

Jean-Philippe Bouchaud
Capital Fund Management,
21 rue de l'Université, 75007 Paris

Curriculum Vitae

Background and education:

- Born 1962, in Boulogne-Billancourt (France)
- Studies at the French Lycée of London (1975-1979)
- Undergraduate and graduate studies at Ecole Normale Supérieure, Paris (1981-1985)
- D-Phil at the 'Laboratoire de Spectroscopie Hertzienne', Ecole Normale Supérieure, Paris (1985), on *Transport properties in spin-polarized quantum gases*; Advisor: Pr. Claire Lhuillier

Positions:

Present:

- Chairman and Chief Scientist of Capital Fund Management (since 2000), co-heading (with M. Potters) a research group of 60 PhDs.
- Member of the French "Académie des Sciences" since 2018
- Professor of "Complex Systems" at Ecole Normale Supérieure (since 2017)
- President of the "Fondation CFM pour la Recherche" (since 2009)

Past:

- CNRS Member (1985-1992)
- Compulsory Military Service at CEA-Limeil (1988-1989), worked on magnetic properties of materials.
- Scientific advisor at CEA-Limeil (1989-1992)
- Research associate at the Cavendish Laboratory (Cambridge) (1992-1993)
- Corpus Christi College Visiting Fellow (1992-1993)
- Research Engineer at CEA-Saclay (1993-96)
- Co-Founder of the company 'Science and Finance' (1994), merged with Capital Fund Management in 2000.
- Senior Expert at CEA-Saclay (1996-2006)

- Professor of Statistical Physics at ESPCI (2000-2008)
- Four-month visit at Harvard (2001), teaching two courses (Harvard & MIT)
- Co-Editor in Chief (with M. Dempster) of Quantitative Finance (2003-2012)
- Professor at Ecole Polytechnique (Statistical Physics & Complex Systems), 2009-2017
- Professor at College de France, Chaire Bettencourt de l'Innovation (2020-2021)

Prizes and honors:

- IBM 'Young Scientist' Prize (1990)
- C.N.R.S. Silver Medal (1996)
- Ordre National du Mérite (1999)
- Palmes Académiques (2001)
- « Quant of the Year » Risk award, in 2017 & 2018
- Onsager Prize (APS, 2024)
- Quant Researcher of the Year, Journal of Portfolio Management (2024)

PhD Students :

Advisor or co-advisor of 32 PhD students since 1992: P. Cizeau, Ph. Claudin, R. Cont, A. Baldassarri, M. Campellone, F. Selmi, A. Hasareeing, J. Lamarcq, B. Pochart, E. Bertin, M. Wyart, A. Andreanov, Th. Sarlat, Ch. Borghesi, R. Chicheportiche, R. Allez, T. Gueudré, J. Batista, J. Bun, J. Donier, J. Moran, A. Fosset, D. Sharma, Th. Dessertaine, F. Morelli, R. Morel, J. Garnier-Brun, K. Naumann-Woleske, M. Knicker, C. Aubrun, S. Elomari, N. Hey.

Recent scientific activities

- Quantitative Finance
- Theory of the Glass Transition
- Macroeconomics
- Random Matrix Theory

Books:

- *Théorie des Risques Financiers*, with M. Potters, Eyrolles (Paris) 1997
- *Theory of Financial Risks and Derivative Pricing*, with M. Potters, Cambridge University Press (2000 and 2003)

- *Lévy flights and Laser cooling*, with A. Aspect, F. Bardou, C. Cohen-Tannoudji, Cambridge University Press (2001)
- *Complex Systems*, Les Houches Lecture Notes (2006), Editor with M. Mézard, J. Dalibard, Elsevier (2008)
- *Dynamical heterogeneities in glasses, colloids, and granular media*, Editor with L. Berthier, G. Biroli, L. Cipelletti, W. van Saarloos, Oxford University Press (2010)
- *Trades, Quotes & Prices: Financial Markets under the Microscope*, with J. Bonart, J. Donier, M. Gould, Cambridge University Press (2018)
- *A First Course in Random Matrix Theory*, with M. Potters, Cambridge University Press (2021)

Review articles and book chapters:

- [Anomalous diffusion in disordered media: statistical mechanisms, models and physical applications](#)
JP Bouchaud, A Georges
Physics reports 195 (4), 127-293
- [Out of equilibrium dynamics in spin-glasses and other glassy systems](#)
JP Bouchaud, LF Cugliandolo, J Kurchan, M Mezard in “Spin Glasses and Random Fields”, A. P. Young Editor, World Scientific, 1997
- [Aging in glassy systems: new experiments, simple models, and open questions](#)
JP Bouchaud, in Soft and fragile matter, Edited by M. Cates, IOP Press, 2000
- [The random first-order transition theory of glasses: A critical assessment](#)
G Biroli, JP Bouchaud - Structural Glasses and Supercooled Liquids, V. Lubchenko and P. Wolynes 2012
- [How markets slowly digest changes in supply and demand](#)
JP Bouchaud, J Farmer, F Lillo, How Markets Slowly Digest Changes in Supply and Demand, in Handbook of financial markets: Dynamics and Evolution, by Th. Hens, K. Reiner Schenk-Hoppé, North Holland, 2009
- [The endogenous dynamics of markets: price impact, feedback loops and instabilities](#)
JP Bouchaud
Lessons from the Credit Crisis. A. Berd, Risk Publications, 2011
- [Financial applications of random matrix theory: a short review](#)
JP Bouchaud, M Potters in The Oxford Handbook of Random Matrix

Theory, Edited by G. Akemann, J. Baik, and Ph. Di Francesco, Oxford University Press, 2011

■ [Crises and Collective Socio-Economic Phenomena: Simple Models and Challenges](#)

JP Bouchaud, Journal of Statistical Physics, 1-40, 2013

■ [Price impact](#)

JP Bouchaud, Encyclopedia of Quantitative Finance, Wiley (2010)

Research articles:

Ca. 400 publications since 1984 in reviewed journals, in different fields (Statistical physics, Spin glasses & Glasses, Granular Matter, Random Matrix Theory, Theoretical Finance & Economics). H-index according to Google Scholar: **107**

Ten most cited research articles (ex. Review articles and books):

[Noise dressing of financial correlation matrices](#)

L Laloux, P Cizeau, JP Bouchaud, M Potters

Physical Review Letters 83 (7), 1467

[Weak ergodicity breaking and aging in disordered systems](#)

JP Bouchaud

Journal de Physique I 2 (9), 1705-1713

[Herd behavior and aggregate fluctuations in financial markets](#)

R Cont, JP Bouchaud

Macroeconomic dynamics 4 (2), 170-196

[Jamming, force chains, and fragile matter](#)

ME Cates, JP Wittmer, JP Bouchaud, P Claudin

Physical review letters 81 (9), 1841

[Direct experimental evidence of a growing length scale accompanying the glass transition](#)

L Berthier, G Biroli, JP Bouchaud, L Cipelletti, D El Masri, D L'Hôte, F ...

Science 310 (5755), 1797-1800

[Models of traps and glass phenomenology](#)

C Monthus, JP Bouchaud

Journal of Physics A: Mathematical and General 29 (14), 3847

[Wealth condensation in a simple model of economy](#)

JP Bouchaud, M Mézard

Physica A: Statistical Mechanics and its Applications 282 (3), 536-545

[Fluctuations and response in financial markets: the subtle nature of random price changes](#)

JP Bouchaud, Y Gefen, M Potters, M Wyart

Quantitative finance 4 (2), 176

[On the Adam-Gibbs-Kirkpatrick-Thirumalai-Wolynes scenario for the viscosity increase in glasses](#)

JP Bouchaud, G Biroli

The Journal of chemical physics 121 (15), 7347-7354

[Statistical aging and nonergodicity in the fluorescence of single nanocrystals](#)

X Brokmann, JP Hermier, G Messin, P Desbiolles, JP Bouchaud, M Dahan

Physical review letters 90 (12), 120601

Article in the general press:

- Pour une pédagogie des risques financiers, Le Monde, Mars 1995
- Le mythe funeste des marchés efficients, Le Monde, Janvier 2003
- Economics needs a scientific revolution, Nature, November 2008
- Il faut éviter de sous-évaluer les répercussions économiques d'une diminution de la dépendance au gaz russe, Le Monde, Avril 2022

Patent :

[Evaluating and optimizing error-correcting codes using a renormalization group transformation](#)

JS Yedidia, JPM Bouchaud

US Patent 6,857,097