

# **PUBLICATIONS DE L'IHP**

# Annals (of the Institut) Henri Poincaré

Four renowned thematic international journals emerged from the original "Annales de l'Institut Henri Poincaré". They now belong to the Association des Publications de l'Institut Henri Poincaré.

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*Cover of the Annales de l'IHP first number* 

History of the annals

## Annals of the Institut Henri Poincaré

From 1930, IHP started its own journal, the *Annales de l'Institut Henri Poincaré*. Among the first authors were Einstein, Darwin, Fermi, De Donder, Pólya, Lévy, Kostitzin, Born, Brillouin, Bloc, Dirac, Carleman, etc. Aside them, contributors to the first years of the journal included: Birkhoff (the collaborator of É. Borel in the foundation of the IHP) in dynamic systems; the founders of the mathematical theory of probabilities (other than Lévy) Cantelli, de Finetti, von Mises; the philosopher Reichenbach, physicists Schrödinger, Pauli, Gamow, etc.

All issues have been digitized and are available on Numdam.org.

## Annales Henri Poincaré and Annales de l'IHP – B/C/D

The Annals of the Institut Henri Poincaré were split in 1964 into two thematic branches (corresponding to the two disciplines which motivated the founding of the institute in 1928): series A for **theoretical physics**, and series B for **probabilities and statistics**.

Twenty years later series C was created for **nonlinear analysis**.

In 2000 series A merged with Helvetica Physica Acta to give the Annales Henri Poincaré.

Finally in 2014 series D was created, dedicated to the theme:**combinatorics**, **physics and interactions**.

Thus the original Annales de l'Institut Henri Poincaré became the Annales Henri Poincaré, and the Annales de l'Institut Henri Poincaré B, C and D. They belong to the Association Publications de l'Institut Henri Poincaré, jointly with the Swiss Physical Society for the first title.



## Association Publications de l'Institut Henri Poincaré

In 1982, an association under the 1901 law was created entitled**Institut Henri Poincaré**, with the aim of "developing, animating and coordinating the outreach activities of mathematicians, among themselves and with the public".

In 1999 this association was renamed **Publications de l'Institut Henri Poincaré** (PIHP) and its goal became "to develop, animate and coordinate publishing activities in mathematics and physics, and to support the development of the Institut Henri Poincaré.

The PIHP association is traditionally chaired by the director of IHP.

URL of the page: https://www.ihp.fr/en/library/annals&is\_pdf=true



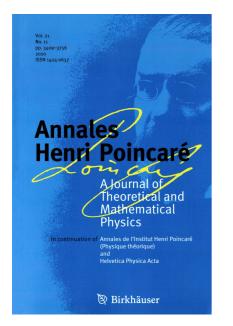
The non-for-profit Association Publications de l'IHP offers 5-year subscriptions free of charge to academic libraries in developing countries to the *Annales de l'Institut Henri Poincaré* series *C* and *D*, published by EMS Press.

Applications are currently closed.

## Annals in detail

To learn more about each journal, see the drop-down blocks below.

# Annales Henri Poincaré - A Journal of Theoretical and Mathematical Physics



Publisher: Birkhäuser

Editor-in-chief: Claude-Alain Pillet

ISSN 1424-0637 (paper) - ISSN 1424-0661 (online)

The two journals Annales de l'Institut Henri Poincaré, physique théorique and Helvetica *Physical Acta* merged into a single new journal under the nameAnnales Henri Poincaré - A *Journal of Theoretical and Mathematical Physics* edited jointly by the Institut Henri Poincaré and by the Swiss Physical Society.

URL of the page: https://www.ihp.fr/en/library/annals&is\_pdf=true The goal of the journal is to serve the international scientific community in theoretical and mathematical physics by collecting and publishing original research papers meeting the highest professional standards in the field. The emphasis will be on analytical theoretical and mathematical physics in a broad sense.

The journal is organized into eighteen sections:

- Algebraic Quantum Field Theory
- Conformal Field Theory
- Constructive Field Theory
- Dynamical Systems
- Equilibrium and Nonequilibrium Statistical Mechanics
- General Relativity and Geometric Partial Differential Equations
- Integrable Probability and Random Matrices
- Integrable Systems
- Mathematical Condensed Matter Theory
- Nonlinear Partial Differential Equations in Mathematical Physics
- Perturbative Quantum Field Theory
- Quantum Chaos
- Quantum Dynamics
- Quantum Gravity
- Quantum Information
- Spectral, Scattering and Semi-Classical Analysis
- Statics and Dynamics of Disordered Systems
- String Theory

Journal homepage on the publisher's site

# Annales de l'Institut Henri Poincaré B - Probability and Statistics



Publisher: Institute of Mathematical Statistics

Editors-in-chief: Giambattista Giacomin and Yueyun Hu

ISSN 0246-0203 (paper) - ISSN 1778-7017 (online)

The Probability and Statistics section of the Annales de l'Institut Henri Poincaré is an international journal which publishes high quality research papers. The journal deals with all aspects of modern probability theory and mathematical statistics, as well as with their applications.

Journal homepage on the publisher's site

Issues from 1964 to 2015 are available in open access on<u>Numdam.org</u>



Publisher: EMS Press

Editors-in-chief: Anne-Laure Dalibard and Mathieu Lewin

ISSN 0294-1449 (paper) - ISSN 1873-1430 (online)

The Nonlinear Analysis section of the Annales de l'Institut Henri Poincaré is an international journal created in 1983 which publishes original and high quality research articles. It concentrates on all domains concerned with nonlinear analysis, specially applicable to PDE, mechanics, physics, economy, without overlooking the numerical aspects.

Journal homepage on the publisher's site

Issues from 1984 to 2017 are available in open access on Numdam.org.

# Annales de l'Institut Henri Poincaré D - Combinatorics, Physics and their Interactions



Publisher: EMS Press

#### Editors-in-chief: Alan Sokal and Adrian Tanasă

## ISSN 2308-5827 (paper) - ISSN 2308-5835 (online)

The unfolding of new ideas in physics is often tied to the development of new combinatorial methods, and conversely some problems in combinatorics have been successfully attacked using methods inspired by statistical physics or quantum field theory.

The journal is dedicated to publishing high-quality original research articles and survey articles in which combinatorics and physics interact in both directions. Combinatorial papers should be motivated by potential applications to physical phenomena or models, while physics papers should contain some interesting combinatorial development.

Both rigorous mathematical proof and heuristic physical reasoning have a place in this journal, but each must be clearly labeled. Definitions and proofs should be presented with the precision and rigor that are expected in a mathematics journal. Conjectures based on heuristic physical arguments and/or numerical evidence are warmly encouraged, but they should be clearly labeled as such and should be stated as precisely as possible.

Authors should remember that readers of the journal will come from a wide variety of backgrounds, both mathematical (not only combinatorics but also algebra, topology, geometry, analysis, probability, etc) and physical (quantum field theory, statistical mechanics, quantum gravity etc). Therefore, authors should write with such a diverse audience in mind and should take care to provide, in the introductory section of their article, a clear statement of the problem to be studied and the mathematical and/or physical background from which it arises. Authors are also encouraged to provide, in the second section of the article, a brief pedagogical review of the mathematical or physical tools that will be used in their work.

The list of specific subject areas in which articles are anticipated includes:

- Combinatorics of renormalization
- · Combinatorics of cluster, virial and related expansions
- Discrete geometry and combinatorics of quantum gravity
- Graph polynomials and statistical-mechanics models
- Topological graph polynomials and quantum field theory
- Physical applications of combinatorial Hopf algebras, matroids, combinatorial species, and other combinatorial structures
- Exact solutions of statistical-mechanical models
- Combinatorics and algebra of integrable systems
- Computational complexity and its relation with statistical physics
- Computational/algorithmic aspects of combinatorial physics
- Interactions of combinatorial physics with topology, geometry, probability theory, or computer science

### Journal homepage on the publisher's site

## Annals prizes

Each year, editorial boards of Annals A, B and C award a prize which recognizes the most outstanding article(s) published in their respective journals.

# **AHP Prize**

The latest awarded article is available for free online for one year.

- 2021: Sven Bachmann, Wojciech De Roeck, Martin Fraas, and Markus Lange for the article *Exactness of Linear Response in the Quantum Hall Effect*
- **2020**: Benjamin Doyon and Jason Myers for the article *Fluctuations in Ballistic Transport from Euler Hydrodynamics*
- 2019: Mischa P. Woods, Ralph Silva and Jonathan Oppenheim for the article *Autonomous Quantum Machines and Finite-Sized Clocks*
- 2018: Marius Junge, Renato Renner, David Sutter, Mark M. Wilde and Andreas Winter for the article <u>Universal Recovery Maps and Approximate Sufficiency of Quantum Relative</u> <u>Entropy</u>
- 2017: Johannes Bausch, Toby Cubitt and Maris Ozols for the article <u>The Complexity of</u> <u>Translationally Invariant Spin Chains with Low Local Dimension</u>
- 2016: Sven Bachmann, Wojciech Dybalski and Pieter Naaijkens for the article <u>Lieb-</u> <u>Robinson Bounds, Arveson Spectrum and Haag-Ruelle Scattering Theory for Gapped</u> <u>Quantum Spin System</u>
- 2015: Ira Herbst and Juliane Rama for the article *Instability of Pre-Existing Resonances* <u>Under a Small Constant Electric Field</u>
- 2014: David Damanik, Jake Fillman and Anton Gorodetski for the article <u>Continuum</u> <u>Schrödinger Operators Associated With Aperiodic Subshifts</u>
- 2013: Dean Baskin for the article *Strichartz Estimates on Asymptotically de Sitter Spaces*
- 2012: Semyon Dyatlov for the article <u>Asymptotic Distribution of Quasi-Normal Modes for</u> <u>Kerr-de Sitter Black Holes</u>
- 2011: László Erdős and Antti Knowles for the article <u>Quantum Diffusion and</u> <u>Delocalization for Band Matrices with General Distribution</u>
- **2010**: J.-M. Barbaroux, T. Chen, V. Vougalter and S. Vugalter for the article <u>Quantitative</u> <u>Estimates on the Binding Energy for Hydrogen in Non-Relativistic QED</u>
- 2009: D. Dolgopyat and B. Fayad for the article <u>Unbounded Orbits for Semicircular Outer</u> <u>Billiard</u>
- 2008: P. Bálint and I. P. Tóth for the article *Exponential Decay of Correlations in Multi-Dimensional Dispersing Billiards*
- 2007: Fabien Vignes-Tourneret for the article <u>Renormalization of the Orientable Non-</u> <u>commutative Gross-Neveu Model</u>
- 2006: Giuseppe Benfatto, Alessandro Giuliani and Vieri Mastropietro for the article <u>Fermi</u> <u>Liquid Behavior in the 2D Hubbard Model at Low Temperatures</u>
- 2005: Alexander V. Sobolev for the article <u>Integrated Density of States for the Periodic</u> <u>Schrödinger Operator in Dimension Two</u>
- 2004: Nandor Simanyi for the article <u>Proof of the Ergodic Hypothesis for Typical Hard Ball</u> <u>Systems</u>
- 2003: Alessandro Pizzo for the article <u>One-particle (improper) States in Nelson's</u> <u>Massless Model</u>
- 2002: Lorenzo Bertini, Stella Brassesco, Paolo Buttà and Errico Presutti for the article Stochastic Phase Field Equations: Existence and Uniqueness

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- 2001: Galina Perelman for the article <u>On the Formation of Singularities in Solutions of the</u> <u>Critical Nonlinear Schrödinger Equation</u>
- 2000: Michael T. Anderson for the article <u>On the Structure of Solutions to the Static</u> <u>Vacuum Einstein Equations</u> as well as Gueorgui Popov for the article <u>Invariant Tori</u>, <u>Effective Stability</u>, and Quasimodes with Exponentially Small Error Terms

Prize page

AIHP B Prize

- 2020-2021: Roland Bauerschmidt, Tyler Helmuth and Andrew Swan for the article <u>The</u> <u>geometry of random walk isomorphism theorems</u> as well as Ismaël Castillo and Romain Mismer for the article <u>Spike and slab Pólya tree posterior densities: adaptive inference</u>
- 2018-2019: Omer Angel, Duncan Dauvergne, Alexander E. Holroyd and Bálint Virág for the article <u>The local limit of random sorting networks</u> as well as Włodzimierz Bryc and Yizao Wang for the article <u>Limit fluctuations for density of asymmetric simple exclusion</u> <u>processes with open boundaries</u>
- 2016-2017: Alessandro Giuliani, Vieri Mastropietro and Fabio Lucio Toninelli for the article <u>Height fluctuations in interacting dimers</u> as well as Y. Guivarc'h ans É. Le Page for the article <u>Spectral gap properties for linear random walks and Pareto's asymptotics for affine</u> <u>stochastic recursions</u>
- 2014-2015: Madaule Thomas for the article <u>Maximum of a log-correlated Gaussian field</u> as well as Gérard Biau, Frédéric Cérou and Arnaud Guyader for the article <u>New insights</u> <u>into Approximate bayesian Computation</u>
- 2012-2013: Kurt Johansson for the article <u>Universality for certain Hermitian Wigner</u> <u>matrices under weak moment conditions</u> as well as Hubert Lacoin for the article Superdiffusivity for Brownian Motion in a Poissonian potential with long range correlation <u>part I</u> and <u>part II</u>
- **2011**: Jiří Černý, Augusto Teixeira and David Windisch for the article <u>Giant vacant</u> <u>component left by a random walk in a random d-regular graph</u>
- 2010: Christina Goldschmidt and Bénédicte Haas for the article <u>Behavior near the</u> <u>extinction time in self-similar fragmentations I : The stable case</u>
- **2008**: N. Berger, M. Biskup, C.E. Hoffman and G. Kozma for the article <u>Anomalous heat-kernel decay for random walk among bounded random conductances</u> as well as Pierre Tarrès and Thomas Mountford for the article <u>An asymptotic result for Brownian polymers</u>
- 2007: Sunder Sethuraman for the article <u>On diffusivity of a tagged particle in asymmetric</u> <u>zero-range dynamics</u>
- 2006: Lucien Birgé for the article <u>Model selection via testing: an alternative to (penalized)</u> <u>maximum likelihood estimators</u>
- 2005: G. Morvai and B. Weiss for the article *Forward estimation for ergodic time series G* as well as L. Greenberg and D. loffe for the article <u>On an invariance principle for phase</u> <u>separation lines</u>
- 2003: Remco van der Hofstad and Gordon Slade for the article <u>Convergence of Critical</u> <u>Oriented Percolation to Super-Brownian Motion above 4 + 1 Dimensions</u> as well as Erwin Bolthausen, Alain-Sol Sznitman and Ofer Zeitouni for the article <u>Cut points and diffusive</u> <u>random walks in random environment</u>
- 2002: Raphaël Cerf and Agoston Pisztora for the article <u>Phase coexistence in Ising, Potts</u> <u>and percolation models</u>
- 2000: Timo Seppäläinen for the article <u>Strong law of large numbers for the interface in</u> <u>ballistic deposition</u>
- 1999: Carol Bezuidenhout and Geoffrey Grimmett for the article <u>A central limit theorem</u> for random walks in random labyrinths <u>Prize page</u>

# **AIHP C Prize**

All articles awarded since 2002 are available for free online.

- 2012-2013: Eugen Varvaruca and Georg S. Weiss for the article <u>The Stokes conjecture</u> for waves with vorticity as well as D. De Silva and J.M. Roquejoffre for the article <u>Regularity in a one-phase free boundary problem for the fractional Laplacian</u>
- 2011: Galina Perelman for the article <u>Two soliton collision for nonlinear Schrödinger</u> <u>equations in dimension 1</u>
- 2010: Nader Masmoudi and Kenji Nakanishi for the article <u>From the Klein–Gordon–</u> <u>Zakharov system to a singular nonlinear Schrödinger system</u>
- **2009**: Laure Saint-Raymond for the article <u>Hydrodynamic limits: some improvements of</u> <u>the relative entropy method</u>
- **2008**: Thomas Duyckaerts, Xu Zhang and Enrique Zuazua for the article <u>On the optimality</u> <u>of the observability inequalities for parabolic and hyperbolic systems with potentials</u>
- 2007: Anne de Bouard and Arnaud Debussche for the article <u>Random modulation of</u> <u>solitons for the stochastic Korteweg-de Vries equation</u>
- **2006**: Yvan Martel and Frank Merle for the article <u>Multi solitary waves for nonlinear</u> <u>Schrödinger equations</u>
- **2005**: M. Escobedo, S. Mischler and M. Rodriguez Ricard for the article <u>On self-similarity</u> <u>and stationary problem for fragmentation and coagulation models</u>
- 2004: N. Burq, P. Gérard and N. Tzvetkov for the article <u>On nonlinear Schrödinger</u> <u>equations in exterior domains</u>
- **2003**: B. Desjardins and E. Grenier for the article <u>Linear instability implies nonlinear</u> <u>instability for various types of viscous boundary layers</u>
- 2002: H. Zaag for the article <u>On the regularity of the blow-up set for semilinear heat</u> <u>equations</u>



# INSTITUT HENRI POINCARÉ

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## TIMETABLE

The institute:

- Monday to Friday from 8:30am to 6pm,
- closed on public holidays.

The museum - Maison Poincaré :

- Monday, Tuesday, Thursday and Friday from 9:30am to 5:30pm,
- Saturday from 10am to 6pm,
- closed on Wednesday and Sunday.