

# Publications of Michael Schürmann

- (A) Monographs
- (B) Articles in journals
- (C) Contributions to books and proceedings
- (D) Others
- (E) Preprints
- (F) Books edited

## (A) Monographs

- (A01) White noise on bialgebras.  
Lect. Notes Math., vol. 1544. Berlin Heidelberg New York: Springer 1993

## (B) Articles in journals

- (B01) (with L. Accardi und W. von Waldenfels)  
Quantum independent increment processes on superalgebras.  
Math. Z. 198, 451-477 (1988)
- (B02) A class of representations of involutive bialgebras.  
Math. Proc. Camb. Phil. Soc. 107, 149-175 (1990)
- (B03) Noncommutative stochastic processes with independent and stationary increments  
satisfy quantum stochastic differential equations.  
Probab. Th. Rel. Fields 84, 473-490 (1990)
- (B04) Quantum stochastic processes with independent additive increments.  
J. Multivariate Anal. 38, 15-35 (1991)
- (B05) Quantum  $q$ -white noise and a  $q$ -central limit theorem.  
Commun. Math. Phys. 140, 589-615 (1991)
- (B06) (with P. Glockner und R. Speicher)  
Realization of free white noise.  
Arch. Math. 58, 407-416 (1992)
- (B07) Direct sums of tensor products and non-commutative independence.  
J. Funct. Anal. 133, 1-9 (1995)

- (B08) (with M. Skeide)  
 Infinitesimal generators on the quantum group  $SU_q(2)$ .  
 Inf. Dim. Anal. Quantum Probab. Rel. Topics 1, 573-598 (1998)
- (B09) Operator processes majorizing their quadratic variation.  
 Inf. Dim. Anal. Quantum Probab. Rel. Topics 3, 99-120 (2000)
- (B10) (with A. Ben Ghorbal)  
 Non-commutative notions of stochastic independence.  
 Math. Proc. Camb. Phil. Soc. 133, 531-561 (2002)
- (B11) (with A. Ben Ghorbal)  
 Quantum stochastic calculus on Boolean Fock space.  
 Inf. Dim. Anal. Quantum Probab. Rel. Topics 7, 631-650 (2004)
- (B12) (with A. Ben Ghorbal)  
 Quantum Lévy processes on dual groups.  
 Math. Z. 251, 147-165 (2005)
- (B13) (with L. Sahu and K.B. Sinha)  
 Unitary processes with independent increments and representations of Hilbert tensor algebras.  
 Publ. Res. Inst. Math. Sci. 45, 745-785 (2009)
- (B14) (with M. Skeide and S. Volkwardt)  
 Transformation of quantum Lévy processes on Hopf algebras.  
 Commun. Stoch. Anal., 4(4), 553-577 (2010)
- (B15) (with S. Voß)  
 Schoenberg Correspondence on Dual Groups.  
 To appear in Commun. Math. Phys.

### (C) Contributions to books and proceedings

- (C01) Positive and conditionally positive linear functionals on coalgebras.  
 In: Accardi, L., Waldenfels, W. v. (eds.) Quantum probability and applications II. Proceedings, Heidelberg 1984. (Lect. Notes Math., vol. 1136). Berlin Heidelberg New York: Springer 1985
- (C02) A central limit theorem for coalgebras.  
 In: Heyer, H. (ed.) Probability measures on groups VIII. Proceedings, Oberwolfach 1985. (Lect. Notes Math., vol. 1210). Berlin Heidelberg New York: Springer 1986

- (C03) (with W. von Waldenfels)  
 A central limit theorem on the free Lie group.  
 In: Accardi, L., Waldenfels, W. v. (eds.) Quantum probability and applications III. Proceedings, Oberwolfach 1987. (Lect. Notes Math., vol. 1303). Berlin Heidelberg New York: Springer 1988
- (C04) Infinitely divisible states on cocommutative bialgebras.  
 In: Heyer, H. (ed.) Probability measures on groups IX. Proceedings, Oberwolfach 1988. (Lect. Notes Math., vol. 1379). Berlin Heidelberg New York: Springer 1989
- (C05) Noncommutative stochastic processes with independent and stationary additive increments.  
 In: Accardi, L., Waldenfels, W. v. (eds.) Quantum probability and applications IV. Proceedings, Oberwolfach 1988. (Lect. Notes Math., vol. 1396). Berlin Heidelberg New York: Springer 1989
- (C06) (with W. von Waldenfels)  
 A central limit theorem on the free Lie group.  
 In: Accardi, L., Waldenfels, W. v. (eds.) Quantum probability and applications III. Proceedings, Heidelberg 1988. (Lect. Notes Math., vol. 1442). Berlin Heidelberg New York: Springer 1990
- (C07) Gaussian states on bialgebras.  
 In: Accardi, L., Waldenfels, W. v. (eds.) Quantum probability and applications III. Proceedings, Heidelberg 1988. (Lect. Notes Math., vol. 1442). Berlin Heidelberg New York: Springer 1990
- (C08) White noise on involutive bialgebras.  
 In: Accardi, L. (ed.) Quantum probability VI. Singapore New Jersey London Hong Kong: World Scientific 1991
- (C09) The Azéma martingales as components of quantum independent increment processes.  
 In: Azéma, J., Meyer, P. A., Yor, M. (eds.) Séminaire de probabilités XXV. (Lect. Notes Math., vol. 1485). Berlin Heidelberg New York: Springer 1991
- (C10) Realization of unitary q-white noise on Fock space.  
 A central limit theorem on the free Lie group.  
 In: Heyer, H. (ed.) Probability measures on groups X. Proceedings, Oberwolfach 1990. New York: Plenum Press 1991
- (C11) The Azéma martingales as central limits.  
 In: Accardi, L. (ed.) Quantum probability VII. Singapore New Jersey London Hong Kong: World Scientific 1992

- (C12) Non-commutative probability on algebraic structures.  
In: Heyer, H. (ed.) Probability measures on groups and related structures XI. Proceedings, Oberwolfach 1994. Singapore New Jersey London Hong Kong: World Scientific 1995
- (C13) Quantenstochastik: Eine mathematische Theorie und ihre Wurzeln.  
In: Flachsmeyer, J., Fritsch, J., Reichel, H.-C. (eds.) Mathematik - Interdisziplinär Aachen: Shaker 2000
- (C14) (with U. Franz)  
Lévy processes on quantum hypergroups.  
In: Heyer, H., Hirai, T., Obata, N. (eds.) Infinite dimensional harmonic analysis. Transactions of a Japanese-German symposium, Kyoto 1999
- (C 15) Lévy processes on deformations of Hopf algebras.  
In: Heyer, H., Hirai, T., Kawazoe, T., Saito, K. (eds.) Infinite dimensional harmonic analysis III. Proceedings of the third German-Japanese symposium, Tübingen 2003
- (C16) (with S. Voß)  
Positivity of Free Convolution Semigroups.  
In: (J.C. Garcia, R. Quezada, S.B. Sontz (eds.) Quantum probability and related topics. Proceedings of the 28th Conference, Mexico 2007

## (D) Others

- (D01) Positiv definite Funktionen auf der freien Lie-Gruppe und stabile Grenzverteilungen.  
Heidelberg: Diploma thesis 1979
- (D02) Über \*-Bialgebren und quantenstochastische Zuwachsprozesse.  
Heidelberg: PhD thesis 1985
- (D03) White noise on bialgebras.  
Heidelberg: Habilitation thesis 1993
- (D04) Cours d'introduction à la statistique.  
Strasbourg: Lectures 1995
- (D05) Cours d'introduction aux probabilités.  
Strasbourg: Lectures 1995

## (E) Preprints

- (E01) (with A. Ben Ghorbal)  
On the algebraic foundations of a non-commutative probability theory.  
Greifswald: Preprint-Reihe Mathematik 8 (1999)
- (E02) (with U. Franz und R. Schott)  
Lévy processes and Brownian motion on braided spaces.  
Greifswald (2002)
- (E03) (with M. Skeide and S. Volkwardt)  
Transformations of Lévy processes.  
Greifswald: Preprint-Reihe Mathematik 13 (2007)

## (F) Books edited

- (F01) D. Applebaum, B.V.R. Bhat, J. Kustermans, J.M. Lindsay  
Quantum Independent Increment Processes I: From Classical Probability to Quantum Stochastic Calculus, (U. Franz and M. Schürmann, eds.)  
Lecture notes of a school held in Greifswald in March 2003  
Springer Lecture Notes in Mathematics, Vol. 1865, 2005
- (F02) Quantum Probability and Infinite Dimensional Analysis: From Foundations to Applications (U. Franz and M. Schürmann, eds.)  
Proceedings of a conference held in Greifswald in June 2003  
Quantum Probability and White Noise Calculus, Volume XVIII, World Scientific, 2005
- (F03) O.E. Barndorff-Nielsen, U. Franz, R. Gohm, B. Kümmerer, S. Thorbjørnsen  
Quantum Independent Increment Processes II: Quantum Lévy Processes, Classical Probability, and Applications (U. Franz and M. Schürmann, eds.)  
Lecture notes of a school held in Greifswald in March 2003  
Springer Lecture Notes in Mathematics, Vol. 1866, 2006
- (F04) Quantum Probability and Infinite Dimensional Analysis (L. Accardi, W. Freudenberger and M. Schürmann, eds.)  
Proceedings of the 26th conference held in Levico in February 2005  
Quantum Probability and White Noise Analysis, Volume XX, World Scientific, 2007
- (F05) Ph. Biane, L. Bouten, F. Cipriani, N. Konno, N. Privault, Q. Xu  
Quantum Potential Theory (U. Franz and M. Schürmann, eds.)

Lecture notes of a school held in Greifswald in March 2007  
Springer Lecture Notes in Mathematics, Vol. 1866, 2008