Nguyen-Bac Dang

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Nationality : French
Civil status : single

Education

2018-current	**Milnor Lecturer**, *Stony Brook University*, Stony-Brook.
2014-2018	**Ph.D in Mathematics under the direction of Charles Favre**, *CMLS*, École Polytechnique, Palaiseau.
2012–2014	**Master's degree in Mathematics**, *Université Paris-Diderot*, Paris, France, *with distinction*.
2011–2012	**Licence degree in Mathematics**, *École Normale Supérieure*, Lyon, France.

Research papers

October 2020	Self-similar groups and holomorphic dynamics: Renormalization, integrability, and spectrum (*joint work with Rostislav Grigorchuk et Mikhail Lyubich*), submitted.
July 2020	Intersection theory of nef b-divisor classes (*joint work with Charles Favre*), submitted.
July 2020	Dynamical degrees of automorphisms on abelian varieties (*joint work with Thorsten Herrig*), submitted
June 2020	Spectral interpretations of dynamical degrees and applications (*joint work with Charles Favre*), submitted.
March 2020	A central limit theorem for the degree of a random product of Cremona transformations (*joint work with Giulio Tiozzo*), submitted.
June 2019	Higher arithmetic degrees of dominant rational self-maps (*joint work with Dragos Ghioca, Fei Hu, John Lesieutre, Matthew Satriano*), Annali della Scuola Normale Superiore di Pisa, Classe di Scienze, electronically published DOI: 10.2422/2036-2145.201908_014.
May 2019	Dynamical invariants of monomial correspondences (*joint work with Rohini Ramadas*), Ergodic Theory and Dynamical Systems, Cambridge University Press, DOI 10.1017/etds.2020.32.
October 2018	Degree growth for tame automorphisms of an affine quadric threefold, submitted.
September 2017	Positivity of valuations on convex bodies and invariant valuations by linear actions (*joint work with Jian Xiao*), accepted in Journal of Geometric Analysis.
January 2017	Degrees of iterates of rational maps on normal projective varieties, Proc. London Math. Soc., 121: 1268-1310. https://doi.org/10.1112/plms.12366.

Experiences

Talk and mini-courses

Mar. 2021	Dynamics and geometry seminar of Angers, Zoom
	Spectral interpretation of dynamical degrees.
Mar. 2021	Amiens seminar, Zoom
	Spectral interpretation of dynamical degrees.
Mar. 2021	Group and dynamics seminar, Texas A&M, Zoom
	On the spectrum of self-similar groups and holomorphic dynamics.
Feb. 2021	Singularity seminar in Paris 7, Zoom.
	Functional analysis on b-divisors.
Nov. 2020	ADIOS seminar, Zoom.

	Spectral interpretation of dynamical degrees.
Jun. 2020	Saint-Petersburg seminar on representation theory and dynamics, Zoom.
	On the spectrum of self-similar groups and holomorphic dynamics.
Feb. 2020	Dynamics and Renormalization seminar, Stony Brook
	On the spectrum of self-similar groups and holomorphic dynamics.
Jan. 2020	CIRM (Complex dynamics conference), Marseille
	On the spectrum of self-similar groups and holomorphic dynamics.
Apr. 2019	Complex geometry and dynamical systems seminar, Ann Arbor
	Spectral gap in the dynamical degrees of tame automorphism preserving an affine quadric threefold.
Nov. 2018	Algebraic geometry seminar, Brown University.
	Degree growth of tame automorphisms preserving an affine quadric threefold.
Nov. 2018	Algebra and Number Theory Seminar, Penn State.
	Degree growth of tame automorphisms preserving an affine quadric threefold.
Oct. 2018	Dynamical systems seminar, Stony Brook.
	Degree growth of tame automorphisms preserving an affine quadric threefold.
Dec. 2017	Seminar on Geometric Analysis, Frankfurt
	A notion of positivity of valuations in convex geometry
Nov. 2017	Workshop on Arithmetic and Complex Dynamics, Oaxaca
	Degrees of iterates of dominant rational maps
Oct. 2017	Seminar in dynamics, Amiens
	A notion of positivity of valuations in convex geometry
Sep. 2017	Mini-Workshop on Positivity of algebraic cycles, Oberwolfach
	Positive cones of valuations in convex geometry
Sep. 2017	Young researcher in geometry and dynamics, Rennes
	Degrees of iterates of rational maps
May 2017	Del Duca meeting, Rennes
	Mini-course on dynamical degrees with Junyi Xie
Mar. 2017	Seminar LAGA, Villetaneuse
	Degrees of iterates of rational maps
Mar. 2017	Seminar on Analytic Geometry, Rennes
	Degrees of iterates of rational maps
Mar. 2017	ANR Lambda meeting, Paris
	Degrees of iterates of rational maps
Feb. 2017	Seminar on singularities, Paris 7
	Degrees of iterates of rational maps
Feb. 2016	Workshop Folheações Holomorfas, Rio de Janeiro
	Degrees of iterates of rational maps

Internship in Mathematics

February 2014- September 2015	**On the dynamics at infinity of automorphism of a cubic surface**, *under the direction of Charles Favre*, CMLS, École Polytechnique, Palaiseau.
May-June 2013	**On the Riemann-Hilbert problem in rank** 2, *under the direction of de Frank Loray*, IRMAR, Rennes.
May-June 2012	**On Quantum groups**, *under the direction of Vladimir Roubtsov*, Larema, Angers.

Teaching

Fall 2020	**Lecturer for Mat331 Computer-Assisted Mathematical Problem Solving**, *Stony Brook University*.
Fall 2019 and Fall 2020	**Lecturer for Mat131 Calculus**, *Stony Brook University*.
Spring 2019 and Spring 2020	**Lecturer for Mat118 Mathematical Thinking**, *Stony Brook University*.
Fall 2018	**TA for Mat125 Calculus A**, *Stony Brook University*.
2015-2018	**Probability for second year undergraduate students at the University of Orsay**, *Orsay, France*.
2015-2018	**Exercice sessions for first year undergraduate students at the University of Orsay**, *Orsay, France*.
January-April 2015	**Volunteer teacher in Mathematics at the organisation B.A-BA**, *42 avenue Edouard Vaillant, 93500 Pantin*.
2012-2013	**Tutoring in Mathematics**, *Lyon, France*.

Hobbies

Piano	Has played for 15 years
Sports	Volley-ball, Table tennis