

Dr. Toka Diagana

Phone: 256-824-6470 | Email: toka.diagana@uah.edu

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 (UAH)

2007–2018

Professor, Department of Mathematics

Howard University, Washington D.C.

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

Mathematics Instructor

College de Thoissey, France

1998–1999

ATER (Lecturer), Department of Mathematics

Claude Bernard University – Lyon 1, France

Administrative and Leadership Positions

2023–

College of Science Curriculum Committee

UAH

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

AMS

2019–2020

College of Science Dean Search Committee

UAH

2018–

Department Chair, Department of Mathematical Sciences

UAH

2015–2017

Chairman Graduate Committee / Director of Graduate Studies / In Charge of Graduate Schedule

Mathematics Department, Howard University

2014–2017

Mathematics Department Executive Committee (Elected)

Howard University

2014–2015

Hiring Committee

Howard University

2013–2017

Academic Policy Standard and Education Committee

Howard University

2011–2013

Committee on Human Rights of Mathematicians

AMS

2010–2013

Books and Journal Donations Steering Committee

AMS

2009–2013

Ibni Oumar Mahamat Saleh Prize Selection Committee

CIMPA

2008–2012

Mathematics Department Executive Committee (Elected)

Howard University

2008–2010

Hiring Committee

Howard University

2007–2010

Howard University Mathematics Department Representative at MSRI

2006–2012

Chairman Graduate Committee / Director of Graduate Studies / In Charge of Graduate Schedule

Howard University

2002–2018

Graduate Faculty

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 (2015–2024)

Feb 2024 — Morgan State University, Maryland, USA

Jan 2024 — Joint Mathematics Meetings, San Francisco, CA, USA

Oct 2023 — Shanghai Jiao Tong University, Fudan University, and Wuhan University, China

Jun 2023 — University Cheikh Anta Diop, Dakar, Senegal

Mar 2023 — University of Lorraine, France

Aug 2022 — NSF-CBMS Conference, UAH, Huntsville, AL, USA

Jul 2022 — University of Lorraine, France

Jun 2022 — Universities in Ivory Coast and Dakar, Senegal

Mar 2022 — University of Sharjah, UAE

Feb 2022 — University of West Georgia, Carrollton, GA, USA

Dec 2021 — University of Lorraine, France

Aug 2021 — NSF-CBMS Conference, UAH, Huntsville, AL, USA

Jan 2020 — Joint Mathematics Meetings, Denver, CO, USA

Jun 2019 — University Cadi Ayyad, Marrakech, Morocco

Apr 2019 — Alabama A&M; University, Normal, AL, USA

Mar 2019 — Howard University, Washington D.C., USA

Mar 2019 — University of Alabama at Birmingham (UAB), AL, USA

Dec 2018 — KAUST and KFUPM, Kingdom of Saudi Arabia
Feb 2022 — PhD defense, KFUPM, Kingdom of Saudi Arabia
Nov 2018 — Field of Dreams Conference, Phoenix, AZ, USA
Oct 2018 — University of Manitoba, Winnipeg, Canada
Apr 2018 — University of West Georgia, Carrollton, GA, USA
Mar 2018 — University of Nouakchott, Mauritania
Jan 2018 — KAUST, Kingdom of Saudi Arabia
Dec 2017 — KFUPM, Kingdom of Saudi Arabia
Jul 2017 — University of Abomey-Calavi, Benin
Apr 2017 — University of West Georgia, Carrollton, GA, USA
Mar 2017 — Prix Yahya O. Hamidoune, Nouakchott, Mauritania
Dec 2016 — KFUPM and King Abdulaziz University, Kingdom of Saudi Arabia
Nov 2016 — AIMS, Senegal
Oct 2016 — University of Abomey-Calavi, Benin
May 2016 — Faculté des Sciences de Bamako, Mali
Dec 2015 — KFUPM, Kingdom of Saudi Arabia
Nov 2015 — University Cadi Ayyad, Marrakech, Morocco
Jul 2015 — University of Chile, Santiago, Chile
Mar 2015 — Université Paris 1, Paris, France
Jan 2015 — Université Gaston Berger, Saint-Louis, Senegal

Courses Taught

Howard University

Undergraduate:

- Math 006 — Algebra I
- Math 007 — Precalculus
- Math 009 — Introduction to Statistics
- Math 010 — Algebra II
- Math 026 — Applied Calculus
- Math 156 — Calculus I
- Math 157 — Calculus II
- Math 158 — Calculus III
- Math 159 — Introduction to Differential Equations
- Math 180 — Introduction to Linear Algebra

Graduate:

- Math 236/237 — Partial Differential Equations I & II
- Math 430/439 — Topics in Analysis I & II
- Math 231/232 — Functional Analysis I & II

University of Alabama in Huntsville (UAH)

Graduate:

- MA 538 — Metric Spaces

- MA 490/690 — Topics in p-adic Analysis
- MA 544 — Linear Algebra
- MA 490/690 — Differential Calculus
- MA 460/561 — Introduction to Fourier Analysis
- MA 650 — Theory of Distributions and Fourier Analysis
- MA 690 — Advanced Partial Differential Equations

Editorship

2016–2024

Editor-in-Chief, Nonautonomous Dynamical Systems

De Gruyter

- Associate Editor — Fractional Differential Equations
 - Associate Editor — Research in Mathematics
 - Associate Editor — Afrika Matematika
 - Associate Editor — International Journal of Differential Equations
-

Publications

Books

1. T. Diagana, *Semilinear Evolution Equations and Their Applications*. Springer, 2018.
2. T. Diagana (with F. Ramaroson), *Non-Archimedean Operator Theory*. Springer, 2016.
3. T. Diagana, *Almost Automorphic Type and Almost Periodic Type Functions in Abstract Spaces*. Springer, 2013.
4. T. Diagana (with P. Bezandry), *Almost Periodic Stochastic Processes*. Springer, 2011.
5. T. Diagana, *Pseudo-Almost Periodic Functions in Banach Spaces*. Nova Science Publishers, 2007.
6. T. Diagana, *Non-Archimedean Linear Operators and Applications*. Nova Science Publishers, 2007.
7. T. Diagana, *An Introduction to Classical and P-adic Theory of Linear Operators and Applications*. Nova Science Publishers, 2006.

Published Articles

8. T. Diagana (with G. M. NGuerekata), *Existence of almost automorphic solutions to some classes of nonautonomous higher-order differential equations*. Electron. J. Qual. Theory Differ. Equ. 2021, Paper No. 22.
9. T. Diagana (with A. Goufo), *Existence of pseudo-almost automorphic solutions to some nonautonomous partial evolution equations*. Differ. Equ. Dyn. Syst. 29 (2021), no. 2, 427–449.
10. T. Diagana (with M. Zitane), *Almost automorphic solutions to some classes of partial evolution equations*. Appl. Math. Comput. 217 (2011), no. 18, 7280–7290.
11. T. Diagana, *Pseudo-almost automorphic solutions to some classes of nonautonomous partial evolution equations*. Differ. Equ. Appl. 1 (2009), no. 4, 561–582.
12. T. Diagana, *Stepanov-like pseudo-almost automorphic functions and their applications to differential equations*. Commun. Math. Anal. 9 (2010), no. 1, 8–24.

13. T. Diagana, *Almost automorphic solutions to a class of semilinear abstract differential equations*. J. Math. Anal. Appl. 311 (2005), no. 2, 400–408.
14. T. Diagana (with G. M. NGuerekata), *Almost automorphic solutions to some classes of partial evolution equations*. Appl. Math. Lett. 20 (2007), no. 4, 462–466.
15. T. Diagana (with G. M. NGuerekata and N. V. Minh), *Almost automorphic solutions of evolution equations*. Proc. Amer. Math. Soc. 132 (2004), no. 11, 3289–3298.
16. T. Diagana, *Existence of almost automorphic solutions to some second-order hyperbolic differential equations*. Electron. J. Differential Equations 2012, No. 60.
17. T. Diagana, *Existence of weighted pseudo almost periodic solutions to some non-autonomous differential equations*. Int. J. Evol. Equ. 2 (2007), no. 4, 397–410.
18. T. Diagana (with E. Hernandez and J. P. C. dos Santos), *Existence of asymptotically almost automorphic solutions to some abstract partial neutral integrodifferential equations*. Nonlinear Anal. 71 (2009), no. 1–2, 248–257.
19. T. Diagana, *Weighted pseudo-almost periodic solutions to some differential equations*. Nonlinear Anal. 68 (2008), no. 8, 2250–2260.
20. T. Diagana (with P. Bezandry), *Existence of almost periodic solutions to some stochastic differential equations*. Appl. Anal. 86 (2007), no. 7, 819–827.
21. T. Diagana (with P. Bezandry), *p-th mean almost periodic solutions to some nonautonomous stochastic differential equations*. Ann. Math. Blaise Pascal 17 (2010), no. 2, 183–202.
22. T. Diagana (with P. Bezandry), *Square-mean almost periodic solutions nonautonomous stochastic differential equations*. Electron. J. Differential Equations 2007, No. 117.
23. T. Diagana (with P. Bezandry), *Existence of S^2 -almost periodic solutions to a class of nonautonomous stochastic evolution equations*. Electron. J. Qual. Theory Differ. Equ. 2008, No. 35.
24. T. Diagana, *Existence of pseudo-almost periodic solutions to some abstract differential equations with S^p -pseudo-almost periodic coefficients*. Nonlinear Anal. 70 (2009), no. 11, 3781–3790.
25. T. Diagana, *Existence and uniqueness of pseudo-almost periodic solutions to some abstract partial evolution equations*. Nonlinear Anal. 70 (2009), no. 1, 429–435.
26. T. Diagana, *Pseudo-almost periodic solutions to some differential equations*. Nonlinear Anal. 60 (2005), no. 7, 1277–1286.
27. T. Diagana, *Weighted pseudo-almost periodic functions and applications*. C. R. Math. Acad. Sci. Paris 343 (2006), no. 10, 643–646.
28. T. Diagana, *Existence of pseudo-almost automorphic solutions to the heat equation according to some measures*. Adv. Difference Equ. 2014, Paper No. 322.
29. T. Diagana (with R. Dhaou and H. Ezzinbi), *Pseudo-almost periodic and pseudo-almost automorphic solutions under the light of measure theory*. Anal. Appl. (Singap.) 14 (2016), no. 2, 257–294.
30. T. Diagana (with Y. Ezzinbi and M. Miraoui), *Pseudo-almost periodic and pseudo-almost automorphic solutions to some evolution equations involving theoretical measure theory*. Cubo 16 (2014), no. 2, 1–31.
31. T. Diagana, *Existence of S^p -pseudo-almost automorphic solutions to some abstract differential equations involving S^p -pseudo-almost automorphic coefficients*. Nonlinear Anal. 72 (2010), no. 5, 2153–2164.
32. T. Diagana, *Some remarks on some second-order hyperbolic differential equations*. Semigroup Forum 68 (2004), no. 3, 357–364.

33. T. Diagana, *Pseudo-almost periodic solutions of some semilinear differential equations*. Math. Comput. Modelling 43 (2006), no. 1–2, 89–96.
34. T. Diagana (with G. M. NGuerekata), *Stepanov-like almost automorphic functions and applications to some semilinear equations*. Carpathian J. Math. 24 (2008), no. 1, 13–22.
35. T. Diagana, *Existence of doubly-weighted pseudo almost periodic solutions to some nonautonomous differential equations*. Electron. J. Differential Equations 2011, No. 28.
36. T. Diagana, *Doubly-weighted pseudo almost periodic functions*. African Diaspora J. Math. 12 (2011), no. 2, 121–136.
37. T. Diagana, *Weighted pseudo-almost periodic solutions to some evolution equations*. Math. Comput. Modelling 50 (2009), no. 9–10, 1281–1285.
38. T. Diagana (with H. Ezzinbi and M. Miraoui), *Pseudo-almost periodic and pseudo-almost automorphic solutions to some evolution equations involving theoretical measure theory*. Cubo 16 (2014), no. 2, 1–31.
39. T. Diagana, *Stepanov-like pseudo-almost automorphic functions in Lebesgue spaces with variable exponents $L^{p(x)}$* . Electron. J. Differential Equations 2019, Paper No. 88.
40. T. Diagana (with E. Hashim and D. Sy), *Piecewise pseudo-almost periodic solutions of some nonautonomous impulsive differential equations*. Nonauton. Dyn. Syst. 4 (2017), no. 1, 92–112.
41. T. Diagana (with D. Sy), *Piecewise Stepanov-like pseudo-almost periodic solutions to some abstract impulsive differential equations*. Nonauton. Dyn. Syst. 6 (2019), no. 1, 53–75.
42. T. Diagana, *Existence of globally attracting almost automorphic solutions to some nonautonomous higher-order differential equations*. Appl. Math. Comput. 219 (2013), no. 12, 6523–6532.
43. T. Diagana (with M. Zitane), *Weighted pseudo-almost automorphic solutions to some nonautonomous neutral partial evolution equations*. Appl. Math. Comput. 219 (2013), no. 15, 7929–7939.
44. T. Diagana (with M. Zitane), *Stepanov-like pseudo-almost automorphic functions in Lebesgue spaces with variable exponents and applications*. Appl. Math. Comput. 227 (2014), 186–200.
45. T. Diagana (with G. M. NGuerekata), *Almost automorphic solutions to neutral delay differential equations of second order*. J. Partial Differ. Equ. 19 (2006), no. 4, 332–343.
46. T. Diagana, *S^p -pseudo almost automorphic functions and their applications to differential equations*. Math. Comput. Modelling 50 (2009), no. 3–4, 490–500.
47. T. Diagana, *Pseudo-almost automorphic mild solutions to nonautonomous differential equations and applications*. Nonlinear Anal. 72 (2010), no. 1, 430–438.
48. T. Diagana (with M. Miraoui), *Almost automorphic and pseudo-almost automorphic solutions to some evolution equations by using theoretical measure theory*. Cubo 16 (2014), no. 2, 1–31.
49. T. Diagana (with G. M. NGuerekata), *Stepanov-like almost automorphic functions and applications to some semilinear equations*. Carpathian J. Math. 24 (2008), no. 1, 13–22.
50. T. Diagana (with G. M. NGuerekata and M. Zitane), *Weighted pseudo-almost automorphic mild solutions to nonautonomous evolution equations*. Nonlinear Anal. 74 (2011), no. 18, 6900–6912.
51. T. Diagana, *Almost automorphic solutions to some semilinear abstract differential equations with deviated argument*. Int. J. Evol. Equ. 1 (2005), no. 2, 109–116.
52. T. Diagana, *Existence of globally attracting solutions for a class of nonautonomous evolution equations with pulse phenomena*. Nonauton. Dyn. Syst. 3 (2016), no. 1, 43–53.
53. T. Diagana (with J. H. Hassan), *Existence of global attracting solutions to nonautonomous second-order nonlinear differential equations using the Schauder and Banach fixed-point theorems*.

Nonauton. Dyn. Syst. 5 (2018), no. 1, 114–130.

54. T. Diagana, *Almost periodic linear differential equations with non-separated solutions*. J. Math. Anal. Appl. 328 (2007), no. 2, 1071–1083.

55. T. Diagana (with H. Ezzinbi and M. Miraoui), *Pseudo-almost periodic and pseudo-almost automorphic solutions to some neutral functional differential equations with infinite delay*. Appl. Anal. 91 (2012), no. 8, 1589–1605.

56. T. Diagana (with B. Guede), *Existence of pseudo-almost automorphic solutions to some abstract differential equations*. Int. J. Evol. Equ. 4 (2010), no. 4, 423–436.

57. T. Diagana, *Existence of S^p -almost periodic solutions to some abstract partial evolution equations*. Int. J. Evol. Equ. 4 (2010), no. 3, 241–255.

58. T. Diagana (with E. Hernandez M.), *Existence and uniqueness of pseudo almost periodic solutions to some abstract partial neutral functional-differential equations and applications*. J. Math. Anal. Appl. 327 (2007), no. 2, 776–791.

59. T. Diagana, *Existence of $C^{(n)}$ -almost periodic solutions to some abstract differential equations*. Appl. Math. Comput. 197 (2008), no. 2, 765–774.

60. T. Diagana, *Almost periodic solutions to differential equations in Hilbert spaces*. Results Math. 56 (2009), no. 1–2, 65–78.

61. T. Diagana (with E. Hernandez M. and M. L. Pelicer), *Bounded mild solutions for semilinear integrodifferential equations in Banach spaces*. Integral Equations Operator Theory 56 (2006), no. 4, 439–468.

62. T. Diagana, *Pseudo-almost periodic functions and their applications to differential equations*. Afr. Diaspora J. Math. 4 (2007), no. 1, 1–22.

63. T. Diagana (with G. M. NGuerekata), *Almost automorphic solutions of some differential equations in Banach spaces*. Int. J. Evol. Equ. 1 (2005), no. 2, 109–116.

64. T. Diagana, *p -adic integral operators*. J. Math. Anal. Appl. 342 (2008), no. 2, 1065–1072.

65. T. Diagana, *Non-archimedean operators and applications to p -adic differential equations*. Adv. Stud. Pure Math. 49 (2007), 103–124.

66. T. Diagana (with F. Ramaroson), *Non-archimedean operator theory*. SpringerBriefs in Mathematics, 2016.

67. T. Diagana, *Towards a theory of some unbounded linear operators on p -adic Hilbert spaces and applications*. Ann. Math. Blaise Pascal 12 (2005), no. 1, 205–222.

68. T. Diagana, *Bilinear functionals on non-archimedean Hilbert spaces*. Numer. Funct. Anal. Optim. 29 (2008), no. 11–12, 1235–1247.

69. T. Diagana, *Erratum to bilinear functionals on non-archimedean Hilbert spaces*. Numer. Funct. Anal. Optim. 32 (2011), no. 6, 666–668.

70. T. Diagana, *An introduction to p -adic Hilbert spaces and applications*. Afr. Diaspora J. Math. 6 (2008), no. 2, 1–10.

71. T. Diagana, *Towards a spectral theory for non-archimedean operators*. Afr. Diaspora J. Math. 7 (2009), no. 2, 1–24.

72. T. Diagana (with D. K. Attimu), *Linear operators on some non-archimedean Hilbert spaces*. Comment. Math. Univ. Carolin. 51 (2010), no. 2, 197–220.

73. T. Diagana, *Spectral theory for some non-archimedean operators*. Asian-Eur. J. Math. 4 (2011), no. 3, 451–464.

74. T. Diagana, *Self-adjoint operators on non-archimedean Hilbert spaces*. Quaest. Math. 34 (2011), no. 4, 421–444.
75. T. Diagana (with A. Mahouton Norbert), *Spectral analysis for rank-one perturbations of diagonal operators on non-archimedean Hilbert spaces*. Comment. Math. Univ. Carolin. 52 (2011), no. 3, 385–402.
76. T. Diagana (with G. D. McNeal), *Spectral analysis for rank-one perturbations of diagonal operators in non-archimedean Hilbert space*. Afr. Diaspora J. Math. 11 (2011), no. 1, 1–20.
77. T. Diagana (with T. H. Miabey), *Spectral analysis for finite rank perturbations of diagonal operators in non-archimedean Hilbert spaces*. Afr. Diaspora J. Math. 13 (2012), no. 2, 12–32.
78. T. Diagana, *p-adic dynamical systems of (2,1)-rational functions with unique fixed point*. Cogent Mathematics 3 (2016), 1202148.
79. T. Diagana (with J. Knight), *Dynamical systems of p-adic (3,3)-rational functions*. Nonauton. Dyn. Syst. 9 (2022), no. 1, 87–108.
80. T. Diagana (with J. Knight), *p-adic dynamical systems of the function $ax + b$* . Nonauton. Dyn. Syst. 8 (2021), no. 1, 225–239.
81. T. Diagana (with N. S. Al-Islam), *Pseudo almost periodic solutions to some non-autonomous neutral functional differential equations with unbounded delay*. Math. Comput. Modelling 53 (2011), no. 7–8, 1230–1239.
82. T. Diagana (with N. S. Al-Islam), *Existence of pseudo-almost periodic solutions to some classes of hyperbolic second-order partial differential equations*. Nonlinear Stud. 17 (2010), no. 1, 75–90.
83. T. Diagana (with N. S. Al-Islam and M. Zitane), *Almost automorphic solutions to nonautonomous neutral functional integrodifferential equations*. Nonauton. Dyn. Syst. 1 (2014), no. 1, 30–49.
84. T. Diagana (with V. Nelson), *Existence of pseudo-almost automorphic solutions to some abstract differential equations*. Electron. J. Differential Equations 2011, No. 92.
85. T. Diagana (with V. Nelson), *Existence results for some higher-order evolution equations*. Nonauton. Dyn. Syst. 2 (2015), no. 1, 6–24.
86. T. Diagana (with N. Drissi and K. Ezzinbi), *Pseudo-almost periodic solutions to some neutral partial functional differential equations with delays*. Nonauton. Dyn. Syst. 6 (2019), no. 1, 1–17.
87. T. Diagana, *Some new results on the existence of pseudo-almost periodic solutions to some neutral functional differential equations*. Adv. Difference Equ. 2010, Art. ID 970568.
88. T. Diagana (with N. S. Al-Islam), *Existence of hyperbolic-type pseudo-almost periodic solutions to some second-order differential equations*. Int. J. Evol. Equ. 4 (2009), no. 2, 183–201.
89. T. Diagana (with G. M. NGuerekata), *Almost automorphic solutions of some differential equations in Banach spaces*. Int. J. Evol. Equ. 1 (2005), no. 2, 109–116.
90. T. Diagana (with M. Miraoui), *New existence of pseudo-almost automorphic solutions to some semilinear differential equations*. Electron. J. Differential Equations 2016, Paper No. 52.
91. T. Diagana (with J. H. Hassan and S. M. Mabrouk), *Pseudo-almost periodic solutions to some non-autonomous neutral functional integrodifferential equations with unbounded delay*. Nonauton. Dyn. Syst. 6 (2019), no. 1, 76–100.
92. T. Diagana (with J. H. Hassan and S. M. Mabrouk), *Weighted pseudo-almost periodic solutions to some non-autonomous neutral partial functional integrodifferential equations*. Nonauton. Dyn. Syst. 7 (2020), no. 1, 59–90.
93. T. Diagana (with M. Lott and M. Miraoui), *Existence and stability of almost-periodic solutions to nonautonomous differential equations*. Nonauton. Dyn. Syst. 9 (2022), no. 1, 21–35.

94. T. Diagana (with M. Lott), *Stability analysis for some nonautonomous differential equations*. Nonauton. Dyn. Syst. 10 (2023), no. 1, 1–18.
95. T. Diagana (with J. H. Hassan), *A numerical approach to some nonautonomous second-order ordinary differential equations*. Nonauton. Dyn. Syst. 5 (2018), no. 1, 53–69.
96. T. Diagana (with E. M. Warma), *Existence of weighted pseudo-almost periodic solutions to some classes of hyperbolic evolution equations*. J. Math. Anal. Appl. 350 (2009), no. 1, 18–28.
97. T. Diagana (with B. Guede and G. M. NGuerekata), *Pseudo-almost periodic solutions to some classes of partial hyperbolic evolution equations*. Nonlinear Stud. 14 (2007), no. 4, 377–394.
98. T. Diagana, *A note on pseudo-almost periodic solutions of some hyperbolic and parabolic differential equations*. Int. J. Evol. Equ. 2 (2007), no. 3, 321–332.
99. T. Diagana (with M. Miraoui), *Pseudo-almost periodic solutions to some nonautonomous evolution equations via functional analysis and measure theory*. Cubo 17 (2015), no. 3, 71–96.
100. T. Diagana (with J. H. Hassan), *Stepanov-like pseudo-almost automorphic solutions to some second-order nonautonomous evolution equations*. Nonauton. Dyn. Syst. 5 (2018), no. 1, 131–147.
101. T. Diagana (with G. M. NGuerekata), *On some perturbations of some abstract differential equations*. Int. J. Evol. Equ. 1 (2005), no. 2, 109–116.
102. T. Diagana, *Pseudo-almost periodic mild solutions to hyperbolic partial evolutions*. Results Math. 60 (2011), no. 1–2, 163–185.
103. T. Diagana (with A. Milce and J. C. Mado), *Existence and stability of a periodic solution to a nonautonomous system*. Nonauton. Dyn. Syst. 3 (2016), no. 1, 54–64.
104. T. Diagana (with J. H. Hassan and M. M. A. Mohamed Soultane), *New results on the Sigmoid Beverton-Holt model in a time-varying environment*. Nonauton. Dyn. Syst. 10 (2023), no. 1, 76–99.
105. T. Diagana (with M. Lott), *Existence results on nonautonomous differential equations via the Schauder fixed-point theorem*. Nonauton. Dyn. Syst. 11 (2024), no. 1, 20241013.
106. T. Diagana (with Q. R. McKinney), *Analysis of the periodically forced sigmoid Beverton-Holt model*. Nonauton. Dyn. Syst. 9 (2022), no. 1, 109–120.
107. T. Diagana, *Strongly almost periodic sequences*. Afr. Diaspora J. Math. 13 (2012), no. 1, 1–10.
108. T. Diagana (with G. Kamingu), *Existence of almost automorphic solutions to some nonautonomous singular systems of differential equations*. Nonauton. Dyn. Syst. 4 (2017), no. 1, 1–15.
109. T. Diagana (with M. Miraoui), *Almost automorphic and pseudo-almost automorphic solutions to semilinear evolution equations using functional analysis and measure theory*. Cubo 16 (2014), no. 3, 1–29.
110. T. Diagana (with M. Miraoui and G. M. NGuerekata), *New existence results for some generalized pseudo-almost automorphic functions and applications*. Differ. Equ. Appl. 8 (2016), no. 2, 147–163.
111. T. Diagana (with M. Lott and M. Miraoui), *Existence and uniqueness of Besicovitch almost-periodic solutions*. Nonauton. Dyn. Syst. 10 (2023), no. 1, 20230101.
112. T. Diagana (with F. Ndambomve and S. K. Ntouyas), *Existence results for some nonlinear differential equations with nonlocal boundary conditions*. Nonauton. Dyn. Syst. 2 (2015), no. 1, 60–71.
113. T. Diagana (with A. Milce and J. C. Mado), *Existence and globally attracting solutions to some nonautonomous differential equations*. Nonauton. Dyn. Syst. 2 (2015), no. 1, 72–80.
114. T. Diagana (with F. Ndambomve), *Semilinear evolution equations with nonlocal conditions and nonautonomous operators*. Nonauton. Dyn. Syst. 3 (2016), no. 1, 79–93.
115. T. Diagana (with G. Kamingu), *Existence of pseudo almost periodic solutions to some singular systems*. Nonauton. Dyn. Syst. 5 (2018), no. 1, 41–52.

116. T. Diagana (with J. Vanterler da C. Sousa and E. C. de Oliveira), *Existence of pseudo-almost periodic solutions to nonautonomous functional integral equations*. Differ. Equ. Dyn. Syst. 27 (2019), no. 4, 615–629.
117. T. Diagana (with L. Sabbagh), *Existence and global attractiveness of a pseudo-almost periodic solution in p -norm for some nonautonomous differential equations*. Nonauton. Dyn. Syst. 1 (2014), no. 1, 62–74.
118. T. Diagana (with F. Ndambomve and H. Ezzinbi), *Existence results for some nonautonomous functional differential equations with nonlocal conditions*. Afr. Diaspora J. Math. 18 (2015), no. 1, 18–34.
119. T. Diagana, *Existence results for some damped second-order Volterra integrodifferential equations*. Appl. Math. Comput. 237 (2014), 304–317.
120. T. Diagana (with H. Ezzinbi and M. Miraoui), *Pseudo-almost periodic and pseudo-almost automorphic solutions to some evolution equations involving theoretical measure theory*. Cubo 16 (2014), no. 2, 1–31.
121. T. Diagana (with B. Guede), *Some notes on two-point boundary value problems for nonlinear fractional differential equations*. Nonlinear Stud. 14 (2007), no. 4, 323–334.
122. T. Diagana, *Existence of pseudo-almost periodic solutions to some abstract differential equations with S^p -pseudo-almost periodic coefficients*. Nonlinear Anal. 70 (2009), no. 11, 3781–3790.
123. T. Diagana (with A. H. Mohamed), *Existence results for some second-order evolution equations with damping*. Nonauton. Dyn. Syst. 2 (2015), no. 1, 43–59.
124. T. Diagana (with A. H. Mohamed), *Existence of asymptotically almost-periodic solutions to some second-order nonautonomous differential equations*. Nonauton. Dyn. Syst. 3 (2016), no. 1, 93–108.
125. T. Diagana (with T. H. Miabey), *Weighted pseudo-almost periodic mild solutions to nonautonomous abstract differential equations*. Nonauton. Dyn. Syst. 1 (2014), no. 1, 24–36.
126. T. Diagana (with H. Ezzinbi and M. Miraoui), *Pseudo-almost periodic and pseudo-almost automorphic solutions to some evolution equations involving theoretical measure theory*. Cubo 16 (2014), no. 2, 1–31.
127. T. Diagana (with K. Ezzinbi and M. Miraoui), *Pseudo-almost periodic solutions under the light of measure theory*. Int. J. Differ. Equ. (2014), Art. ID 781612.
128. T. Diagana, *Evolution equations in generalized Stepanov-like pseudo almost automorphic spaces*. Electron. J. Differential Equations 2012, No. 49.
129. T. Diagana (with H. Ezzinbi and M. Miraoui), *Pseudo-almost periodic and pseudo-almost automorphic solutions to some neutral partial functional differential equations with infinite delay and Stepanov-like perturbation*. Cubo 14 (2012), no. 3, 71–99.
130. T. Diagana (with R. Dhaou and H. Ezzinbi), *Pseudo-almost periodic and pseudo-almost automorphic solutions under the light of measure theory*. Anal. Appl. 14 (2016), no. 2, 257–294.
131. T. Diagana, *Weighted pseudo-almost automorphic solutions to a neutral delay integral equation of advanced type*. Afr. Diaspora J. Math. 14 (2012), no. 2, 154–165.
132. T. Diagana (with S. Mabrouk), *Weighted pseudo-almost periodic solutions to some nonautonomous neutral functional integrodifferential equations*. Nonauton. Dyn. Syst. 3 (2016), no. 1, 1–15.
133. T. Diagana, *Algebraic sum of unbounded normal operators and the square root problem of Kato*. Rend. Sem. Mat. Univ. Padova 110 (2003), 269–275.
134. T. Diagana (with G. M. NGuerekata), *On some perturbations of some abstract differential equations*. Commentationes Mathematicae. Prace Mat. 43 (2003), no. 2, 201–206.
135. T. Diagana, *On the algebraic sum of unbounded normal operators*. Far East J. Math. Sci. (FJMS) 11 (2003), no. 1, 89–94.

136. T. Diagana, *Some remarks on the coupling of Dirichlet and Neumann problems*. Libertas Math. 23 (2003), 133–135.
137. T. Diagana (with G. M. NGuerekata), *Some remarks on almost automorphic solutions of some abstract differential equations*. Far East J. Math. Sci. (FJMS) 8 (2003), no. 3, 313–322.
138. T. Diagana (with P. Bezandry), *Fluctuation theory for a three-dimensional model of Maxwellian molecules*. J. Stat. Phys. 110 (2003), no. 3–6, 1375–1395.
139. T. Diagana, *Quelques remarques sur l'opérateur de Schrödinger avec un potentiel complexe singulier particulier*. (French) Bull. Belg. Math. Soc. Simon Stevin 9 (2002), no. 2, 293–298.
140. T. Diagana, *Variational sum and Kato's conjecture*. J. Convex Anal. 9 (2002), no. 1, 291–294.
141. T. Diagana, *A generalization related to Schrödinger operators with a singular potential*. Int. J. Math. Math. Sci. 29 (2002), no. 10, 609–611.
142. T. Diagana, *Schrödinger operators with a singular potential*. Int. J. Math. Math. Sci. 29 (2002), no. 6, 371–373.
143. T. Diagana, *An application to Kato's square root problem*. Int. J. Math. Math. Sci. 29 (2002), no. 3, 179–181.
144. T. Diagana, *Sommes d'opérateurs et conjecture de Kato-McIntosh*. (French) C. R. Math. Acad. Sci. Paris Ser. I 330 (2000), no. 6, 461–464.

Other Publications

145. T. Diagana, Interview with Professor Stephen Smale. Communications in Mathematical Analysis 10 (2011), No. 1, pp. 1–4.
146. T. Diagana, Interview with Prof. Peter D. Lax. Communications in Mathematical Analysis 8 (2010), No. 2, pp. 1–4.
147. T. Diagana, Remembering Yahya Ould Hamidoune. Notices of the American Mathematical Society, July 2012.

Edited Books

148. (Editor: T. Diagana) African Diaspora Mathematics Compendium. Volume 1. Nova Science Publishers, 2011.
149. (Editor: T. Diagana) African Diaspora Mathematics Compendium. Volume 2. Nova Science Publishers, 2012.
150. (Editor: T. Diagana) African Diaspora Mathematics Compendium. Volume 3. Nova Science Publishers, 2011.
151. (Editor: T. Diagana) African Diaspora Mathematics Compendium. Volume 4. Nova Science Publishers, 2011.
152. (Editor: T. Diagana) African Diaspora Mathematics Research Progress. Nova Science Publishers, 2008.
153. (Editor: T. Diagana) Focus on African Diaspora Mathematics. Nova Science Publishers, 2008.
154. (Editor: T. Diagana) Trends in African Diaspora Mathematics Research. Nova Science Publishers, 2006.

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 Sciences, University of Alabama in Huntsville, March 2022**
Thesis Title: Dynamical Systems of p -adic $(3,3)$ -Rational Functions
- Mariem Mohamed Abdellahi Mohamed Soutane — Department of Mathematics, University of Nouakchott, Mauritania, December 2023**
Thesis Title: Contributions à la modélisation mathématique: Résultats d'existence de solutions de modèles Sigmoid Beverton-Holt en time scales
- Michael Lott — Department of Mathematical Sciences, University of Alabama in Huntsville, February 2025**
Thesis Title: Existence and Stability Analysis for Non-Autonomous Systems of Differential Equations in Multi-Dimensional Time

Participating 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 Eregho (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 Minerals, KSA) — 2018
- Demba Sy (Howard University) — 2019
- Nadia Drissi (University of Cadi Ayyad, Morocco) — 2019
- Jason Knight (University of Alabama in Huntsville, USA) — 2022
- Mariem Mohamed Abdellahi Mohamed Soultane (University of Nouakchott) — 2023
- Solym Manou-Abi (University of Montpellier, France) — HDR — 2024
- Michael Lott (University of Alabama in Huntsville, USA) — 2025

Served as Chairperson for the PhD Committees of the following candidates:

- Simeao Joao
- Lakeshia Legette

- Lifoma Salaam
- Kendall Williams
- Chinenye Ofodile
- Adebukola Gbade-Oyelakin
- Henry Jordan
- Nianpeng Li
- Evelyn Thomas
- Ralph Twum
- Francis Eregho
- Jason Knight
- Michael Lott

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

Martin Arienmughare — M.S. Thesis, Howard University

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