

Name: **VALLES JEAN**
Date of birth: 31/05/1967
Place of birth: Auch (France)
Position: Maître de conférences
Belonging affiliation: Université de Pau et des Pays de l'Adour (UPPA)
Laboratoire de mathématiques et leurs applications (LMA)
Avenue de l'université, 64000 Pau

Personal address:
7, rue abbé Brémond
64000 Pau
France

jean.valles@univ-pau.fr
<http://jvalles.perso.univ-pau.fr/>

Qualifications

- 06/2010 Habilitation à Diriger des Recherches (jury of the HDR : E. Arrondo (referee), J. Cresson, L. Gruson (referee) I. Dolgachev (referee), G. Ottaviani (referee), C. Peskine, C. Sorger).
- 07/1996 PHD Thesis at Paris 6 University (advisor: Ch. Peskine).

Jobs

- Maître de conférences, Pau University (UPPA) since 2005.
- 2007-2008 One year position at the CNRS (six month in Firenze).
- Maître de conférences, Versailles University from 1998 to 2005.

Administrative responsibilities

- Leader of the UPPA's Algebra and Geometry team (until 2018).
- Member of the laboratory council (until 2019).
- Member of the "commission d'experts".
- PHD advisor of B. Guerville (title : "Topological invariants of line arrangements") with Florens (UPPA) and Artal (Univ. Saragosse).
- PHD advisor of J. Ortigas (title : "Algebraic and Topological Invariants of Curves and Surfaces with Quotient Singularities ") with Florens and Cogolludo (Univ. Saragosse).
- Member of the GDR 3064 of CNRS (Géométrie Algébrique et géométrie Complexe).
- Member of the ANR project *INTERLOW* (Intersection in low dimensional topology and invariants of algebraic varieties, (2009-2013)).
- Local responsible of the ANR project *GEOLMI* (Geometry and Algebra of Linear Matrix Inequalities with Systems Control Applications), general leader: D. Henrion (2011-2015).
- Leader (french side) of the SAKURA-Campus France project 2014-2016.
- Member of the project Capes-Cofecub (41928WJ Campus-France) "Espaces de modules en géométrie algébrique et applications" (2019-2022).
- Member of the pre-project ANR-JaZy "Jacobian syZygies of projective hypersurfaces".
- Member of the project ANR-BRIDGES "Brazil-France interplays in Gauge Theory, extremal structures and stability" (ANR-21-CE40-0017-05).

- Member of the project Math-Am-Sud GSMS 21-MATH-06 “Special geometries and moduli spaces” (2021-2022).

Research activities

Publications

1. *New examples of free projective curves* with Wayne NG Kwing King, Rend. Istit. Mat. Univ. Trieste, Volume 54, (2022), 17 pages.
2. *On invariant rank two vector bundles on \mathbb{P}^2* with Simone Marchesi, accepted for publication in Publicacions Matemàtiques (arxiv:2010.06506)
3. *Nearly free curves and arrangements: a vector bundle point of view* with Simone Marchesi, Mathematical Proceedings of the Cambridge Philosophical Society , Volume 170 , Issue 1 , January 2021 , 51–74.
4. *Triple planes with $p_g = q = 0$* with Daniele Faenzi and Francesco Polizzi Trans. Amer. Math. Soc. 371 (2019), no. 1, 589–639.
5. *Logarithmic bundles of deformed Weyl arrangements of type A_2* , with Takuro Abe and Daniele Faenzi, BSMF 144, fascicule 4 (2016), 745–761.
6. *Free divisors in a pencil of curves*, Journal of Singularities, 11, (2015), 190–197
7. Preface of the special volume devoted to the meeting “Vector bundles days”, Rend. Istit. Mat. Univ. Trieste, 47, (2015).
8. *Logarithmic bundles and Line arrangements, an approach via the standard construction* (with D. Faenzi), J. Lond. Math. Soc. (2) 90 (2014), no. 3, 675–694.
9. *À propos des variétés de Poncelet*, Monografías Matemáticas García de Galdeano 39, 215–222 (2014).
10. *Singular hypersurfaces characterizing the Lefschetz properties* (with Roberta Di Gennaro and Giovanna Ilardi), J. London Math. Soc. (2014) 89 (1):194–212.
11. *A vector bundle proof of Poncelet’s closure theorem*, Expo. Math. 30 (2012), no.4, 399–405.
12. *Freeness of line arrangements* (with D. Faenzi), Eleventh International Conference Zaragoza-Pau on Mathematics and Statistics, no.37 (2012) Prensas Univ. Zaragoza, Zaragoza.
13. *Hyperplane arrangements of Torelli type* (with D. Faenzi and D. Matei), Compositio Math., 149 (2013), no.2, 309–332.
14. *Fibrés de Schwarzenberger et fibrés logarithmiques généralisés*, Math. Z. 268 (2011), no.3-4, 1013–1023.
15. *Geometry of syzygies via Poncelet varieties* (with G. Ilardi and P. Supino), B.U.M.I., serie XI (2009), vol.II, no.3, 579–589.
16. *Fibrés vectoriels de rang deux sur \mathbb{P}^2 provenant d’un revêtement double*, Ann. Inst. Fourier 59 (2009), no.5, 1897–1916.
17. *Hyperdéterminant d’un SL_2 -homomorphisme*, Ann. Math. Blaise Pascal 15 (2008), no.1, 81–86.

18. *Fibrés logarithmiques sur le plan projectif*, Ann. Fac. Sci. Toulouse Math. (6) 16 (2007), no.2, 385–395.
19. *Variétés de type Togliatti*, C.R.A.S. 343 (2006), no.6, 411–414.
20. *Porisme de Poncelet et coniques de saut*, C.R.A.S. Math. 333 (2001), no.6, 567–570.
21. *Nombre maximal d’hyperplans instables pour un fibré de Steiner*, Math. Z. 233 (2000), no.3, 507–514.
22. *Fibrés de Schwarzenberger et coniques de droites sauteuses*, Bull. Soc. Math. France 128 (2000), no.3, 433–449.
23. *Complexes inattendus de droites de saut*, C.R.A.S. 321 (1995), no.1, 87–90.

Prepublications

1. *Generalized logarithmic sheaf on smooth projective surfaces* with Sukmoon Huh, Simone Marchesi, Joan Pons-Llopis.
2. *Logarithmic sheaves of complete intersections* with Daniele Faenzi and Marcos Jardim, arXiv:2106.14453
3. *Eight cubes of linear forms in \mathbb{P}^6* with Giovanna Ilardi, arXiv:1910.04035
4. *Terao’s conjecture for triangular arrangements* with Simone Marchesi, arXiv:1903.08885
5. *Quelques contributions à la classification des fibrés vectoriels sur les espaces projectifs complexes*, habilitation à diriger des recherches, hal : tel-00512155.
6. *Moduli of vector bundles and group action* (with G. Ottaviani).

Recent talks in seminars

- 10/2020 Invited speaker at the university of Marseille. Title of the seminar: *Arrangements de droites et de courbes. Diviseurs libres.*
- 05/2019 Invited speaker at the 27e National School of Algebra in Bucarest to give a 2h course about Hyperplane arrangement.
- 12/2018 Invited speaker at the XXV Brazilian Algebra Meeting, Campinas-UNICAMP (Brasil).
- 11/2018 Invited speaker at the Colóquio de Geometria e Aritmética at Rio de Janeiro. Title of the talk: *Logarithmic bundles and line arrangements, an approach via the standard construction.*
- 11/2018 Invited speaker at the workshop Geometry in Algebra and Algebra in Geometry IV à l’IME-USP in Sao-Paulo.
- 11/2018 Invited speaker at the 70e birthday of Israel Vaisencher at Belo Horizonte.
- 06/2018 Invited speaker at the conference “Matroid, reflection groups and free hyperplane arrangements” at the RIMS (Kyoto University). Title of the talk: *Lefschetz properties for artinian rings and line arrangements.*
- 06/2018 Invited speaker at the conference “Splitting, construction and stability of vector bundles and their applications” at the university of Kyushu (Fukuoka). Title of the talk: *Unexpected divisor of jumping lines.*
- 12/2017 *Nearly free curves and arrangements: a vector bundle point of view*, invited speaker to the meeting “Commutative algebra, Syzygies and Singularities” in Nice 4-9 december).
- 07/2017 Invited speaker to the meeting “Lefschetz Properties in Algebra, Geometry and Combinatorics” (Mittag-Leffler-Institute). Title of the talk: *Bundles associated to line arrangement and Lefschetz Properties.*
- 01/2017 Invited speaker at “Congreso Biental de la Real Sociedad Matemática Española”. Title

of the talk: *Singular hypersurfaces characterizing the Lefschetz properties.*

- 03/2016 Invited speaker to the workshop “Lefschetz Properties in Algebra” at BIRS (Banff). Title of the talk: *Singular hypersurfaces characterizing the Lefschetz properties.*

Last scientific reviews

- 03/2017 Reviewer of M. Bahtiti’s thesis (title: *Fibrés vectoriels algébriques de petit rang sur la variété projective \mathbb{P}^n* , University of Paris VI. Advisor: J.M. Drezet).
- 06/2014 Reviewer of P. Bailet’s thesis (title: *Arrangements d’hyperplans*, University of Nice. Advisor: A. Dimca).
- 06/2021 Member of Yanis Mabed’s thesis comitee at University of Nice. Title: *Diviseurs totalement invariants des endomorphismes non triviaux de l’espace projectif.*
- 09/2020 Member of Nasrin Altafi’s thesis comitee at KTH Intitute of technology, Stockholm. Title: *Lefschetz properties and Jordan types of Artinian algebras.*
- 03/2018 Member of Aline Vilela Andrade’s thesis comitee at Campinas UNICAMP. Title: *Moduli of Orthogonal Instanton Bundles on \mathbb{P}^n and their splitting type*
- Reviewer for Duke Mathematical Journal, Math Z., Journal de l’Ecole Polythecnique, Bulletin of the London Mathematical Society, I.R.M.N., Quarterly journal of Mathematics, Math. Nachrichten, Mathscinet., ...

Organisation of some recent events

- 07/2022 Organizer (with Iarrobino, Marques and Rossi) of a special session at “AMS-SMF-EMS Joint Internat. Meeting”, in Grenoble.
- 10/2021 Organizer (with Giovanna Ilardi) of the meeting *Algebraic geometry in Ischia* in honour of Alex Dimca’s retirement (<http://jvalles.perso.univ-pau.fr/ischia.html>). (30 participants).
- 09/2019 Organizer (with Alex Dimca and Rosa Miro-Roig) of the meeting *Lefschetz Properties in Algebra, Geometry and Combinatorics II*, at the CIRM Luminy (<https://conferences.cirm-math.fr/2073.html>).
- 09/2017 Organizer of the VIII-e meeting of Algebra and Geometry between Pau and Zaragoza.
- 09/2015 Organizer (with E. Artla) of “Geometry, Topology and Combinatorics of Hyperplane Arrangements” in Saragosse (25 participants).
- 01/2014 Organizer (with D. Faenzi, A. Boralevi and E. Mezzeti) of “VECTOR BUNDLES DAYS II” at Trieste University (50 participants).
- 04/2013 Organizer (with D. Faenzi, A. Boralevi and E. Mezzeti) of “VECTOR BUNDLES DAYS I” at Pau University (40 participants).
- 06/2012. Organizer (with D. Faenzi, V. Florens) of “ARRANGEMENTS IN PYRÉNÉES” (70 participants, one week).

International relations: Last stays out of France

- 11/2019 Three weeks at the university of (Brasil) with the project Capes-Cofecub (41928WJ Campus-France).
- 10/2019 Ten days at the university of Sungkyunkwan (Seoul). Invited by Sukmoon Huh.
- 05/2019 One week at the Mathematical Institute of Bucarest, financial support by AUF.
- 09-12/2018 Three months at the University of Campinas (Brasil), invitation by Simone Marchesi, financial support by FAPESP.
- 06/2018 Three weeks in Japan, invitation by Takuro Abe.

- 07/2017 One week at Mittag-Leffler Institute for a five days workshop “Lefschetz Properties and Artinian Algebras.”
- 03/2016 One week at Banff (BIRS) for a five days workshop “Lefschetz Properties and Artinian Algebras.”

PhD supervision

- Supervision of a master’s internship 2: Wayne Ng Kwing King about free varieties in a pencil.

Teaching : 2010-2020

- History of Mathematics (L2-L3-M1-M2).
- Algebra, linear algebra, Complex analysis, Differential calculus Licence (L3).
- Algebraic topology, Algebraic geometry, Commutative algebra, Master Research (M1).

Languages

- French: native language.
- English: almost fluent with a french accent.
- Italian: almost fluent with a french accent.

Interests

Sports: rugby (selected to play in French team at 18 years old), football, tennis.
Other interests: literature, history.