TEXAS A&M UNIVERSITY

Florent P. BAUDIER

Curriculum Vitae

Biographical and Additional Information

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Webpage: www.math.tamu.edu/~florent/

Current Position

09/22– **Associate Professor**, *Texas A&M University*, College Station, Texas.

Articles Published in Peer-Reviewed Journals

(lastname$^{(g)}$: graduate student, lastname$^{(p)}$: postdoc)

20. F. Baudier, C. Gartland$^{(p)}$, and Th. Schlumprecht, *L_1-distortion of Wasserstein Metrics: a Tale of Two Dimensions*, to appear in Trans. Amer. Math. Soc., arXiv:2208.13879, 35 pages.

19. F. Baudier, P. Motakis$^{(p)}$, and Th. Schlumprecht, and A. Zsák, *Stochastic approximation of lamplighter metrics*, Bull. Lond. Math. Soc. **54** (2022), no. 5, 1804–1826.

18. F. Baudier, B. de Mendonça Braga$^{(p)}$, Ilijas Farah, Ana Khukhro, Alessandro Vignati, R. Willett, *Uniform Roe algebras over uniformly locally finite metric spaces are rigid*, Invent. Math. **230** (2022), no. 3, 1071–1100.

17. F. Baudier, *Barycentric gluing and geometry of stable metrics*, Rev. R. Acad. Cienc. Exactas Fís. Nat. Ser. A Mat. RACSAM **no. 1** (2022), Paper No. 37, 48pp.

16. F. Baudier, G. Lancien, P. Motakis$^{(p)}$, and Th. Schlumprecht, *The geometry of Hamming-type metrics and their embeddings into Banach spaces*, Israel J. Math. **244** (2021), 681–725.

15. F. Baudier, G. Lancien, P. Motakis$^{(p)}$, and Th. Schlumprecht, *A new coarsely rigid class of Banach spaces*, J. Inst. Math. Jussieu **no. 5** (2021), 1729–1747.

14. F. Baudier, K. Swieçicki$^{(g)}$, and A. Swift$^{(p)}$, *No dimension reduction for doubling subsets of ℓ_q when $q > 2$ revisited*, J. Math. Anal. Appl. **no. 2** (2021), Paper No. 125407, 18pp.

13. F. Baudier, P. Motakis$^{(p)}$, Th. Schlumprecht, and A. Zsák, *On the bi-Lipschitz geometry of lamplighter graphs*, Discrete Comput. Geom. **66** (2021), no.1, 181-214.

12. F. Baudier, G. Lancien, P. Motakis$^{(p)}$, and Th. Schlumprecht, *Coarse and Lipschitz universality*, Fund. Math. **254** (2021), no. 2, 181-214.

11. F. Baudier, G. Lancien, and Th. Schlumprecht, *The coarse geometry of Tsirelson's space and applications*, J. Amer. Math. Soc. **31** (2018), no. 3, 699-717.

10. F. Baudier, R. Causey$^{(p)}$, S. Dilworth, D. Kutzarova, N. L. Randrianarivony, Th. Schlumprecht, and S. Zhang$^{(g)}$, *On the metric geometry of the countably branching diamond graphs*, J. Funct. Anal. **273** (2017), no. 10, 3150-3199.

9. F. Baudier, D. Freeman, Th. Schlumprecht, and A. Zsák, *The metric geometry of the Hamming cube and applications*, Geom. Topol. **20** (2016), no. 3, 1427-1444.

8. F. Baudier and S. Zhang$^{(g)}$, *(β)-distortion of some infinite graphs*, J. Lond. Math. Soc. (2) **93** (2016), no. 2, 481-502.

7. F. Baudier, *Quantitative nonlinear embeddings into Lebesgue sequence spaces*, J. Topol. Anal. **8** (2016), no. 1, 117-150.

6. F. Baudier and G. Lancien, *Tight embeddability of proper and stable metric spaces*, Anal. Geom. Metr. Spaces **3** (2015), 140-156.

5. F. Albiac and F. Baudier, *Embeddability of snowflaked metrics with applications to the nonlinear geometry of the spaces L_p and ℓ_p for $0 < p < \infty$*, J. Geom. Anal. **25** (2015), no. 1, 1-24.

4. F. Baudier, *Embeddings of proper metric spaces into Banach spaces*, Houston J. Math. **38** (2012), no. 1, 209-223.

3. F. Baudier, N. J. Kalton, and G. Lancien, *A new metric invariant for Banach spaces*, Studia Math. **199** (2010), no. 1, 73-94.

2. F. Baudier and G. Lancien, *Embeddings of locally finite metric spaces into Banach spaces*, Proc. Amer. Math. Soc. **136** (2008), 1029-1033.

1. F. Baudier, *Metrical characterization of super-reflexivity and linear type of Banach spaces*, Archiv Math. **89** (2007), 419-429.

Articles Published in Peer-Reviewed Conference Proceedings

1. F. Baudier and R. Deville, *Lipschitz embeddings into c_0*, Harmonic Analysis, Function Theory, Operator Theory, and Their Applications: Conference Proceedings, Bordeaux, June 1-4, 2015, (2018), 29-42.

Preprints Submitted for Publication in Peer-Reviewed Journals

2. F. Baudier, B. de Mendonça Braga, Ilijas Farah, Alessandro Vignati, R. Willett, *Embeddings of von Neumann algebras into uniform Roe algebras and quasi-local algebras*, submitted (2022), arXiv:2212.14312, 35 pages.

1. F. Baudier and C. Gartland$^{(p)}$, *Umbel convexity and the geometry of trees*, submitted (2021), arXiv:2103.16011, 46 pages.

Other Publications

2. F, Baudier, *Asymptotic structure and nonlinear geometry of Banach spaces*, MFO Report 19/2018, (2018), (contribution to the report for the Oberwolfach Mini-Workshop: Superexpanders and Their Coarse Geometry).

1. F. Baudier and W. B. Johnson, Review of the book *Embeddings: bilipschitz and coarse embeddings*, by M. I. Ostrovskii, Bull. Amer. Math. Soc. **53** (2016), 495-506.

Monographs in Preparation

2. F. Baudier and G. Lancien *Nonlinear Geometry of Banach Spaces*, in preparation, commissioned by the Société Mathématique de France and to appear in the series "Cours Spécialisés".

1. F. Baudier, *Geometric Embeddings and Metric Invariants*, in preparation.

Mentoring

Postdocs, Visiting Assistant Professors

2020-2023 **C. Gartland**, *Texas A&M University*.

Ph.D. Students

2022- **L. Aceves Gonzalez**, *Texas A&M University*.
co-advisor Prof. W. B. Johnson

2021- **R. Malthaner**, *Texas A&M University*.

2020-2021 **K. Swieçicki**, *Texas A&M University*, currently Assistant Professor at Wrocław University of Science and Technology.
co-advisor Prof. G. Yu

2014-2018 **A. Swift**, *Texas A&M University*, currently a Robotic Process Automation Programming Analyst at American Fidelity after holding a Visiting Assistant Professor position at the University of Oklahoma (2018-2020).
Co-advisor Prof. Th. Schlumprecht

Graduate Students

Spring 2021 **M. Mathey-Prévot**, *Université de Neuchâtel*, Master Thesis on Transportation Metrics, Master's Thesis committee member and informal advisor.
Advisor: Prof. A. Valette.

2018 **K. Swieçicki**, *Texas A&M University*, Research on equivariant embeddings, MATH 691, Summer semester.

Undergraduate Students

Sum. 2021 **D. Finkel**, *Texas A&M University*, Coarse embeddability between Lebesgue spaces, MATH 485 Directed Studies.

Grants, Fellowships, Scholarships

Federal and State Grants

2021-2024 **PI, NSF standard grant**, *Geometry of Graphs and Banach Spaces, reference number DMS-2055604*, funding period 07/01/2021-06/30/2024, total amount: $249,460.

2020-2022 **PI, NSF continuing grant**, *(co-PIs I. Holmes, W. B. Johnson, E. Procaccia) Workshop in Analysis and Probability, reference number DMS-1900844*, funding period 06/01/2019-05/31/2022, total amount: $174,000.

2020-2023 **AIM SQuaRE grant**, *Expanders, Ghosts, and Roe Algebras*, SQuaRE group composed of F. Baudier, B. de Mendonça Braga, I. Farah, A. Khukhro, A. Vignati, R. Willett.

2018-2022 **PI, NSF standard grant**, *Banach Spaces and Graphs: Geometric Interactions and Applications, reference number DMS-1800322*, funding period 07/01/2018-06/30/2022, total amount: $112,771.

2014-2016 **PI, ANR research grant (Agence Nationale de la Recherche, French national research agency)**, *NoLiGeA Project, reference number ANR-13-PDOC-0031*, funding period January 2014-January 2016, total amount: 150,000€ ($195,000).

2013-2015 **Co-PI, FAPESP research grant (São Paulo Research Foundation, state of São Paulo (Brazil) research agency)**, *(PI Prof. V. Ferenczi, USP) Somas torcidas, posicoes, e teoria de Ramsey, reference number 2013/11390-4*, funding period: October 2013-September 2015, total amount: 76,398 R$ ($34,380).

Fellowships and Scholarships

Fall 2011 **Invited research member**, *MSRI, Berkeley, California*, partially supported by an NSF grant DMS-0932078 administered by the MSRI.

2010-2012 **Fields Postdoctoral Fellowship**, *Thematic Program on Asymptotic Geometric Analysis (6 months) and University of Alberta (18 months)*, declined.

2005-2008 **Ph.D. scholarship**, *Université de Franche-Comté*, Besançon, France.

Other external and internal grants

2014 **Internal grant**, *from the Équipe d'Analyse Fonctionnelle, Université Pierre et Marie Curie (Paris 6)*, to support the organization of the Fall School "Metric Embeddings: Obstructions and Constructions", total amount: 1,000 €.

External grant, *from the GDR AFHP*, to support the organization of the Fall School "Metric Embeddings: Obstructions and Constructions", total amount: 1,000 €.

Internal grant, *from the Institut de Mathématiques de Jussieu-Paris Rive Gauche*, to support the organization of the Fall School "Metric Embeddings: Obstructions and Constructions", total amount: 3,000 €.

External grant, *from the "Function Theory on Infinite Dimensional Spaces XIII" organizing committee*, covering the regular registration fee, the local expenses and accommodation expenses, total amount: equivalent of 1,500 €.

2009 **External grant**, *from the CCCI (Commission des Colloques et Congrès Internationaux)*, to attend the Workshop on Quantitative and Computational Aspects of Metric Geometry, IPAM, UCLA, California (January 2009), total amount: 1,000 €.

Awards

2019 **2018-2019 Departmental Outstanding Teaching Award**, *Texas A&M University*.

Conference Talks

2022 **BWB-2022 Brazilian Workshop in Banach Spaces**, *Butantã edition, USP São Paulo*, São Paulo state, Brazil, (December 2022).
main speaker *(45-minute talk)*

Functional Analysis in Lille. A conference in honor of Gilles Godefroy, *Université de Lille*, Lille, France, (June 2022).
invited speaker *(25-minute talk)*

2021 **Spring Eastern Sectional Meeting of the AMS**, *virtual (formerly at Brown University, Providence, RI)*, Special Session on Metric Techniques in Analysis, (March 2021).
invited speaker (20-minute talk)

2020 **10ème Rencontres d'Analyse Fonctionnelle Besançon-Neuchâtel**, *Université de Neuchâtel*, Neuchâtel, Suisse, (originally June 2020, postponed).
main speaker (50-minute talk)

Entangling Noncommutative Functional Analysis and Geometry of Banach Spaces, *CIRM (Centre International de Rencontres Mathématiques)*, Luminy, France, virtual (October 2020).
main speaker (50-minute talk)

2019 **Geometry and Analysis: Celebrating the Mathematics of Pierre Pansu**, *Mathematical Institute University of Oxford*, Oxford, UK, (September 2019).
main speaker (1-hour talk)

Spring Eastern Sectional Meeting of the AMS, *University of Connecticut, Hartford, CT*, Special Session on Banach Space Theory and Metric Embeddings, (April 2019).
invited speaker (20-minute talk)

2018 **Recent Advances in Functional Analysis, dedicated to the memory of Joe Diestel and Victor Lomonosov**, *Kent State University*, Kent, Ohio, USA, (October 2018).
invited speaker (20-minute talk)

SUMIRFAS 2018, *Texas A&M University*, College Station, Texas, (August 2018).
main speaker (50-minute talk)

Workshop on Large Scale Geometry and Applications, *The Fields Institute for Research in Mathematical Sciences*, Toronto, Canada, (May 2018).
main speaker (45-minute talk)

Mini-Workshop: Superexpanders and Their Coarse Geometry, *MFO, Oberwolfach Research Institute for Mathematics*, Oberwolfach, Germany, (April 2018).
main speaker (two 1-hour lectures)

Non Linear Functional Analysis, *CIRM (Centre International de Rencontres Mathématiques)*, Luminy, France, (March 2018).
main speaker (45-minute talk)

2017 **Virginia Operator Theory and Complex Analysis Meeting (VOTCAM)**, *University of Virginia*, Charlottesville, VA, (October 2017).
main speaker (1-hour talk)

Fall Central Sectional Meeting of the AMS, *University of North Texas, Denton, TX*, Special Session on Banach Spaces and Applications, (September 2017).
invited speaker (40-minute talk)

Spring Eastern Sectional Meeting of the AMS, *Hunter College, City University of New York, New York, NY*, Special Session on Banach Space Theory and Metric Embeddings, (May 2017).
invited speaker (20-minute talk)

2016 **Annual Meeting of the French Functional Analysis Research Network (GDR AFHP)**, *Institut de Mathématiques de Toulouse*, Toulouse, France, (October 2016).
plenary speaker (50-minute talk)

6ème Rencontres d'Analyse Fonctionnelle Besançon-Neuchâtel, *LMB, Université de Franche-Comté*, Besançon, France, (June 2016).
main speaker (50-minute talk)

Workshop in Functional Analysis, *Universidad Politécnica de Cartagena*, Cartagena, Spain, (June 2016).
plenary speaker (declined)

2015 **Relations Between Banach Space Theory and Geometric Measure Theory**, *Mathematics Institute, University of Warwick*, Coventry, England, (June 2015).
invited speaker (30-minute talk)

Banach spaces and their applications in analysis, *CIRM (Centre International de Rencontres Mathématiques)*, Luminy, France, (January 2015).
main speaker (50-minute talk)

2014 **Conference on Geometric Functional Analysis and its Applications**, *LMB, Université de Franche-Comté*, Besançon, France, (October 2014).
main speaker (50-minute talk)

Banach Methods in Non Commutative Geometry, *Fundan University*, Shangai, China, (June 2014).
plenary speaker (50-minute talk)

4ème Rencontres d'Analyse Fonctionnelle Besançon-Neuchâtel, *LMB, Université de Franche-Comté*, Besançon, France, (May 2014).
main speaker (45-minute talk)

Function Theory on Infinite Dimensional Spaces XIII, *Instituto de Ciencias Matemáticas*, Madrid, Spain, (February 2014).
invited speaker (30-minute talk)

Joint Mathematics Meeting, *Baltimore, Maryland*, Special Session on Banach Spaces, Metric Embeddings and Applications, (January 2014).
invited speaker (20-minute talk)

2013 **Fall Central Sectional Meeting of the AMS**, *Washington University, St. Louis, Missouri*, Special Session on Linear and Non-linear Geometry of Banach Spaces, (October 2013).
invited speaker (20-minute talk)

Banach Spaces: Geometry and Analysis, *Institute of Advanced Studies (IAS) at the Hebrew University of Jerusalem*, Jerusalem, Israel, (May 2013).
contributed talk (30-minute talk)

2012 **Annual Meeting of the French Functional Analysis Research Network (GDR AFHA)**, *Université de Marne La Vallée*, Paris, France, (October 2012).
contributed talk (30-minute talk)

Banach Space Theory, *Banff International Research Station (BIRS)*, Banff, Alberta, Canada, (March 2012).
main speaker (50-minute talk)

2011 **Embedding Problems in Banach Spaces and Group Theory**, *Mathematical Science Research Institute (MSRI)*, Berkeley, California, (October 2011).
main speaker (50-minute talk)

Discrete Analysis Embeddings Workshop, *Isaac Newton Institute for Mathematical Sciences (INIMS)*, Cambridge, England, (January 2011).
main speaker (50-minute talk)

2010 **SUMIRFAS 2010**, *Texas A&M University*, College Station, Texas, (August 2010).
invited speaker (30-minute talk)

2009 **Function Theory on Infinite Dimensional Spaces XI**, *Universidad Complutense de Madrid*, Madrid, Spain, (December 2009).
contributed talk (30-minute talk)

Annual Meeting of the French Functional Analysis Research Network (GDR AFHA), *Université de Franche-Comté, Besançon*, France, (November 2009).
contributed talk (30-minute talk)

2009 **Affine Isometric Actions of Discrete Groups**, *Centro Stefano Franscini*, Ascona, Switzerland, (July 2009).
contributed talk (30-minute talk)

2008 **Annual Meeting of the French Functional Analysis Research Network (GDR AFHA)**, *Université d'Orléans*, Orléans,France, (October 2008).
contributed talk (30-minute talk)

Spring Conference on Banach spaces, *(Organized by the Mathematical Institute of Czech Academy of Sciences, Prague)*, Pazeky, Czech Republic, (April 2008).
contributed talk (30-minute talk)

2007 **Geometric Linearization of Graphs and Groups**, *Centre Interfacultaire Bernoulli*, EPFL Lausanne, Switzerland, (January 2007).
invited contributed talk (20-minute talk)

2006 **Annual Meeting of the French Functional Analysis Research Network (GDR AFHA)**, *Université des Sciences et Technologies de Lille*, Lille, France, (September 2006).
contributed talk (30-minute talk)

Lecture Series, Mini-courses, Schools

2015 **Group Actions and Metric Embeddings**, *Kyoto University*, Kyoto, Japan, (September 2015).
mini-course speaker (three 1-hour talks)

2010 **Lectures of the** 3*rd* **Roman Cycle**, *Institut de Mathématiques de Neuchâtel*, Embeddings of Metric Spaces and Applications, (Spring 2010).
semester-long course

2009 **Summer School, Geometry and Analysis in the Theory of Computation**, *Indiana University*, Bloomington, Indiana, (August 2009).
2-hour lecture

Colloquium and Seminar Talks

2023 **Logic Seminar**, *University of Maryland*, College Park, MD,(February 2023).

2022 **Operator Algebra Seminar**, *Universidade Federal de Santa Catarina*, Florianopolis, Brazil (March 2022).

Functional Analysis and Descriptive Set Theory Seminar, *University of São Paulo*, São Paulo, Brazil (March 2022).

2021 **Banach Spaces Webinar**, *University of North Texas*, Denton, virtual, moderated by Buyamin Sari, (December 2021).

Functional Analysis and Descriptive Set Theory Seminar, *University of São Paulo*, virtual, São Paulo, Brazil (June 2021).

Operator Theory Seminar at UVA, *University of Virginia*, Richmond, virtual (February 2021).

2020 **Banach Spaces Webinar**, *University of North Texas*, Denton, virtual, moderated by Buyamin Sari, (July 2020).

Analysis Seminar, *University of Connecticut*, Hartford, Connecticut, (originally April 2020-postponed).

2019 **Colloquium**, *University of Mississippi*, Oxford, Mississippi, (March 2019).

Groups and Dynamics Seminar, *Texas A&M University*, College Station, Texas, (February 2019).

Colloquium, *Iowa State University*, Ames, Iowa, (February 2019).

Colloquium, *Texas A&M University*, College Station, Texas, (January 2019).

2018 **Analysis Seminar**, *University of Houston*, Houston, Texas, (October 2018).

Colloquium, *Saint Louis University*, Saint Louis, Missouri, (April 2018).

2017 **Séminaire d'Analyse Fonctionnelle**, *IMJ-PRG, Université Paris VI-Pierre et Marie Curie*, Paris, France, (June 2017).

Functional Analysis Seminar, *Université de Franche-Comté*, Besançon, France, (June 2017).

2016 **Functional Analysis Seminar**, *Université de Franche-Comté*, Besançon, France, (May 2016).

Calderón-Zygmund Analysis Seminar, *University of Chicago*, Chicago, Illinois, (March 2016).

2015 **Analysis Seminar**, *Miami University*, Oxford, Ohio, (November 2015).

Colloquium, *Miami University*, Oxford, Ohio, (November 2015).

Analysis Seminar, *University of Illinois at Urbana-Champaign*, Urbana-Champaign, Illinois, (October 2015).

Colloquium, *Florida Atlantic University*, Boca Raton, Florida, (September 2015).

Groups and Analysis Seminar, *Université de Neuchâtel*, Switzerland, (June 2015).

Séminaire d'Initiation à l'Analyse, *IMJ-PRG, Université Paris VI-Pierre et Marie Curie*, Paris, France, (June 2015).

Logic Seminar, *University of Illinois at Chicago*, Chicago, Illinois, (March 2015).

Analysis Seminar, *Universidad Complutense de Madrid*, Madrid, Spain, (January 2015).

2014 **Functional Analysis Seminar**, *Universidade de São Paulo*, São Paulo, Brazil, (August 2014).
two talks

Séminaire d'Initiation à l'Analyse, *Université Paris VI-Pierre et Marie Curie*, Paris, France, (January 2014).

Colloquium, *Kansas State University*, Manhattan, Kansas, (January 2014).

2013 **Interview Maître de Conférence (ranked 6^{th})**, *Université Paris VII-Denis Diderot*, Paris, France, (May 2013).

Functional Analysis Seminar, *Université de Franche-Comté*, Besançon, France, (May 2013).

Millican Colloquium, *University of North Texas*, Denton, Texas, (April 2013).

2012 **Groups and Dynamics Seminar**, *Texas A&M University*, College Station, Texas, (October 2012).

Analysis Seminar, *Universidad Complutense de Madrid*, Madrid, Spain, (June 2012).

Analysis Seminar, *Universidad Pública de Navarra*, Pampelona, Spain, (June 2012).

2011 **Functional Analysis Seminar**, *Université de Franche-Comté*, Besançon, France, (January 2011).

2010 **Groups and Analysis Seminar**, *Université de Neuchâtel*, Switzerland, (December 2010).

2009 **Colloquium of the Mathematical Analysis Department**, *Universidad Complutense de Madrid*, Madrid, Spain, (October 2009).

Functional Analysis Seminar, *Université des Sciences et Technologies de Lille*, Lille, France, (May 2009).

2008 **Workshop on Operator Algebras**, *Université d'Orléans*, Orléans, Orléans, France. (February 2008)

Analysis Seminar, *IMB, Université de Bordeaux 1*, Bordeaux, France, (March 2008).

Synergistic Activities

Conference Organization

2022 **SUMIRFAS 2022**, *Texas A&M University, College Station, Texas*, July 29-31.
chair *(co-organizers Profs. W. B. Johnson, I. Holmes)*

Geometry and Analysis on Nonsmooth Spaces, *Texas A&M University, College Station, Texas*, August 8-12.
(co-organizers G. C. David, C. Gartland (***chair***), *J. Wang)*

Joint AMS-SMF-EMS Meeting, *Special Session on "Quantitative Geometry of Transportations Metrics"*, Grenoble, France, July 18-22.
chair *(co-organizers Profs. D. Cordero-Erausquin, A. Eskenazis, and E. Pernecká)*

STEaLTH Workshop on the Coarse Geometry of Uniform Roe Algebra, *Texas A&M University, College Station, Texas*, May 23.
(sole organizer)

2021 **SUMIRFAS 2021**, *Texas A&M University, College Station, Texas*, July 30-August 1 2021, hybrid.
chair *(co-organizers Profs. W. B. Johnson, I. Holmes, E. Procaccia)*

2016 **Workshop in Analysis and Probability**, *Concentration Week on "Metric Spaces: Analysis, Embeddings into Banach Spaces, and Applications"*, Texas A&M University, College Station, Texas, 5-9 July 2016.
chair *(co-organizers Profs. M. Ostrovskii, Th. Schlumprecht, and N. Randrianarivony)*

2014 **Fall School**, *Metric Embeddings: Constructions and Obstructions*, Institut Henri Poincaré, Paris, France, 3-7 November 2014.
chair *(co-organizers Profs. G. Godefroy, P. Pansu, and R. Tessera)*

First Brazilian Workshop in Geometry of Banach Spaces, Maresias, São Paulo state, Brazil, 25-29 August 2014.
organizer *(co-organizers Profs. J. L. Abad, C. Brech, V. Ferenczi (chair), and E. Galego)*

2011 **Workshop in Analysis and Probability**, *Concentration Week on "Non-Linear Geometry of Banach Spaces, Differentiability and Geometric Group Theory"*, Texas A&M University, College Station, Texas, 1-5 August 2011.
chair *(co-organizers Profs. W. B. Johnson, P. Nowak, and B. Sari)*

2010 **Rencontres d'Analyse Fonctionnelle Neuchâtel-Besançon**, Université de Neuchâtel, Neuchâtel, Switzerland, 3-4 June 2010.
founder and organizer *(co-founder and co-organizer Prof. A. Valette)*

Seminar Organization

2021– **Banach and Metric Space Geometry Working Seminar**, *Texas A&M University*.
main organizer

2020– **Banach and Metric Space Geometry Research Seminar**, *Texas A&M University*.
main organizer

2012-2019 **Working Seminar on Nonlinear Geometries**, *Texas A&M University*.
organizer (co-organizer Prof. G. Paouris)

2010-2016 **Banach Spaces Seminar**, *Texas A&M University*.
main organizer

Service Activities

2023– **Promotion and Tenure Committee**, *Texas A&M University-Department of Mathematics*.
elected member

2022–2023 **Teaching Committee**, *Texas A&M University-Department of Mathematics*.
appointed member

2018–2020 **Academic Professional Track Committee**, *Texas A&M University-Department of Mathematics*.
elected member

Fall 2018 **Academic Professional Track Teaching Committee**, *Texas A&M University-Department of Mathematics*.
appointed member

2018-2019 **Graders and Undergraduate Teaching Assistants Operations**, Fall 2018-Fall 2019.
appointed supervisor

Outreach Activities

2017 Outreach talk at the Texas A&M Math Club (April).

Title: When the spaces of Stefan Banach and Maurice Fréchet meet the approximation algorithms of theoretical computer scientists.

Editorial Activities

Referee Ann. Funct. Anal.

Bull. Belg. Math. Soc. Simon Stevin – Bul. Lond. Math. Soc.

Discrete Math.

Colloquium Mathematicum

Forum Math. Pi

Houston J. Math.

Int. Math. Res. Not. IMRN – Israel J. Math. – Invent. Math.

J. Approx. Theory – J. Funct. Anal. – J. Math. Anal. Appl. – J. Topol. Anal.

Math. Ann. – Mathematical Inequalities & Applications – Mediterr. J. Math.

Nat. Acad. Sci. Lett.

Positivity – Proc. Amer. Math. Soc.

Proceedings volume for the conference on Operator Theory and its Applications

Studia Math.

Trans. Amer. Math. Soc.

Reviewer Zentralblatt MATH (2013-2022).

MathSciNet (2010-2022).

Scientific Organization Memberships

American Mathematical Society (since 2012)

Société Mathématique Européenne (since 2012)

Société Mathématique de France (since 2012)

Teaching Experience

Graduate level

2023 **Real Analysis II**, *MATH 608, TAMU*, Spring.
instructor

2022 **Real Analysis I**, *MATH 607, TAMU*, Fall.
instructor

Mathematical Algorithms and their Implementations, *MATH 689, TAMU*, Spring.
instructor

2020 **Topics Course in "Metric Invariants: Algorithmic and Geometric Applications"**, *MATH 689, TAMU*, Fall.
instructor

2019 **Introduction to classical analysis**, *MATH 615, TAMU*, Fall (from mid-semester).
instructor

2016 **Topics Course in "Geometry of Metric Spaces"**, *MATH 663, TAMU*, Spring.
instructor

Undergraduate level

2022 **Foundations of Mathematics**, *MATH 300, TAMU*, 1 section, Fall.
instructor

2019 **Foundations of Mathematics**, *MATH 300, TAMU*, 2 sections, Fall.
instructor

2018 **Foundations of Mathematics**, *MATH 220, TAMU*, 3 sections, Fall.
instructor

2017 **Foundations of Mathematics**, *MATH 220, TAMU*, 1 section, Fall.
instructor

Calculus, *MATH 172, TAMU*, 2 sections, Fall.
instructor

2016 **Foundation of Mathematics**, *MATH 220, TAMU*, 2 sections, Fall.
instructor

Engineering Mathematics I, *MATH 151, TAMU*, 3 sections, Fall.
instructor

2015 **Differential Equations**, *MATH 308, TAMU*, (2 sections), Fall.
instructor

Differential Equations, *MATH 308, TAMU*, (2 sections), Summer.
instructor

Differential Equations, *MATH 308, TAMU*, (2 sections), Spring.
instructor

2013 **Engineering Mathematics III**, *MATH 251, TAMU*, 2 sections, Fall.
instructor

Linear Algebra, *MATH 304, TAMU*, 1 section, Summer.
instructor

Differential Equations, *MATH 308, TAMU*, 1 section, Spring.
instructor

2012 **Engineering Mathematics I**, *MATH 151, TAMU*, 6 sections, Fall.
instructor

Linear Algebra, *MATH 304, TAMU*, 1 section, Summer.
instructor

Engineering Mathematics II, *MATH 152, TAMU*, 6 sections, Spring.
instructor

Differential Equations, *MATH 308, TAMU*, 1 section, Spring.
instructor

2011 **Engineering Mathematics II**, *MATH 152, TAMU*, 4 sections, Summer.
instructor

Engineering Mathematics I, *MATH 151, TAMU*, 6 sections, Spring.
instructor

2009 **Analysis for** 1*st* **year undergraduate biology students**, *Université de Franche-Comté*, Spring.
teaching assistant in charge of recitations (60 students)

2008 **Analysis for** 1*st* **year undergraduate biology students**, *Université de Franche-Comté*, Fall.
teaching assistant in charge of recitations (60 students)

Teaching at École Nationale Supérieure de Micro-Méchanique (ENSMM)

2005–2008 **Additional Analysis and Modeling 2**, *(distribution theory in one dimension, convolution of distributions, Fourier and Laplace transforms of distributions)*, ENSMM (Engineering School), Spring and Fall.
instructor and course coordinator (100 students per semester)

Examinator in "Classes préparatoires aux Grandes Écoles" (CPGE)

2008–2009 **MP section (math-physics second year students)**, *Lycée Victor Hugo, Besançon, France*, weekly, Spring and Fall.
oral examinator

2007–2008 **MPSI section (math-physics first year students)**, *Lycée Victor Hugo, Besançon, France*, weekly, Spring and Fall.
oral examinator

Study Abroad Programs (Summer semester in Besançon, France)

2020 **Advanced Calculus I**, *MATH 409, TAMU.*

Directed Studies, *MATH 485, TAMU.*
instructor and faculty leader (12 students, program canceled after the recruiting and pre-departure preparation phases)

2019 **Advanced Calculus I**, *MATH 409, TAMU.*

Directed Studies, *MATH 485, TAMU.*
instructor and faculty leader (17 students)

2018 **Advanced Calculus I**, *MATH 409, TAMU.*

Directed Studies, *MATH 485, TAMU.*
instructor and faculty leader (18 students)

2017 **Advanced Calculus I**, *MATH 409, TAMU.*

Directed Studies, *MATH 485, TAMU.*
instructor and faculty leader (students)

2016 **Advanced Calculus I**, *MATH 409, TAMU.*

Directed Studies, *MATH 485, TAMU.*
instructor and faculty leader (students)

Former Positions

09/19–08/22 **Assistant Professor**, Texas A&M University, College Station, Texas.

09/17–08/19 **Instructional Assistant Professor**, *with a special appointment to the Graduate Faculty*, Texas A&M University, College Station, Texas.

10/10–08/17 **Visiting Assistant Professor**, *with a special appointment to the Graduate Faculty*, Texas A&M University, College Station, Texas.

01/14–01/15 **ANR Fellow**, *NoLiGeA Project*, Institut de Mathématiques de Jussieu-Paris Rive Gauche, Université Pierre et Marie Curie (Paris 6), Paris, France.

Fall 2011 **Research Member**, *Mathematical Science Research Institute*, Berkeley, California.

01/10–09/10 **Postdoc FNS**, *Université de Neuchâtel*, Neuchâtel, Switzerland.

09/09–12/09 **Postdoc IMI**, *Universidad Complutense de Madrid*, Madrid, Spain.

09/08–08/09 **Teaching and Research Assistant**, *Université de Franche-Comté*, Besançon, France.

09/05–08/08 **Ph.D. student with scholarship**, *Université de Franche-Comté with a teaching appointment at ENSMM (Engineering School)*, Besançon, France.

Education

2005–2008 **Ph.D. degree in Mathematics**, *Université de Franche-Comté*, Besançon, France.
Studies for a Ph.D. degree (with scholarship) under the supervision of Prof. Gilles Lancien.

2002–2005 **M.Sc. degree in Mathematics**, *Université de Franche-Comté*, Besançon, France.
M.Sc. thesis: Extension of bi-Lipschitz mappings between L_p spaces, prepared under the supervision of Prof. Gilles Lancien.

2003–2004 **Agrégation de Mathématiques preparation**, *Université de Franche-Comté*, Besançon, France.
Intensive preparatory year to the nation-wide educational contest called Agrégation de Mathématiques; selected 99^{th} out of 2560 candidates in 2005.

2001–2002 **B.Sc. degree in Mathematics**, *Université de Franche-Comté*, Besançon, France.
Studies for a "Licence de Mathématiques Pures" (equivalent to a B.Sc. degree in Mathematics)

1998–2001 **Classes préparatoires aux Grandes Écoles**, *Lycée Victor Hugo*, Besançon, France.

Research Interests

- Qualitative and quantitative aspect of metric geometry (coarse, uniform, strong, and Lipschitz

geometries of metric spaces; metric geometry of graphs and groups)
- Low-distortion embeddability of finite and infinite metric spaces (probabilistic methods, Ramsey theoretic methods).
- Banach space geometry (nonlinear theory of Banach spaces, Lipschitz/uniform/coarse classification of Banach spaces, Ribe Program, Kalton Program).
- Functional Analysis (classical linear theory of Banach spaces).
- Applications of the above to geometric group theory, noncommutative geometry, topology, and theoretical computer science.

Computer Skills

Tools	WebAssign, SMART Notebook, i>clicker.
Platforms	Mac OS X, Linux, Windows.
Languages	LaTeX, HTML, Python.
Softwares	MATLAB, Maple, Scilab.

Languages

Self-assessment European level CEFR (C2 maximum evaluation)

		Comprehension		**Speaking**		**Writing**
		Listening	Reading	Interaction	Production	
French	Mother Tongue	*C2*	*C2*	*C2*	*C2*	*C2*
English	Fluent	*C2*	*C2*	*C2*	*C2*	*C2*
Portuguese	Spouse Language	*C2*	*C1*	*C1*	*C1*	*B2*
Spanish	Intermediate	*C1*	*C1*	*B2*	*B2*	*B1*
German	Intermediate	*B2*	*B2*	*B1*	*B1*	*B1*