in Huntsville, USA) — 2022

Served as the Chairperson for the PhD Committees of the following PhD candidates:
- Simeao Joao
- Lakeshia Legette
- Lifoma Salaam
- Kendall Williams
- Chinenye Ofodile
- Adebukola Gbade-Oyelakin
- Henry Jordan
- Nianpeng Li
- Evelyn Thomas
- Ralph Twum
- Francis Erebholo
- Jason Knight

Master/Honors Theses Directed

Quinten Ryan McKinney – Honors Thesis, University of Alabama in Huntsville

Thesis: Analysis of the Almost Periodically Forced Sigmoid Beverton-Holt Model
Defense Date: August 2020

Gradi Lubwele Kamingu – M.S. Thesis, The African Institute of Mathematical Sciences (AIMS), Senegal

Thesis: Existence of Almost Automorphic Solutions to Some Singular Systems of Differential Equations
Defense Date: June 2017

Thesis: Almost Periodic Solutions to Some Singular Systems of Differential Equations
Defense Date: April 2012

Membership

American Mathematical Society Membership, 2000–present

International Society of Difference Equations, 2008-present