

CURRICULUM VITAE

JOÃO PEDRO DOS SANTOS

Personal Information

Birth date and place: 19 May 1982, in Rio de Janeiro, Brazil.

Current academic affiliation: Institut de Montpelliérain Alexandre Grothendieck, Université de Montpellier,

Case courrier 051, Place Eugène Bataillon 34095,

Montpellier Cedex 5 France.

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Research Interests

Algebraic and arithmetic Geometry; D -modules in positive and mixed characteristic; differential Galois theory; fundamental group-schemes in algebraic Geometry; vector bundles; Tannakian categories; geometric aspects of representation theory.

Education

- (1) **December 2014.** Habilitation à diriger des recherches. Université de Paris 6. Title of thesis: Manifestations algebro-géométriques du concept de groupe fondamental. Refereed by P. Berthelot (Rennes), H. Esnault (Berlin) and Ch. Pauly (Nice). Jury composed by Y. André, D. Bertrand, P. Berthelot, I. Biswas, Hélène Esnault, P. H. Hai and C. Pauly.
- (2) **October 2003–November 2006.** PhD, University of Cambridge, U.K. Thesis advisor: N.I. Shepherd-Barron (FRS). Title of the thesis: Fundamental Groups in Algebraic Geometry.
- (3) **October 2002–July 2003.** Certificate of Advanced Study in Mathematics (Part III), University of Cambridge, U.K. *Grade:* Distinction.
- (4) **January 2000–January 2002.** Masters in Pure Mathematics, IMPA, Rio de Janeiro, Brazil. Advisor: C. G. Moreira.
- (5) **January 1998–December 2000.** German High School, Rio de Janeiro, Brazil.

Employment

- (1) **September 2022–present.** Maître de Conférences, Université de Montpellier, Montpellier, France.
- (2) **September 2008–2022.** Maître de Conférences, Université de Paris 6, Paris, France.
- (3) **October 2007–September 2008.** Invited researcher (post-doc), Max-Planck-Institut für Mathematik, Bonn, Germany.
- (4) **October 2006–September 2007.** Visiting researcher (post-doc) sponsored by the Arithmetic Algebraic Geometry Network, Rennes, France.

Fellowships, distinctions and fundings obtained

- (1) **August 2023 to July 2024.** Research leave, IMPA, Rio de Janeiro, Brazil. Funding provided by the CNRS.
- (2) **July and August 2022.** Visiting researcher at IMPA, Rio de Janeiro. Funds provided by the CNRS.
- (3) **September 2020–July 2021.** Research Leave. Institut de Mathématiques de Jussieu. Paris, France. Funding provided by the CNRS.
- (4) **September 2017–September 2021.** Research grant from the Sorbonne University (Prime d’enseignement et recherche).
- (5) **January 2017–June 2017.** Research Leave. Institut de Mathématiques de Jussieu. Paris, France. Funding provided by the CNRS.
- (6) **September 2014–December 2014.** Research Leave. Institut de Mathématiques de Jussieu. Paris, France. Funding provided by the CNRS.
- (7) **September 2013–August 2017.** Research grant from the Sorbonne University (Prime d’enseignement et recherche).
- (8) **July 2013.** Invited researcher in IMPA, Rio de Janeiro, Brazil. Funding provided by the IMPA.
- (9) **September 2012–December 2012.** Research Leave. Institut de Mathématiques de Jussieu. Paris, France. Funding provided by the CNRS.
- (10) **September 2009–August 2013.** Research grant from the Sorbonne University (Prime d’enseignement et recherche).
- (11) **October 2007–September 2008.** Max-Planck-Gesellschaft Stipendium, Bonn, Germany.
- (12) **October 2006–September 2007.** Marie-Curie grant from the “Arithmetic Algebraic Geometry” programme, Rennes, France.
- (13) **October 2006–September 2007.** Rouse Ball studentship, Trinity College, Cambridge, U.K. (declined).
- (14) **October 2003–October 2006.** Internal Graduate Studentship, Trinity College, Cambridge, U.K.
- (15) **July 2003.** Tripos prize. Trinity College, Cambridge, U.K.
- (16) **October 2002–July 2003.** Studentship in Mathematics, Trinity College, Cambridge, U.K.
- (17) **August 2000–August 2002.** Grant from the Brazilian Research Council, Rio de Janeiro, Brazil.

Invitations to international conferences as speaker

September 2022. Mediterranean Algebraic Geometry Seminar. Nice, France. Invited by A. Höring.

September 2019. Arithmetic and p -adic fundamental groups. Caen, France. Invited by Tuan Ngo Dac and Jerome Poineau.

May 2019. Thematic semester: Arithmetic, Geometry and Cryptography, Rennes, France. Invited by M. Romagny and D. Tossici.

May 2017. Workshop “Fundamental group schemes in Arithmetic Geometry”. Tuan-Chau, Vietnam. (Membre of the scientific committee.)

December 2013. “Fundamental Groups in Arithmetic and Algebraic Geometry” in Pisa, Italy. Invited by Niels Borne.

July 2013. “Workshop on Vector Bundles in Positive Characteristic” in Nice, France. Invited by Christian Pauly.

May 2011. “Sino-French Summer Institute in Arithmetic Geometry” in Tianjin, China.

Invited by Lei Fu.

April/May 2010. “Bundles on Projective Varieties” in Bombay en India. Invited by Indranil Biswas.

March 2010. “Geometric and Differential Galois Theory” at the CIRM in Luminy, France. Invited by Pierre Dèbes.

February 2010. “The arithmetic of π_1 ” in Heidelberg, Germany. Invited by Jakob Stix.

September 2007. “Final conference of the Arithmetic Algebraic Geometry Network” in Cetraro, Italy. Invited by Bruno Chiarellotto.

References

- (1) Y. André (Paris, France, yves.andre@imj-prg.fr),
- (2) F. Baldassarri (Padova, baldassa@math.unipd.it),
- (3) I. Biswas (Bombay, India, indranil2919@gmail.com),
- (4) H. Esnault (Berlin, Germany, helene.esnault@fu-berlin.de),
- (5) Phùng Hô Hai (Hanoi, Vietnam, phung@math.ac.vn),
- (6) Marius van der Put (Groningen, The Netherlands, m.van.der.put@rug.nl).

Languages

Fluent in German, English, French and Portuguese.

Scientific Publications

Articles are also available on <https://imag.umontpellier.fr/~dos-santos/>

- dS23p *A survey on algebraic dilatations.* With. A. Mayeux and A. Dubouloz.
- dS22pb *On the monodromy of holomorphic differential systems.* With I. Biswas, S. Dumitrescu, L. Heller and S. Heller. Preprint October 2022.
- dS22pa *Prolongation of regular singular connections on punctured affine line over a henselian ring.* Preprint July 2022. With P. H. Hai, Phạm Thanh Tâm and Đào Văn Thịnh. To appear in Comm. Algebra.
- dS21pb *Algebraic theory of formal regular-singular connections with parameters.* July 2021. With P. H. Hai and Pham Thanh Tam. To appear in Rend. Semin. Mat. Univ. Padova.
- dS21pa *Connections on trivial vector bundles over projective schemes.* With I. Biswas and P. H. Hai. To appear in C. R. Math. Acad. Sci. Paris.
- dS22b *Regular singular connections on relative complex schemes.* With P. H. Hai. To appear in Ann. Sc. Norm. Super. Pisa Cl. Sci. (5).
Online. DOI 10.2422/2036-2145.202006_010
- dS22a *On certain Tannakian categories of integrable connections over Kähler manifolds.* With I. Biswas, S. Dumitrescu and S. Heller. Canad. J. Math. 74(4) (2022), 1034–1061.
Online. DOI 10.4153/S0008414X21000201.
- dS23 *Finite torsors on projective schemes defined over a discrete valuation ring.* With P. H. Hai. Algebraic Geometry 10 (1) (2023) 1–40.
Online. doi: 10.14231/AG-2023-001.
- dS21b *On the fundamental group schemes of certain quotient varieties.* With I. Biswas and P. H. Hai. Tohoku Math. J. (2) 73(4), pp. 565–595 (2021).
Online. DOI 10.2748/tmj.20200727.
- dS21a *On the structure of affine flat group schemes over discrete valuation rings, II.* Int. Math. Res. Not. IMRN, Vol. 2021, Issue 12, June 2021, pp. 9375–9424.
Online. DOI: 10.1093/imrn/rnaa247.
- dS18b *On the structure of affine flat group schemes over discrete valuation rings.* With N. D. Duong and P. H. Hai. Ann. Sc. Norm. Super. Pisa Cl. Sci. (5) Vol. XVIII (2018), 977–1032
Online. DOI: 10.2422/2036-2145.201509_004
- dS18a *The action of the étale fundamental group scheme on the connected component of the essentially finite one.* With P. H. Hai. Mathematische Nachrichten. 2018; 291:1733–1742
Online. <https://doi.org/10.1002/mana.201600494>
- dS17 *Abelianization of the F -divided fundamental group scheme.* With I. Biswas. Proc. Indian Acad. Sci. Math. Sci. 127 (2017), no. 2, 281–287
- dS15 *The homotopy exact sequence for the fundamental group scheme and infinitesimal equivalence relations.* Algebraic Geometry 2 (5) (2015) 535–590

Online. doi:10.14231/AG-2015-024.

- dS13 *Triviality criteria for vector bundles over rationally connected varieties.* With I. Biswas. *Journal of the Ramanujan Mathematical Society* (2013) Volume 28, no. 4, pp 423–442.
- dS12b *On the number of Frobenius–trivial sheaves on specific curves.* *Arch. Math.* September 2012, Volume 99, Issue 3, pp 227–235.
Online. doi:10.1007/s00013-012-0424-9.
- dS12a *Vector bundles trivialized by proper morphisms and the fundamental group scheme II.* With I. Biswas. *The Arithmetic of Fundamental Groups. PIA 2010. Contributions in Mathematical and Computational Sciences, Vol. 2.* J. Stix (editor). Springer 2012.
- dS11b *Vector bundles trivialized by proper morphisms and the fundamental group scheme.* With I. Biswas. *Journal of the Inst. of Math. Jussieu* (2011) 10(2), 225–234.
Online. doi:10.1017/S1474748010000071.
- dS11a *Lifting D -modules from positive to zero characteristic.* *Bulletin de la Société Mathématique de France* Tome 139 Fasc. 2, 2011, 145–286.
- dS09b *On the vector bundles over rationally connected varieties.* With I. Biswas. *C. R. Math. Acad. Sci. Paris* 347 (2009), no. 19–20, 1173–1176
Online. <http://dx.doi.org/10.1016/j.crma.2009.09.006>
- dS09a *The behaviour of the differential Galois group on the generic and special fibres: A Tannakian approach.* *J. reine angew. Math.* 637 (2009), 63–98.
Online. doi:10.1515/CRELLE.2009.091.
- dS08 *A note on stratified modules with finite integral differential Galois groups.* Preprint 2008.
- dS07c *Fundamental group schemes in positive characteristic.* *Oberwolfach reports* Volume 4, Issue 2, 1514–1516 (2007).
- dS07b *Fundamental group schemes for stratified sheaves.* *Journal of Algebra*, Volume 317, Issue 2, pp. 691–713 (2007).
- dS07a *Local solutions to positive characteristic non-Archimedean differential equations.* *Compositio Mathematica* 143 (2007) 1465–1477.

Contributions to education through research

Lecture notes on research oriented mathematics. All texts are available here.

- (1) *Abelian Varieties. International school on Algebraic Geometry and Algebraic Groups.* Vietnam Academy of Science and Technology. Hanoi, Vietnam. November 2022.
- (2) *Connections in Algebraic Geometry.* Lectures for a mini-course. August 2022. IMPA, Rio de Janeiro, Brazil. 45 pages.
- (3) Lectures on *Algebraic groups acting on varieties and their applications.* Notes from a lecture course delivered at the Online Workshop *Algebraic Groups and Algebraic Geometry.* Vietnam Academy of Sciences and Technology. Hanoi, Vietnam. November 2021. 30 pages.

Supervision of doctoral dissertations.

- (1) Gabriel Bassan. Theme of thesis: *Regular-singular connections on principal bundles.* Sorbonne Université. From 2023.
- (2) Phan Than Tam. Theme of thesis: *Tannakian theory of differential equations depending on parameter.* Institute of Mathematics, Vietnam Academy of Science and Technology. (Main supervisor: Phung Ho Hai.) From 2015–present.
- (3) Hugo Bay-Rousson, *Isomonodromie en théorie de Galois différentielle.* University of Paris 6. From 2015–2019.

Contributions to the formation of Ph.D. students.

- (1) Jury member for the thesis of C. Hilario. Supervisor: K.-O. Stöhr. IMPA, Rio de Janeiro, Brazil, March 2022.
- (2) Jury member for the thesis of Rodrigo C. Cofré. Supervisor: M. Antei and Ch. Pauly. Université de Nice, July 2021.
- (3) Referee for the thesis of Rodrigo C. Cofré. Supervisor: M. Antei and Ch. Pauly. Université de Nice, June 2021.
- (4) Jury member for the thesis of Yuliang Huang. Supervisor: M. Romagny. Université de Rennes, September 2019.
- (5) Referee for the thesis of Yuliang Huang. Supervisor: M. Romagny. Université de Rennes 1. June 2019.
- (6) Jury member for the thesis of M.Lara. Supervisor: H. Esnault. Freie Universität Berlin. February 2019.
- (7) Referee for the thesis of M. Lara. Supervisor: H. Esnault. Free Universität Berlin. January 2019.
- (8) Referee for the thesis of R. Mammeri. Supervisor: N. Borne. Université de Lille. December 2016.
- (9) Jury member for the thesis of R. Mammeri. Supervisor: N. Borne. Université de Lille. December 2016.
- (10) Jury member for the thesis of G. Zalamansky. Supervisor: M. Romagny. Université de Paris 6. July 2015.

Supervision of Master dissertations.

- (1) Milan Berger-Guesnau, *The Cartier transform and Higgs fields.* University of Marseille. June 2022.
- (2) Marwan Benyoussef, *On the Hitchin morphism in positive characteristic.* Sorbonne Université. Paris, France. June 2020. (Ph.D. candidate in Berlin, Germany.)
- (3) Archia Ghiasabadi, *Groupe fondamental en géométrie algébrique et théorème de pureté.* (The fundamental group in algebraic geometry and the purity theorem.) Sorbonne Université 2019. Paris, France. (Ph.D. candidate in Strasbourg, France.)

- (4) Hugo Bay-Rousson, *Étude de la nilpotence de la connexion de Gauss-Manin*. (Study on the nilpotence of the Gauss-Manin connection.) University of Paris 6, 2015. (Ph.D. from the Sorbonne Université, Paris, France.)
- (5) Manuel M. Angulo, *The Gauss-Manin connection in the de Rham cohomology sheaves*. University of Paris 6, 2013. (Ph.D. from the University of Ghent, Belgium.)
- (6) Ines Pinto, *the Hilbert scheme of curves in \mathbb{P}^3* . University of Paris 6, 2012–13. (Abandoned.)
- (7) Ivan Barrientos, *The Gauss-Manin connection and regular singular points*. University of Paris 11 (ALGANT), 2009. (Ph.D. from the University of Regensburg, Germany.)

Teaching record

Production of teaching material for graduates and undergraduates. All texts are available here.

- (1) Lecture notes on “*Algebra, Geometry and Computations (Plane Algebraic Curves)*”. 2022.
- (2) Exercices for “*Algebra, Geometry and Computations (Plane Algebraic Curves)*”. 2022.
- (3) Lecture notes on “*Groups and Rings 2*”. 2022.
- (4) Exercices for “*Groups and Rings 2*”. 2022.
- (5) Exercices with solutions on “*Algebraic Number Theory*”. 2020. 40 pages.
- (6) Lecture notes on “*Groupes and representations*”. 2021. 70 pages.
- (7) Lectures notes on “*Series and series of functions*”. 2019. 77 pages.
- (8) Exercices on “*Series and series of functions*”. 2019. 20 pages.
- (9) Lecture notes on “*Series of functions and one-parameter integrals*”. 2017, 2018, 2019. 92 + 92 + 90 pages.
- (10) Exercices for “*Series of functions and one-parameter integrals*”. 2018 et 2019.
- (11) Lecture notes on “*Elementary Differential Geometry*”. 2016. 71 pages.
- (12) Exercices for “*Elementary Differential Geometry*”. 2016. 20 pages.

- Year 2022/23**
- (1) January–May. Course organiser *Algebra, Geometry and Computations*, Master. University of Montpellier, Montpellier, France.
 - (2) January–May. Exercise classes *Algebra, Geometry and Computations*, Master. University of Montpellier, Montpellier, France.
 - (3) January–May. Course organiser *Groups and Rings 2*, 3rd year undergraduates. University of Montpellier, Montpellier, France.
 - (4) September–December. *Groups and Rings 2*, 3rd year undergraduates. University of Montpellier, Montpellier, France.
 - (5) September–December. Exercise classes *Linear Algebra III*. 2nd year undergraduates. University of Montpellier, Montpellier, France.
 - (6) Exercise classes *Analysis for the engineer*. 2nd year undergraduates. University of Montpellier, Montpellier, France.

- Year 2021/22**
- (1) January–May. Course organiser *Algebra, Geometry and Computations*, Master. University of Montpellier, Montpellier, France.
 - (2) January–May. Exercise classes *Algebra, Geometry and Computations*, Master. University of Montpellier, Montpellier, France.
 - (3) January–May. Course organiser *Groups and Rings 2*, 3rd year undergraduates. University of Montpellier, Montpellier, France.
 - (4) September–December. *Groups and Rings 2*, 3rd year undergraduates. University of Montpellier, Montpellier, France.
 - (5) September–December. Exercise classes *Linear Algebra III*. 2nd year undergraduates. University of Montpellier, Montpellier, France.

- (6) Exercise classes *Analysis for the engineer*. 2nd year undergraduates. University of Montpellier, Montpellier, France.
- Year 2020/21** (1) January–June. Course organiser *Groupes and representations*. Master. Sorbonne University, Paris, France.
 (2) March–June. Exercise classes for *Algebraic Number Theory*. Master. Sorbonne University, Paris, France.
- Year 2019/20** (1) January–June 2020. Course organiser *Groupes and representations*. Master. Sorbonne University, Paris, France.
 (2) March–June 2020. Exercise classes for *Algebraic Number Theory*. Master. Sorbonne University, Paris, France.
 (3) September–December 2019. Course organiser of *Series and series of functions*. 2nd year undergraduates. Sorbonne University, Paris, France.
 (4) September–December 2019. Exercise classes for *Series and series of functions*. 2nd year undergraduates. Sorbonne University, Paris, France.
 (5) September–December 2019. Exercise classes *Linear and bilinear Algebra*. 2nd year undergraduates. Sorbonne University, Paris, France.
- Year 2018/19** (1) January–June 2019. Course organiser of *Groupes and representations*. Master. Sorbonne University, Paris, France.
 (2) January–June 2019. Course organiser of *Series of functions and one-parameter integrals*, 2nd year undergraduates. Sorbonne University, Paris, France.
 (3) January–June 2019. Exercise classes for *Series of functions and one-parameter integrals*, Sorbonne University, Paris, France.
 (4) September–December 2018. Exercise classes for *Series and integrals for the engineer*, 2nd year undergraduates. Sorbonne University, Paris, France.
 (5) September–December 2018. Exercise classes for *Analysis and Algebra*, 1st year undergraduates, Sorbonne University, Paris, France.
- Year 2017/18** (1) January–June 2018. Course organiser for *Series of functions and one-parameter integrals*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 (2) January–June 2018. Exercise classes *Series of functions and one-parameter integrals*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 (3) January–June 2018. Exercise classes *Calcul matriciel*, 1st year undergraduates. University Pierre et Marie Curie, Paris, France.
 (4) September–December 2017. Exercise classes for *Series and integrals*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 (5) September–December 2017. Exercise classes for *Analysis and Algebra*, 1st year undergraduates. University Pierre et Marie Curie, Paris, France.
- Year 2016/17** (1) September–December 2016. Exercise classes for *Series and integrals*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 (2) September–December 2016. Exercise classes for *Permutation and isometry groups*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 (3) January–June 2017. Course organiser *Series of functions and one-parameter integrals*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
- Year 2015/16** (1) September–December 2015. Exercise classes for *Algebra*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
 (2) September–December 2015. Exercise classes for *Series and integrals*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.

- (3) January–Mai 2016. Exercise classes *Curves and surfaces*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (4) January–Mai 2016. Exercise classes *Algebra*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (5) January–Mai 2016. Exercise classes *Series and integrals*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
- Year 2014/15**
- (1) January–Mai 2015. Course organiser *Complements for Analysis and Algebra*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (2) January–Mai 2015. Exercise classes *Series and integrals*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (3) January–Mai 2015. Exercise classes *Algebra 2*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
- Year 2013/14**
- (1) September–December 2013. Exercise classes *Topology and Differential Calculus*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (2) September–December 2013. Exercise classes *Algebra 1*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (3) January–Mai. Course organiser *Elementary Differential Geometry*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (4) January–Mai. Exercise classes *Elementary Differential Geometry*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
- Year 2012/13**
- (1) January–Mai. Course organiser *Elementary Differential Geometry*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (2) January–Mai. Exercise classes *Elementary Differential Geometry*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
- Year 2011/12**
- (1) September–December. Exercise classes du cours *Arithmetic*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (2) January–February. Exercise classes du cours *Algebraic Geometry II*, Master. University Pierre et Marie Curie, Paris, France.
 - (3) February–June. Course organiser *Elementary Differential Geometry*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (4) February–June. Exercise classes *Elementary Differential Geometry*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (5) February–June. Distance teaching. *Elementary Differential Geometry*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
- Year 2010/11**
- (1) October–June: Distant teaching *Arithmetic*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (2) September–December. Exercise classes *Arithmetic*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (3) January–February: Exercise classes *Algebraic Geometry II*, Master. University Pierre et Marie Curie, Paris, France.
 - (4) February–June. Course organiser *Elementary Differential Geometry*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (5) June: Cours *Algebraic geometry with a shade of differential* for the Sino-French Conference in Tianjin, China.
- Year 2009/10**
- (1) September–December: Exercise classes *Arithmetic*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
 - (2) January–February: Exercise classes du cours *Algebraic Geometry II*, Master. University Pierre et Marie Curie, Paris, France.
 - (3) February–June: Exercise classes *Elementary Differential Geometry*, 3rd year undergraduates. University Pierre et Marie Curie, Paris, France.

- Year 2008/09** (1) September–December: Exercise classes *Arithmetic*, 2nd year undergraduates. University Pierre et Marie Curie, Paris, France.
- (2) February–June: Exercise classes *Introduction to functions*, 1st year undergraduates. University Pierre et Marie Curie, Paris, France.
- Year 2002** (1) January 2002. Modular forms, IMPA, Rio de Janeiro, Brazil.
- (2) January 2002. Exercise classes *Introduction to Number Theory*, IMPA, Rio de Janeiro, Brazil.

General interest activities

- (1) Organiser of the *International School Algebraic Geometry and Algebraic Groups* for Vietnamese and East-Asian students. Hanoi, October 2022. In collaboration with M. Brion (Grenoble) and P. H. Hai (Hanoi).
- (2) Organiser of the *International School on Algebraic Geometry and Algebraic Groups* for Vietnamese and East-Asian students. Online event, November 2021.
- (3) Organiser of the Number Theory seminar of the Institute of Mathematics of Jussieu, Paris, France. September 2019 to July 2021.
- (4) Member of the jury of the *Agrégation de Mathématiques*: Session of 2018/9 and 2022/3.
- (5) Research in Paris “Galois groups of differential equations”. Institute Henri Poincaré, Paris, France. March 2018. (Research meeting.)
- (6) Organiser of the workshop “Fundamental group schemes in Arithmetic Geometry” in Tuan Chau, Vietnam. May 2017.
- (7) Member of the hiring committee for associate professors. University Pierre and Marie Curie, Paris, France. 2011 to 2014.