

# Toka Diagana, PhD

## Mailing Address

Department of Mathematical Sciences  
University of Alabama in Huntsville  
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## Education

PhD, Mathematics, [Claude Bernard University - Lyon 1](#), France, January 7, 1999

DEA (M.S.), Mathematics, [Claude Bernard University - Lyon 1](#), France, July 1995

## Employment

Professor & Chair, University of Alabama in Huntsville (UAH), 2018–present

Professor, Howard University (HU), Washington DC, 2007-2018

Associate Professor, Howard University (HU), Washington DC, 2004–2007

Assistant Professor, Howard University (HU), Washington DC, 2002–2004

Lecturer, Howard University (HU), Washington DC, 2000–2002

## Administrative and Leadership Positions

Mathematics Program Advisory Committee, University of Sharjah (UAE), 2022-2024

Ibni Oumar Mahamat Saleh Prize Selection Committee (CIMPA), 2009–2013, 2021–2022

AMS Centennial Fellowship Selection Committee, 2020-2022

College of Science Dean Search Committee, UAH, 2019-2020

Chair, Department of Mathematical Sciences, UAH, 2018-present

President of PROMATH, 2017-2019

Member of the Academic Policy Standard and Education Committee (HU), 2013–2017

AMS Committee on Human Rights of Mathematicians, 2011–2013

AMS Books and Journal Donations Steering Committee, 2010–2013

HU Math Department Executive Committee (Elected), 2008–2012, 2014-2017

HU Math Department Hiring Committee, 2008–2009–2010, 2014-2015

HU Math Department Representative at MSRI, 2007–2010

Chairman of the Graduate Committee, HU Math Department, 2006–2012, 2015-2017

Director of Graduate Studies, HU Math Department, 2006–2012, 2015-2017

Graduate Admission Committee, HU Math Department, 2006–2012, 2014-2017

Graduate Scheduling Committee, HU Math Department, 2006–2012, 2015-2017

Graduate Faculty, HU, 2002–2018

Reviewer for HU FAE Grant Program, 2002–2008

## Honors-Awards

**Faculty Excellence Award**, Howard University, April 2016

**The African Academy of Sciences Fellow** (Elected), 2009–present

**Prix Chinguitt**, 2006

**Emerging Scholar Award**, Howard University, April 2006

**Merit-Based Award**, Howard University, 2003–2011

## Membership

American Mathematical Society Membership, 2000–present

International Society of Difference Equations, 2008-present

## Research Activities (2015-2022)

- Visiting Professor at the University of Sharjah (UAE), March 14-20, 2022.
- Visit to Washington DC to collaborate with Dr. Ramaroson (HU), February 16-20, 2022.
- Visiting Professor at the West Georgia University, February 2-5, 2022.
- Visiting Professor at the Université de Lorraine, Metz, France, December 14-18, 2021.
- Co-Organized an NSF-CBMS Conference, Univ. Alabama in Huntsville, August 2-6, 2021.
- Joint Mathematics Meetings, Denver, Colorado, January 15-18, 2020
- PhD defense at the University Cadi Ayyad, Marrakesh, Morocco, June 17, 2019.
- Visiting Professor, The University of Cadi Ayyad, Morocco, June 15-23, 2019.
- Colloquium talk, Alabama A & M University on April 17, 2019.
- PhD defense of my student at Howard University, March 20, 2019.
- Colloquium talk, University of Alabama at Birmingham, March 1, 2019.
- Visiting Professor, KAUST, KSA, December 19-22, 2018
- Visiting Professor, KFUPM, Dhahran, KSA, December 9-26, 2018
- PhD defense (through Skype), KFUPM, Dhahran, KSA, December 12, 2018.
- The 2018 Field of Dreams Conference in Saint Louis, Missouri, November 1-4, 2018.
- Visiting Professor, University of Manitoba, Winnipeg, Canada, October 24-27, 2018.
- Visiting Professor, University of West Georgia, Carrollton, USA, April 23-25, 2018
- Visiting Professor, University of Nouakchott, Mauritania, March 6-25, 2018
- Visiting Professor, KAUST, KSA, January 21-28, 2018
- Visiting Professor, KFUPM, Dhahran, KSA, November 17, 2017 - January 21, 2018
- Visiting Professor, University of Abomey-Calavi, Cotonou, Benin, July-August 2017
- Colloquium talk, University of West Georgia, Carrollton, USA, April 2017
- Prix Yahya Ould Hamidoune, The University of Nouakchott, Mauritania, March 2017
- Visiting Professor, KFUPM, Dhahran, KSA, December 2016 - January 2017

Visiting Professor, The King Abdulaziz University, Jeddah, KSA, December 2016  
Visiting Professor, AIMS-Senegal, Mbour, Senegal, November 2016  
Visiting Professor, University of Abomey-Calavi, Cotonou, Benin, October 2016  
Visiting Professor, Faculté des Sciences de Bamako, Mali, May 2016  
Visiting Professor, KFUPM, Dhahran, KSA, December 2015  
Visiting Professor, University of Cadi Ayyad, Marrakech, Morocco, November 2015  
Visiting Professor, University of Chile, Santiago, Chile, July 2015  
Visiting Professor, Université Paris 1, France, March 2015  
Visiting Professor, Université Gaston Berger, Saint-Louis, Senegal, January 2015

## Editorship

Editor-in-Chief of *'Nonautonomous Dynamical Systems'*  
Editor-in-Chief of *'Communications in Mathematical Analysis'*  
Associate Editor for *'Fractional Differential Equations'*  
Founding Editor of *'The African Diaspora Journal of Mathematics'*  
Associate Editor for *'Research in Mathematics'*  
Associate Editor for *'Afrika Matematika'*  
Associate Editor for *'Involve: A Journal of Mathematics'*  
Associate Editor for *'International Journal of Differential Equations'*

## Directed PhD

1. **Sandra N. Farrier**, Howard University, Department of Mathematics, January 2005  
Thesis: *Fixed-Point and Ergodic Theorems for Nonexpansive Mappings on Ultrametric Banach Spaces*
2. **Dodzi K. Attimu**, Howard University, Department of Mathematics, February 2008  
Thesis: *Linear Operators on Some Non-Archimedean Hilbert Spaces and Their Spectral Theory*

3. **Najja S. Al-Islam**, Howard University, Department of Mathematics, January 2009  
Thesis: *Pseudo Almost Periodic Solutions to Some Systems of Nonlinear Hyperbolic Second-Order Partial Differential Equations*
4. **George D. McNeal**, Howard University, Department of Mathematics, November 2009  
Thesis: *Spectral Analysis for Rank-One Perturbations of Diagonal Operators in Non-Archimedean Hilbert Space*
5. **Valerie Nelson**, Howard University, Department of Mathematics, November 2013  
Thesis: *Existence Results for Some Higher-Order Abstract Differential Equations with Applications to PDEs*
6. **Mohamed Zitane**, Université IBN TOFAIL, Morocco, December 2013  
Thesis: *Existence Results for Some Nonautonomous Neutral Functional Differential Equations with Applications to PDEs*
7. **TeyLama H. Miabey**, Howard University, Department of Mathematics, April 2014  
Thesis: *Spectral Analysis for Finite Rank Perturbations of Diagonal Operators in non-Archimedean Hilbert Space*
8. **Ahmed H. Mohamed**, Howard University, Department of Mathematics, June 2014  
Thesis: *Existence Results for Some Second-Order Evolution Equations with Damping*
9. **Demba Sy**, Howard University, Department of Mathematics, March 2019  
Thesis: *Piecewise Stepanov-Like Pseudo-Almost Periodic Solutions To Abstract Impulsive Differential Equations*
10. **Jason Knight**, University of Alabama in Huntsville, Department of Mathematical Sciences, March 2022  
Thesis: *Dynamical Systems of  $p$ -adic (3,3)-Rational Functions*

## Current PhD Students

**Michael Lott**, University of Alabama in Huntsville

Thesis Topics: Evolution Equations and their Applications to PDEs

## 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, Department of Mathematics

Thesis: *Almost Periodic Solutions to Some Singular Systems of Differential Equations*

Defense Date: April 2012

## 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 Erebholo (Howard University) — 2015  
Abdelkarim Nidal Akdad (University of Cadi Ayyad, MOROCCO) — 2015  
Arl 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  
Served as the *Chairperson* for the PhD Committees of the following people:

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

## Courses Taught at Howard University

Math 006 Algebra I – Undergrad  
Math 007 Precalculus – Undergrad  
Math 009 Introduction to Statistics – Undergrad  
Math 010 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

## 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. (MR3098423)
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. (MR 2761071)
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. (MR2373925)
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. (MR2294736)
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. (MR2269328)

*Published Articles*

8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. T. Diagana (with S. Araci, M. Acikgoz, and H. M. Srivastavad), A novel approach for obtaining new identities for the  $\lambda$  extension of  $q$ -Euler polynomials arising from the  $q$ -umbral calculus. *Journal of Nonlinear Sciences and Applications* **10** (2017), pp. 1316-1325.
14. T. Diagana, Well-Posedness for Some Damped Elastic Systems in Banach Spaces. *Applied Mathematics Letters* **71** (2017), pp. 70–80.
15. T. Diagana (with H. Maga), Some new identities and congruences for Fubini numbers. *Journal Number Theory* **173** (2017), pp. 547–569.
16. 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.
17. T. Diagana, Existence Results for Some Nonautonomous Integro-differential Equations. *J. Nonlinear Convex Anal.* **17** (2016), no. 8, pp. 1465–1483.
18. 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.
19. 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. (MR MR3434454)

20. T. Diagana (with H. Zhou) Existence of Positive Almost Periodic Solutions to the Hematopoiesis Model. *Appl. Math. Comput.* **274** (2016), pp. 644–648. (MR MR3433164)
21. 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.
22. 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.
23. T. Diagana, Existence Results for Some Higher-Order Evolution Equations with Time-Dependent Unbounded Operator Coefficients. *Mathematica Slovaca*. 65 (2015), no. 1, 121–140.
24. T. Diagana, Perturbations of Unbounded Fredholm Linear Operators. *Handbook in Operator Theory*, Springer (2015), pp. 875–880.
25. T. Diagana (with M. Zitane), Stepanov-like Pseudo-Almost Periodic Functions in Lebesgue Spaces with Variable Exponents  $L^{p(x)}$ . *New Frontiers of Multidisciplinary Research in STEM-H*, Springer. To Appear.
26. 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. (MR3240354)
27. 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.
28. T. Diagana, Almost Automorphic Solutions to a Beverton-Holt Dynamic Equation with Survival Rate. *Applied Mathematics Letters*. Vol. 36 (2014), pp. 19–24. (MR3215484)
29. T. Diagana, Existence Results for Some Damped Second-Order Veltterra Integro-Differential Equations. *Appl. Math. Comput.* **237** (2014), 304–317. (MR3201132)
30. 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. (MR3161669)
31. 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. (MR3093266)
32. 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. (MR3027818)

33. T. Diagana, Bounded Solutions to Some Classes of Nonautonomous Higher-Order Differential Equations. *Afrika Matematika*. **24** (2013), no. 1, pp. 33–53. (MR3019804)
34. T. Diagana (with M. Ariemughare) Existence of Almost Periodic Solutions to Some Singular Differential. *Nonlinear Dyn. Syst. Theory* **13** (2013), no. 1, pp. 1–12. (MR3076321)
35. 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. (MR3104964)
36. T. Diagana (with M. Zitane), Weighted Stepanov-Like Pseudo-Almost Periodic Functions in Lebesgue Spaces with Variable Exponents  $L^{p(x)}$ . *Afr. Diaspora J. Math.* **15** (2013), no. 2, pp. 56–75. (MR3161667)
37. 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. (MR3079785)
38. 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. (MR2920168)
39. 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. (MR3064846)
40. 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. (MR2991993)
41. 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. (MR2930307)
42. T. Diagana, Evolution Equations in Generalized Stepanov-Like Pseudo Almost Automorphic Spaces. *Electronic J. Differential Equations*. 2012 (2012), no. 49, pp. 1-19. (MR2927785)
43. 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. (MR2879134)
44. 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. (MR2945786)

45. 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. (MR2985531)
46. 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. (MR2841812)
47. T. Diagana, Almost Periodic Solutions to Some Second-Order Nonautonomous Differential Equations. *Proceedings of the American Mathematical Society* **140** (2012), 279–289. (MR2833540)
48. 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. (MR2841897)
49. 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. (MR2832771)
50. 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. (MR2815123)
51. 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. (MR2826847)
52. T. Diagana, The existence of a weighted mean for almost periodic functions. *Nonlinear Analysis* **74** (2011), no. 12, 4269–4273.(MR2803029)
53. 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. (MR2781063)
54. 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. (MR2739757)
55. T. Diagana, Almost Automorphic Mild Solutions to Some Classes of Nonautonomous Higher-Order Differential Equations. *Semigroup Forum*. **82** (2011) no. 3, 455–477. (MR2796037)
56. 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. (MR2733234)

57. 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. (MR2725001)
58. 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. (MR2685034)
59. T. Diagana (G. M. N'Guerekata and A. Pankov) Abstract differential and difference equations. *Advances in Difference Equations* **2010 Art. ID 857306**, 2 pp (MR 2774245)
60. 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.(MR2644837)
61. 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. (MR2895480)
62. 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.
63. T. Diagana (with D. Attimu), Representation of Bilinear Forms by Linear Operators in non-Archimedean Hilbert Space Equipped with a Krull Valuation. *Seminario Matematico Università e Politecnico di Torino*. Vol. 68 (2010), no. 2, pp. 139–159. (MR2790459)
64. 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. (MR2574952)
65. 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. (MR2576914)
66. 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. (MR2663467)
67. 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. (MR2598242)
68. 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. (MR2539219)

69. 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. (MR2530114)
70. 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. (MR2534900)
71. 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. (MR2583140)
72. 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. (MR2573412)
73. 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. (MR2599533)
74. T. Diagana, Existence of Solutions to Some Classes of Partial Fractional Differential Equations. *Nonlinear Analysis* **71** (2009), no. 11, 5296–5300.(MR2560198)
75. 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. (MR2562802)
76. 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. (MR2518032)
77. 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.(MR2476888)
78. 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. (MR2455732)
79. 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. (MR2518856)
80. 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. (MR2515298)

81. 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. (MR2468237)
82. T. Diagana, Stepanov-like Pseudo Almost Periodicity and Its Applications to Some Nonautonomous Differential Equations. *Nonlinear Analysis* **69** (2009), Issue 12, Pages 4277–4285. (MR2467232)
83. 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. (MR2443152)
84. 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. (MR2483269)
85. 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. (MR2424524)
86. 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. (MR2403848)
87. 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. (MR2461446)
88. T. Diagana, Weighted pseudo-almost periodic solutions to some differential equations. *Nonlinear Analysis* **68** (2008), no. 8, 2250–2260. (MR2398647)
89. 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. (MR2383001)
90. 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. (MR2377862)
91. 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. (MR2374125)
92. T. Diagana (with P. Bezanadry), Existence of almost periodic solutions to some stochastic differential equations. *Applicable Analysis* **86** (2007), no. 7, 819–827.(MR2355540)



93. 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.(MR2349945)
94. T. Diagana, Stepanov-like pseudo almost periodic functions and their applications to differential equations. *Communications in Mathematical Analysis* **3** (2007), no. 1, 9–18. (MR2347771)
95. T. Diagana (with E. Hernandez), 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. (MR2346495)
96. T. Diagana (with G. M. N'Guerekata), Stepanov-like almost automorphic functions and applications to some semilinear equations. *Applicable Analysis* **86** (2007), no. 6, 723–733. (MR2345891)
97. 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. (MR2325652)
98. 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. (MR2323209)
99. 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. (MR2313589)
100. 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. (MR2311058)
101. 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. (MR2303402)
102. 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. (MR2303379)
103. 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. (MR2276784)
104. T. Diagana, Existence and uniqueness of pseudo-almost periodic solutions to some classes of partial evolution equations. *Nonlinear Analysis* **66** (2007), no. 2, 384–395. (MR2279532)

105. T. Diagana (with E. Hernandez), Existence and uniqueness of pseudo almost periodic solutions to some abstract partial neutral functional-differential equations and applications. *Journal of Mathematical Analysis and Applications* **327** (2007), no. 2, 776–791. (MR2279964)
106. T. Diagana, Existence and uniqueness of pseudo-almost periodic solutions to semilinear differential equations and applications. *Nonlinear Analysis* **66** (2007), no. 1, 228–240. (MR2271651)
107. T. Diagana, Representation of bilinear forms in non-Archimedean Hilbert space by linear operators. *Commentationes Mathematicae. Univ. Carolin.* **47**(2006), no. 4, 695–705. (MR2337423)
108. T. Diagana, Existence and uniqueness of pseudo almost periodic solutions to some functional differential equations. *Functional Differential Equations* **13** (2006), no. 3-4, 431–439. (MR2321634)
109. T. Diagana, Weighted pseudo almost periodic functions and applications. *Comptes Rendus de l'Académie des Sciences. Paris.* **343** (2006), no. 10, 643–646. (MR2271739)
110. T. Diagana, Integer powers of some unbounded linear operators on p-adic Hilbert spaces. *Rendiconti. Semin. Mat. Univ. Politec. Torino* **64** (2006), no. 2, 199–216. (MR2272914)
111. T. Diagana,  $C_0$ -semigroups of linear operators on some ultrametric Banach spaces. *International Journal of Mathematics and Mathematical Sciences* **2006**, Art. ID **52398**, 9 pp. (MR2251650)
112. T. Diagana (D. Bugajewski and C. M. Mahop), Asymptotic and pseudo almost periodicity of the convolution operator and applications to differential and integral equations. *Zeitschrift für Analysis und ihre Anwendungen. (Journal of Analysis and its Applications)* **25** (2006), no. 3, 327–340.(MR2251957)
113. T. Diagana, Pseudo almost periodic solutions to a class of semilinear differential equations. *Nonlinear Dynamics* **45**(2006), no. 1-2, 45–53. (MR2251165)
114. T. Diagana, Pseudo almost periodic solutions to some differential equations with infinite delay. *Electronic Journal of Differential Equations* **2006**, No. 79, 10 pp. (MR2240827)
115. T. Diagana (with G. M. NGuerekata), Pseudo almost periodic mild solutions to hyperbolic evolution equations in intermediate Banach spaces. *Applicable Analysis* **85** (2006), no. 6-7, 769–780. (MR2232421)
116. T. Diagana, Erratum to: "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; MR2126449]. *Annales Mathématiques. Blaise Pascal* **13** (2006), no. 1, 207–208. (MR2233015)

117. T. Diagana (with D. Bugajewski), Almost automorphy of the convolution operator and applications to differential and functional differential equations. *Nonlinear Studies* **13** (2006), no. 2, 129–140. (MR2228933)
118. T. Diagana (with C. M. Mahop, G. M. NGuerekata, and T. Bourama), Existence and uniqueness of pseudo-almost periodic solutions to some classes of semilinear differential equations and applications. *Nonlinear Analysis* **64** (2006), no. 11, 2442–2453. (MR2215818)
119. T. Diagana, Fractional powers of the algebraic sum of normal operators. *Proceedings of the American Mathematical Society* **134** (2006), no. 6, 1777–1782 (MR2207493)
120. T. Diagana (with C. M. Mahop and G. M. NGuerekata), Pseudo-almost-periodic solutions to some semilinear differential equations. *Mathematical and Computer Modelling* **43** (2006), no. 1-2, 89–96. (MR2206691)
121. T. Diagana (with G. M. NGuerekata), Almost automorphic solutions to semilinear evolution equations. *Functional Differential Equations* **13** (2006), no. 2, 195–206. (MR2205205)
122. T. Diagana, Fractional powers of hyponormal operators of Putnam type. *International Journal of Mathematics and Mathematical Sciences* 2005, no. 12, 1925–1932. (MR2176444)
123. T. Diagana, Existence of  $p$ -almost automorphic mild solution to some abstract differential equations. *International Journal of Evolution Equations* **1** (2005), no. 1, 57–67. (MR2144217)
124. T. Diagana, Towards a theory of some unbounded linear operators on  $p$ -adic Hilbert spaces and applications. *Annales Mathématiques. Blaise Pascal* **12** (2005), no. 1, 205–222. (MR2126449)
125. T. Diagana, Pseudo almost periodic solutions to some differential equations. *Nonlinear Analysis* **60** (2005), no. 7, 1277–1286. (MR2112953)
126. T. Diagana (with S. Basu and T. Diagana), A  $p$ -adic version of Hilbert-Schmidt operators and applications. *Journal of Analysis and Its Applications*. **2** (2004), no. 3, 173–188. (MR2092641)
127. T. Diagana (with G. M. NGuerekata and N. V. Minh), Almost automorphic solutions of evolution equations. *Proceedings of the American Mathematical Society* **132** (2004), no. 11, 3289–3298 (MR2073304)
128. T. Diagana, Some remarks on some second-order hyperbolic differential equations. *Semigroup Forum* **68** (2004), no. 3, 357–364. (MR2050895)
129. T. Diagana (with G. M. NGuerekata), On the Bohr-Neugebauer-NGuerekata theorem. *Journal of Analysis and Its Applications*. **2** (2004), no. 1, 1–10. (MR2038292)
130. T. Diagana, Algebraic sum of unbounded normal operators and the square root problem of Kato. *Rendiconti. Sem. Mat. Univ. Padova* **110** (2003), 269–275. (MR2033011)

131. T. Diagana (with G. M. NGuerekata), On some perturbations of some abstract differential equations. *Commentationes Mathematicae. Prace Mat.* **43** (2003), no. 2, 201–206. (MR2029892)
132. T. Diagana, On the algebraic sum of unbounded normal operators. *Far East Journal of Mathematical Sciences(FJMS)* **11**(2003), no. 1, 89–94. (MR2020415)
133. T. Diagana, Some remarks on the coupling of Dirichlet and Neumann problems. Miron Nicolescu (1903–1975) and Nicolae Cioru anescu (1903–1957). *Libertas Mathematica* **23** (2003), 133–135. (MR2002314)
134. T. Diagana (with G. M. NGuerekata), Some remarks on almost automorphic solutions of some abstract differential equations. *Far East Journal of Mathematical Sciences(FJMS)* **8** (2003), no. 3, 313–322. (MR1977710)
135. T. Diagana (P. Bezandry), Fluctuation theory for a three-dimensional model of Maxwellian molecules. Special issue in honor of Michael E. Fisher’s 70th birthday (Piscataway, NJ, 2001). *Journal of Statistical Physics.* **110** (2003), no. 3-6, 1375–1395. (MR1967824)
136. T. Diagana, Quelques remarques sur l’opérateur de Schrodinger avec un potentiel complexe singulier particulier. (French) [Some remarks on the Schrodinger operator with a particular singular complex potential] *Bullelin of the Belgian Mathematical Society* **9** (2002), no. 2, 293–298. (MR2017083)
137. T. Diagana, Variational sum and Kato’s conjecture. *Journal of Convex Analysis* **9** (2002), no. 1, 291–294. (MR1917402)
138. T. Diagana, A generalization related to Schrodinger operators with a singular potential. *International Journal of Mathematics and Mathematical Sciences* **29** (2002), no. 10, 609–611. (MR1900505)
139. T. Diagana, Schrodinger operators with a singular potential. *International Journal of Mathematics and Mathematical Sciences* **29** (2002), no. 6, 371–373. (MR1897865)
140. T. Diagana, An application to Kato’s square root problem. *International Journal of Mathematics and Mathematical Sciences* **29** (2002), no. 3, 179–181. (MR1888351)
141. T. Diagana, Sommes d’opérateurs et conjecture de Kato-McIntosh. (French) [Sums of linear operators and the Kato-McIntosh conjecture] *Comptes Rendus de l’Académie des Sciences. Paris Ser. I Math.* **330** (2000), no. 6, 461–464.

### *Other Publications*

142. T. Diagana, Interview with Professor Stephen Smale, *Communications in Mathematical Analysis* **10** (2011), No. 1, pp. 1-4. (MR2825950)

143. T. Diagana, Interview with Prof. Peter D. Lax, *Communications in Mathematical Analysis* **8**(2010), No. 2, pp. 1–4. (MR2569951)
144. T. Diagana, Remembering Yahya Ould Hamidoune. *Notices of the American Mathematical Society*. July, 2012.

### *Edited Books*

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