



Bruno Duchesne

Identification

Situation

Position Full Professor
Hiring date September 2021
University Paris-Saclay University
Institution Orsay Mathematical Institute & Orsay University Technology Institute

Civil status

Birth date February 9, 1983.
Nationality French.
Family Married and father of two daughters.

Curriculum Vitae

Since Sept. 2021 Full professor of mathematics
2012-2021 Associate Professor at Élie Cartan Institute, University of Lorraine
2011-2012 Post-Doc with a starting grant from the Swiss National Science Foundation. Hebrew University at Jerusalem.
2011 Ph.D. thesis. Defense on July 15, 2011.
2007-2011 Teaching assistant at mathematics department of University of Geneva.

Publications

References

- [BDL16a] Uri Bader, Bruno Duchesne, and Jean Lécureux. Amenable invariant random subgroups. *Israel J. Math.*, 213(1):399–422, 2016. Avec un appendice de Phillip Wesolek.
- [BDL16b] Uri Bader, Bruno Duchesne, and Jean Lécureux. Furstenberg maps for CAT(0) targets of finite telescopic dimension. *Ergodic Theory Dynam. Systems*, 36(6):1723–1742, 2016.
- [BDL17] Uri Bader, Bruno Duchesne, and Jean Lécureux. Almost algebraic actions of algebraic groups and applications to algebraic representations. *Groups Geom. Dyn.*, 11(2):705–738, 2017.

- [DGLL15] Bruno Duchesne, Yair Glasner, Nir Lazarovich, and Jean Lécureux. Geometric density for invariant random subgroups of groups acting on $CAT(0)$ spaces. *Geom. Dedicata*, 175:249–256, 2015.
- [DLP18] Bruno Duchesne, Jean Lécureux, and Maria Beatrice Pozzetti. Boundary maps and maximal representations on infinite dimensional hermitian symmetric spaces. *Ergodic Theory Dynam. Systems*, 2018, 1810.10208. Seconde soumission après demande de modifications mineures.
- [DM18] Bruno Duchesne and Nicolas Monod. Group actions on dendrites and curves. *Ann. Inst. Fourier (Grenoble)*, 68(5):2277–2309, 2018.
- [DM19] Bruno Duchesne and Nicolas Monod. Structural properties of dendrite groups. *Trans. Amer. Math. Soc.*, 371(3):1925–1949, 2019.
- [DMW19] Bruno Duchesne, Nicolas Monod, and Phillip Wesolek. Kaleidoscopic groups: permutation groups constructed from dendrite homeomorphisms. *Fund. Math.*, 247(3):229–274, 2019.
- [DTDW19] Bruno Duchesne, Robin Tucker-Drob, and Phillip Wesolek. $CAT(0)$ cube complexes and inner amenability. *Groups Geom. Dyn.*, 2019, 1903.01596. Accepté pour publication.
- [DTDW20] Bruno Duchesne, Robin Tucker-Drob, and Phillip Wesolek. A new lattice invariant for lattices in totally disconnected locally compact groups. *Israel J. Math.*, 240(2):539–565, 2020.
- [Duc13] Bruno Duchesne. Infinite-dimensional nonpositively curved symmetric spaces of finite rank. *Int. Math. Res. Not. IMRN*, (7):1578–1627, 2013.
- [Duc15a] Bruno Duchesne. Infinite dimensional Riemannian symmetric spaces with fixed-sign curvature operator. *Ann. Inst. Fourier (Grenoble)*, 65(1):211–244, 2015.
- [Duc15b] Bruno Duchesne. Superrigidity in infinite dimension and finite rank via harmonic maps. *Groups Geom. Dyn.*, 9(1):133–148, 2015.
- [Duc18] Bruno Duchesne. Groups acting on spaces of non-positive curvature. In *Handbook of group actions. Vol. III*, volume 40 of *Adv. Lect. Math. (ALM)*, pages 101–141. Int. Press, Somerville, MA, 2018.
- [Duc19] Bruno Duchesne. Representations of infinite dimension orthogonal groups of quadratic forms with finite index. *Ann. Fac. Sci. Toulouse Math.*, 2019, 1907.09803. Seconde soumission après rapport positif, arXiv:1907.09803.
- [Duc20a] Bruno Duchesne. A group with property (T) acting on the circle. 2020, 2011.12861. Soumis, arXiv:2011.12861.
- [Duc20b] Bruno Duchesne. The Polish topology of the isometry group of the infinite dimensional hyperbolic space. 2020, 2005.12204. Soumis, arXiv:2005.12204.
- [Duc20c] Bruno Duchesne. Topological properties of Ważewski dendrite groups. *J. Éc. polytech. Math.*, 7:431–477, 2020.

Research talks since 2012

Conference talks

- 30 May-3 June 2022 **Self-similarity in groups and group actions**, *IHP*, Paris.
Invited talk
- 24-28 August 2020 **From local to global structure**, *Centre Bernoulli*, Lausanne.
Invited talk cancelled
- 18-22 May 2020 **Geometry and Polish groups**, *CIRM*, Luminy.
Invited talk cancelled
- 28 July-2 August 2019 **Summer school "Into the forest"**, *Technion*, Haifa, Israel.
Mini-cours de 3h
- 24-28 June 2019 **Rigidity**, *Banach Center*, Warsaw.
Invited talk
- 14-18 May 2018 **Rencontre autour des IRS de l'ANR AGIRA**, *Sète*.
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- 16-20 Octobre 2017 **Rencontre ANR GAMME**, *Les Plantiers*.
Mini-course on groups of dendrites.
- 11-16 June 2017 **Structure and Geometry of Polish groups**, *Oaxaca*, Mexique.
Invited talk
- 20-24 March 2017 **Young Geometric Group Theory VI**, *Oxford*, Angleterre.
Invited talk
- 13-17 March 2017 **Groups in les Diablerets**, *Les Diablerets*, Suisse.
Invited talk
- 9-13 January 2017 **Non-Positive Curvature in Action**, *Newton Institute*, Cambridge.
Invited talk
- 23-27 May 2016 **Polish groups**, *Sde Boker*, Israël.
Mini-course 5h
- 9-12 Nov. 2015 **Geometric and probabilistic methods in group theory and dynamics**, *Texas A&M*, USA.
- 8-15 Sept. 2015 **Group actions and metric embeddings**, *Kyoto University*, Japon.
Invited talk
- 30 March-6 April 2014 **Arbeitsgemeinschaft : Superrigidity**, *MFO*, Oberwolfach.
- 6-8 Decembre 2012 **Arbre de Noël du GDR Géométrie Non Commutative**, *Université de Lorraine*, Metz.
- 28 May 2012 **The 2012 Meeting of the Israel Mathematical Union**, *Topology and Geometry session*, Bar-Ilan University.
- 26-30 March 2012 **CAT(0) conference**, *Les Diablerets*, Suisse.
Invited talk
- [Seminar talks](#)
- 6 April 2022 **Séminaire de dynamique**, *LAGA*, Paris.
- 4 Oct. 2021 **Séminaire de logique**, *ICJ*, Lyon.
- 16 Sept. 2021 **Séminaire Géométrie Topologie Dynamique**, *IMO*, Orsay.
- 25 March. 2021 **Séminaire d'algèbre d'opérateurs**, *IMJ*, Paris.

- 11 Fev. 2021 **Séminaire francophone de groupes et géométrie**, *Online*.
- 13 Jan. 2021 **Weizmann Midrasha**, *Weizmann Institute*, Rehovot, Israel.
- 7 Dec. 2020 **Séminaire de géométrie**, *IMJ*, Paris.
- 21 Nov. 2020 **Séminaire de géométrie**, *IECL*, Nancy.
- 5 Nov. 2020 **Séminaire de logique**, *Institut Camille Jordan*, Lyon, postponed.
- 22 Oct. 2020 **Séminaire Géométrie Topologie Dynamique**, *LMO*, Orsay.
- 19 Oct. 2020 **Séminaire Théorie ergodique**, *Irmar*, Rennes.
- 4 May 2020 **Séminaire international de Géométrie et dynamique**, *Zoom*.
- 19 March 2020 **Séminaire algèbre, topologie et géométrie**, *LJAD*, Nice, cancelled.
- 22 Oct. 2019 **Séminaire du département de mathématiques**, *LMR*, Reims.
- 12 April 2019 **Séminaire géométries**, *IMB*, Bordeaux.
- 1 April 2019 **Séminaire Géométrie et applications**, *IRMA*, Strasbourg.
- 21 March 2019 **Ergodic and Geometric Group theory seminar**, *EPFL*, Suisse.
- 18 Oct. 2018 **Geometry Seminar**, *Dresden*, Allemagne.
- 29 August 2018 **Groups & Dynamics Seminar**, *Texas A&M*, USA.
- 25 June 2018 **Journée Groupes en Action et Action en Géométrie**, *Nancy*.
- 27 Feb. 2018 **Group Theory Seminar**, *Binghamton University*, USA.
- 8 Jan. 2018 **Séminaire de Géométrie et Topologie**, *Luxembourg*.
- 3 April 2017 **Séminaire de Théorie des groupes**, *Louvain-la-Neuve*, Belgique.
- 17 Nov. 2016 **Seminario Guillermo Torres de Geometría y Topología**, *Mexico*.
- 24 Oct. 2016 **Colloquium of the graduate school**, *Karlsruhe*, Allemagne.
- 7 Oct. 2016 **Groupe de travail Groupes et Géométrie**, *Orsay*.
- 7 May 2016 **Séminaire de Géométrie et Topologie**, *Toulouse*.
- 19 June 2015 **Séminaire Gaston Darboux**, *Montpellier*.
- 26 jan.2015 **Séminaire de Géométrie**, *Strasbourg*.
- 11 Nov. 2014 **Séminaire Groupes et Géométrie**, *Genève*.
- 13 March 2014 **Action Now Wandering Seminar**, *Technion*, Haïfa, Israël.
- 24 May 2013 **Séminaire de géométrie**, *Nantes*.
- 11 Feb. 2013 **Séminaire GT3**, *Strasbourg*.
- 5 Nov. 2012 **Séminaire de théorie ergodique**, *Rennes*.
- 28 Sept. 2012 **Séminaire de théorie géométrique des groupes**, *Orsay*.
- 7 June 2012 **Groups and Dynamics Seminar**, *Einstein Insitute*, Jerusalem.
- 5 April 2012 **Oberseminar Geometrie**, *Mathematik Department*, Fribourg.
- 4 April 2012 **Séminaire de Théorie spectrale et Géométrie**, *IF*, Grenoble.
- 30 March 2012 **Séminaire Géométries**, *Institut Camille Jordan*, Lyon.

- 22 March 2012 **Geometry and Topology seminar**, *Technion*, Haïfa.
- 15 March 2012 **Groups and Dynamics seminar**, *Einstein Institute*, Jérusalem.
- 13 Feb. 2012 **Boundary Working Seminar**, *Technion*, Haïfa.
[Research stays](#)
- August 2018 Texas A& M, invited by Robin Tucker-Drob
- Febrier 2018 Binghamton University, invited by Philipp Wesolek
- Nov. 2016 Mexico University, invited by Pierre Py
- March 2014 Technion, Israël, invited by Uri Bader
- March 2012 EPFL, Suisse, invited by Nicolas Monod.

Organisation of mathematical meetings

- September 2021 *Groupes et courbure négative* at Kleebach in Alsace with Pierre Py. Meeting of the ANR AGIRA project.
- May 2020 *Congrès de la Société Mathématique de France*. cancelled.
- February 2020 *Young Geometric Group Theory IX* in Saint-Jacut-de-la-mer with Talia Fernos and Rémi Coulon.
- November 2019 *Paroles aux jeunes chercheuses et chercheurs en Géométrie, Groupes et Dynamique* with Ana Rechtman, Barbara Schapira and Nicolas Tholozan. .
- January 2019 Master Class *Groups and Geometries* in CIRM with Thomas Haettel.
- December 2018 *Journée Nancéiennes de Géométrie* with Jeremy Daniel.
- September 2018 Journée d'accueil des nouveaux membres de l'institut Élie Cartan et exposés sur les travaux des médaillés Fields.
- May 2018 Rencontre autour des IRS ANR AGIRA in Lazaret.
- March 2018 Congrès MATH.en.JEANS 2018 for Grand-Est area, Belgium and Luxembourg in Nancy. 480 participants.
- February 2017 First meeting of ANR AGIRA project in Lazaret.
- September 2016 Journée de rentrée de l'Institut Élie Cartan. Exposés des nouvelles recrues.
- May 2016 *Du nombre d'Avogadro à Google..*
- August 2015 *Non-Positive Curvature & Infinite Dimension*.
- September 2014 *Journée de rentrée de l'Institut Élie Cartan* et exposés sur les travaux des médaillés Fields avec Renata Bunoiu.

Referee for mathematical journals

Referee for the following journals: *GAGA*, *Geometry, Groups and Dynamics* (3 times), *Monatshefte für Mathematik*, *Expositiones Mathematicae*, *Bulletin of the American Mathematical Society*, *L'enseignement mathématique*, *Journal of Functional Analysis*, *Journal of Symbolic logic*, *Mathematische Zeitschrift* (2 times), *Geometriae Dedicata* (2 times), *Differential Geometry and its applications*, *Israel Journal of Mathematics* (2 times), *Journal of Topology and Analysis*, *Mathematische Annalen*

(2 times), *Journal of Fixed Point Theory and Applications*, *AMS Contemporary Mathematics*, *Archiv der Mathematik*, *Journal of the Japan Mathematical Society*, *Bulletin of the Australian Mathematical Society*, *IMRN* et *Journal de l'Institut Mathématique de Jussieu*.