

Curriculum Vitæ: **John ABBOTT**

Current position:

INdAM-COFUND Marie Curie Fellow at Dipartimento di Matematica, Università di Genova (Italy).

Education

- BA (second class) in mathematics from University of Cambridge
- Honours in “Certificate of Advanced Study in Mathematics” at Cambridge
- PhD (computer algebra) at University of Bath under Prof. J.H. Davenport

Research Interests in Computer Algebra

- polynomial factorization;
- polynomial ideals (Gröbner bases, etc);
- zero-dimensional schemes;
- polynomial root approximation.

Software: CoCoALib and CoCoA-5

- main designer and author (since 1998);
- software is free and open source (GPL3);
- available as a C++ library and an interactive system.

Academic Publications

25 publications in refereed international academic journals including:

J Abbott, M Bronstein, T Mulders: *Fast Deterministic Computation of Determinants of Dense Matrices*
Proc. ISSAC 1999, pp. 197–204 (ACM Press, 1999)

J Abbott, V Shoup, P Zimmermann: *Factorization in $\mathbb{Z}[x]$: The Searching Phase*
Proc. ISSAC 2000, pp. 1–7 (ACM Press, 2000)

J Abbott: *Sparse Squares of Polynomials*
Mathematics of Computation, vol. 71, pp. 407–413 (2002)

J Abbott, M Kreuzer, L Robbiano: *Computing Zero-dimensional Schemes*
Journal of Symbolic Computation, vol. 39, no. 1, pp. 31–49 (2005)

J Abbott: *Bounds on Factors in $\mathbb{Z}[x]$*
Journal of Symbolic Computation, vol. 50, pp. 532–563 (2013)

J Abbott: *Quadratic Interval Refinement for Real Roots*
ACM Comm. in Computer Algebra, vol. 48, no. 1, issue 187, pp. 3–12 (2014)

J Abbott: *Fault-tolerant Modular Reconstruction of Rational Numbers*
J. Symb. Comp. 80P3, pp. 707–718 (2017)

J Abbott, A M Bigatti, L Robbiano: *Implicitization of Hypersurfaces*
J. Symb. Comp. 81, pp. 20–40 (2017)