Curriculum Vitae

Roberto Longo

Particulars

Name: Roberto Longo
Birth: May 9, 1953 in Rome (Italy)
Nationality: Italian
Office address: Dipartimento di Matematica, Università di Roma Tor Vergata,
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Current position:
Emeritus Professor, University of Rome Tor Vergata

Language skill:
Italian (mother tongue), English (fluent), French (basic).

Academic Education and Scholarships

1974 – 1975	C.N.R. (National Research Council) predoc – Rome – Italy
23. 06.1975	Laurea in Matematica, University of Rome Sapienza (maximum grade with honors in each individual exam)
1975 – 1977	C.N.R. (National Research Council) postdoc – Rome – Italy
1978 – 1979	Sabbatical year, C.N.R. scholarship. Visiting scholar at the University of Pennsylvania. Research Associate at the University of California at Berkeley (4 months)

Professional Appointments

10.77 – 09.78	Assistant Professor (non-tenure) - University of Rome Sapienza
10.78 – 10.80	Assistant Professor (tenure) - University of Rome Sapienza
10.79 – 10.80	Associate Professor (non-tenure) - University of Rome Sapienza – Rome
11.80 – 04.87	Associate Professor (tenure) - University of Rome Sapienza
05.87 –	Full Professor (tenure) - University of Rome Tor Vergata
11.09 – 06.23	Director of the Center for Mathematics and Theoretical Physics – Rome
08.21 – 10.21	Coordinator pro tempore of the PhD School in Mathematics – Rome Tor Vergata
10.22 – 12.22	Rector pro tempore - University of Rome Tor Vergata
05.87 – 10.23	Full Professor of Analysis, University of Rome Tor Vergata

Awards and honors

- Professore distaccato (on leave), Accademia Nazionale dei Lincei (Italian National Academy), 1993-1996
- Andrejewski Lecturer, Göttingen, 2004
- Fellow of the American Mathematical Society, USA, 2013
- Conference on the occasion of the 60th birthday: "Mathematics and Quantum Physics", Accademia Nazionale dei Lincei, Rome, July 2013
- Humboldt Research Award, Germany, 2014
- Member of the "Mathematical Physics" panel for the International Congress of Mathematicians, Rio de Janeiro, 2018
- Medaglia dei XL per la Mathematica (Medal of the Italian National Academy of Science), 2021
- Member of the Academia Europaea, 2021
- Conference on the occasion of the 70th birthday: "Where Mathematics meets Physics", Centro Studi e Ricerche Enrico Fermi - CREF, Rome, June 2023
- Guest editor for the special issue of Communications in Mathematical Physics dedicated to H. Araki, 2024

Invited Speaker at Congresses (sample)

- Theoretical and Mathematical Physics, conference of the German Physical Society, Hamburg, 1994
- International Congress of Mathematicians, Zürich 1994.

- International Congress of Mathematical Physics, Berlin 1981, Swansea 1988, Paris 1994, Lisbon 2003.
- International Congress of Mathematical Physics, Prague 2010, Plenary speaker.
- Strings 2018, Okinawa, Plenary speaker.

Funding ID

- ERC Advanced Grant OACFT "Operator Algebras and Conformal Field Theory" 2008 – 2013 (PI)
- ERC Advanced Grant QUEST "Quantum Algebraic Structures and Models" 2015 – 2022 (PI)
- Horizon 2020 Marie Curie fellowship "Beyond RCFT", PI Luca Giorgetti 2019-2022 (tutor)
- MIUR - FARE grant QUEST-NET "Operator Algebras and (non)-equilibrium Thermodynamics in Quantum Field Theory", 2018 – 2022 (PI)
- Several Italian Grants (PI) "Operator Algebras, Noncommutative Geometry and Applications", 1.02.2013 – 31.1.2016 and several previous PRIN Grants.

Publications breakdown

WOS: https://www.webofscience.com/wos/author/record/1089511 total citations about 4300, h-index 37
Research.com: https://research.com total citations about 7400, h-index 46
Google Scholar: http://scholar.google.com/citations?user=oiAuW8UAAAAJ&hl=en total citations about 7800, h-index 47

PhD students

I have been the supervisor of several PhD students (both in Mathematics and Physics most of them came as PhD students to my department from other universities in Italy or abroad to study under my direction. Among my previous PhD students, I mention Tommaso Isola and Francesco Fidaleo (PhD in Mathematics at Rome Sapienza, now full professors in my departments), Romeo Brunetti (PhD in Physics at Naples, now an associate professor in Trento), Annalisa Degan, Paolo Bertozzini (PhD in Mathematics in Milan, now a professor in Thailand), Roberto Conti (PhD in Mathematics, now associate professor at Rome Sapienza), Among my recent PhD students, I mention: Yan Wang (from China, now in the US), Mihaly Weiner (from Hungary, now a professor at Budapest), Yoh Tanimoto (from Japan, full professor in my Department), Robin Hillier (from Germany, now Lecturer at Lancaster), Marcel Bischoff (from Germany, now an associate professor in Ohio), Vincenzo Morinelli (researcher RTDb in my Department), Simone Del Vecchio (associate professor at Bari), Alessio Ranallo (postdoc at Geneva, Switzerland), Vito Bellini (ongoing), Stefano Iovieno, Benedikt Wegener, Lorenzo Panebianco

PostDocs

I have been the supervisor of several PostDocs. I mention Mihaly Weiner, Kenny De Commer, Roberto Conti, Nicola Pinamonti, Robin Hillier, Makoto Yamashita, Paolo Camassa, Pierre Martinetti, Marting Grensing, Yoh Tanimoto, Marcel Bischoff, Katarzyna Rejzner, Luca Tomassini, Wei Yuan, Igor Khavkine, Arnaud Brothier, Alexander Stottmeister, Luca Giorgetti, Vincenzo Morinelli, Fabio Ciolli, Stefano Rossi, Jacopo Bassi, Maria Stella Adamo (most of them are now professors in Italy or abroad).

The Center for Mathematics and Theoretical Physics in Rome

The CMTP - Center for Mathematics and Theoretical Physics was founded in 2010 by a board of renowned Mathematicians and Physicists in Rome. I have been the director of the Center from its foundation till June 2023. The CMTP has organized several important scientific events: conferences, public lectures, colloquia, etc. and hosts PostDocs and young researchers (see http://cmtp.uniroma2.it).

Selection of scientific contributions

- Solution of the Stone-Weierstrass conjecture for factor states. Hahn-Banach theorem for factor states of a C*-algebra.
- Standard and split inclusions of von Neumann algebras (with S. Doplicher). Construction of simple injective subfactors.
- Relation between the Jones index and the Doplicher-Haag-Roberts statistical dimension in QFT. Sectors of factors;
- Duality for finite-dimensional Hopf algebras and subfactors.
- Conformal PCT and spin-statistics theorem (with D. Guido).
- Analog of the Kac-Wakimoto formula with quantization of black hole entropy.

- Complete rationality and modularity of representations in CFT (with Y. Kawahigashi, M. Müger). Classification of local conformal net with c<1 (with Y. Kawahigashi).
- Topological sectors, an index formula (with F. Xu). Sectors for cyclic orbifold models (with V. Kac and F. Xu).
- Algebraic formulation of Boundary Conformal Field Theory (with K.-H. Rehren).
- New boundary QFT nets of von Neumann algebras (with E. Witten).
- Infinite spin particle are not compactly localizable (with V. Morinelli and K.H. Rehren).
- Non-equilibrium thermodynamics analysis and CFT (with S. Hollands).
- Landauer's bound for infinite systems. Finiteness of von Neumann entropy in CFT (with F. Xu).
- Definition and computation of the information in a wave; Quantum Null Energy Inequality for coherent states in free QFT (with F. Ciolli, G. Morsella, A. Ranallo and G. Ruzzi).
- Study of the crossed product structure in QFT (with E Witten).

Invitations at foreign institutions (sample)
MSRI, Berkeley, USA; Fields Institute, Canada; Harvard University, Cambridge, USA; University of Warwick, UK; IHES, Bures-sur-Yvette; Institut Mittag-Leffler, Stockholm, Sweden; Institut Henri Poincaré, Paris; University of Tokyo, Japan; Hamburg University, Germany; Schrödinger Institute, Vienna; University of California, Los Angeles, USA; Göttingen University, Germany; MIT, Cambridge, USA; RIMS, Kyoto, Japan; Leipzig University, Germany; Simons Center, Stony Brook; Hausdorff Center, Bonn, Germany; Leipzig University, Germany; Newton Institute, Cambridge, UK; Copenhagen University, Denmark; IPAM, Los Angeles, USA; UNSW, Sydney.

Longer invitations at foreign institutions (sample)
- CNRS Marseille, April-July 1981
- Mathematical Science Research Institute, Berkeley, 1984-85
- Hamburg University, March 1988
- Fields Institute, Toronto, September 2004
- University of Tokyo, December 2005
- Schrödinger Institute, Vienna August-December 2008 (Coordinator of a research program)
- Institut Henri Poincaré, Paris, May and June 2011
- Harvard University, Cambridge, February-March 2011
- MIT, Cambridge, April 2011
- University of Göttingen, June 2014, April and June 2015
- Haudorff Institute, Bonn, May and July 2016
- Newton Institute, Cambridge, January-February and May-June 2017
- Simons Center, Stony Brooks, June 2019
- University of Göttingen, September 2021
- Institut Henri Poincaré, Paris, April 2024

Invited plenary presentations at conferences (selection from 2005)
- "Noncommutative Geometry and Operator Algebras", 3rd Annual Spring Inst., Nashville, USA, May 2005
- "Opening Colloquium for the Center of Mathematical Physics", Hamburg, October 2005
- "Noncommutative Geometry and Quantum Field Theory", Oberwolfach, October 2005
- "Infinite Dimensional Lie Algebras and Local von Neumann Algebras in CFT", BIRS, Banff, May 2006
- "Topics in von Neumann Algebras", BIRS, Banff, September 2006
- "Micro-Macro Duality in Quantum Physics", RIMS, Kyoto, December 2006
- "Free Probability, Operator Spaces and von Neumann Algebras", Sibiu, Romania, June 2007
- "Noncommutative Dynamics and Applications", Fields Institute, Toronto, Canada, July 2007
- "Geometry and Operator Theory", Ancona, September 2007
- "1st French-Italian Meeting on Noncommutative Geometry", Opening of GREFI-GENCO, Rome, Nov 2007
- "Incontro INDAM-CNRS", Rome, INDAM, May 2008
- "Matematica e Teoria dei Campi", Giornata interdisciplinare, Rome, Tor Vergata, May 2008

- "First Annual Meeting of the EU Network in Noncommutative Geometry", Dublin, DIAS, June 2008
- "Symmetries in Mathematics and Physics", Cortona, June 2008
- "Workshop on Noncommutative Geometry", Münster, September 2008
- "50 Years in Algebraic Quantum Field Theory", Göttingen, July 2009
- "International Congress of Mathematical Physics", Prague, August 2009
- "Noncommutative Geometry and Quantum Physics", Vietri sul Mare, September 2009
- "C*-Algebras", Oberwolfach, March 2010
- "Quantum field theory on curved spacetimes and curved target spaces", Vienna, March 2010
- "Operator algebra and Applications", Beijing, July 2010
- "II_1-factors: rigidity, symmetries and classification", Paris, Institut Henri Poincaré, May 2011
- "Quantum Theory and Gravitation", ETH Zurich, June 2011
- "Rigorous Quantum Field Theory in the LHC Era", Vienna, ESI, September 2011
- "Winter School on Operator Algebras", RIMS Kyoto, December 2011
- "Noncommutative Geometry", Cardiff, April 2012
- "Noncommutative Geometry, Index Theory and Applications", INDAM Cortona, June 2012
- "Noncommutative Geometry and Conformal Field Theory", Oporto, July 2012
- "Algebraic Quantum Field Theory", Hausdorff Institute, Bonn, September 2012
- "Symmetries II", IMPA, Rio de Janeiro, June 2013
- "Algebraic quantum field theory: Its status and its future", ESI, Vienna, May 2014
- "Subfactors and Conformal Field Theory", Oberwolfach, March 2015
- "Subfactor Theory in Mathematics and Physics", Qinhuangdao, July 2015
- "Von Neumann Algebras", Hausdorff Institute, Bonn, July 2016
- "Local Quantum Physics and beyond - in memoriam Rudolf Haag", DESY, Hamburg, September 2016
- "Subfactor Theory, Quantum Field Theory, and Quantum Information", Harvard, Cambridge, October 2016
- "Arnold-Regge Center, Inaugural Conference", Turin, March 2017
- "Conference on Noncommutative Geometry: State of the Art and Future Prospects - A celebration of Alain Connes' 70th Birthday", Fudan Univ., Shanghai, April 2017
- "Subfactors, K-theory and conformal field theory", Cambridge, Newton Institute, June 2017
- "Integrable Models in Statistical Mechanics, Limit Shapes and Combinatorics", Saint Petersburg, August 2017
- "Reflection Positivity", Oberwolfach, November-December 2017
- "Algebraic Quantum Field Theory: Where Operator Algebra meets Microlocal Analysis", Cortona, INdAM, June 2018
- "Strings 2018", Okinawa, June 2018
- "The origin of space and time", Vatican City, November 2018
- "Subfactors in Sydney", Sydney, February 2019
- "Noncommutative manifolds and their symmetries", Scalea, September 2019
- "Operator Algebras in QFT and QP", Roma, December 2019
- "One-parameter Semigroups of Operators", Nizhny Novgorod (on line) April 2021
- "New Frontiers: Interactions between Quantum Physics and Mathematics", Harvard University & American Academy of Arts and Sciences, Cambridge US, June 2022
- "Operator Algebras: Subfactors, K-theory and Conformal Field Theory", Grenynog Hall, UK, July-August 2022
- "Energy conditions in quantum field theory", ITP Lepzig, September 2022
- "Non-linear PDE in Cosenza", Cosenza, May 2023
- "Homotopy and Operator Algebras in Quantum Field Theory", Berlin, June 2023
- "Frontiers in Mathematical Physics", Paris Cergy, June 2023
- "Interactions between Mathematics and Physics. An event in honor of Victor G. Kac". Rome, June 2023
- "Operator Algebras: Subfactors and Applications", Cambridge, Newton Institute, July 2023

- "Emergent Geometries from Strings and Fields", Galilei Institute, Florence, July 2023
- "Standard Subspaces in Quantum Field Theory and Representation Theory", Oberwolfach, Oct 2023
- "Symposium of the Wolfang Pauli Centre in Theoretical Physics", Hamburg, November 2023
- "Random Physics", Center for Theoretical Science, Princeton, March 2024
- "Quantum and classical fields interacting with geometry", IHP, Paris, April 2024
- "48th LQP Workshop and Detlev-Fest:48th LQP Workshop and Detlev-Fest", Leipzig, June 2024
- "Operator Algebras and Mathematical Physics", ICMS Edinburgh, September 2024
- "Mathematical Challenges in Quantum Mechanics", GSSI L'Aquila, February 2025

Some special talks

- Distinguished Visitor's Lecture Series "Introduction to Conformal Field Theory", Iowa University 1999 (four lectures)
- Colloquium talk, University of California, Riverside 2003
- Laudatio on the occasion of the Poincaré prize to Huzihiro Araki, IAMP congress, Lisbon 2003
- Mini-course on "von Neumann Algebras and Conformal Field Theory", Summer school on "Vertex algebras and Related Topics", Erwin-Schrödinger-Institute, Vienna, June-July 2005
- Laudatio on the occasion of the Laurea Honoris Causa to Isadore Singer, Rome 2010
- "Operator Algebras and Boundary Quantum Field Theory" (colloquium talk), Hamburg, Nov. 2010
- "Operator Algebras and Conformal Field Theory" (2 talks), MIT, Cambridge USA, March 2011
- "Operator Algebras and Conformal Field Theory", (mini-course at the school on Noncommutative Geometry and Conformal Field Theory), RIMS Kyoto, December 2011
- "Operator Algebras and Conformal Field Theory", (mini-course at the XXth Oporto Meeting on Geometry, Topology and Physics), Oporto, July 2012
- "An Analog of the Beurling-Lax Theorem and Quantum Field Theory" (colloquium), Münster, May 2012
- "The Importance of Being Noncommutative", Opening of the PhD schools in Mathematics and in Biomolecular Science, Trento, February 2013
- "Operator Algebras and Quantum Field Theory" (colloquium), Beijing, Academy of Science, July 2015
- Laudatio on the occasion of the Laurea Honoris Causa to Vaughan Jones, Rome June 2016
- "Operator Algebras and Conformal Field Theory", (mini-course at the Mathematical Society of Japan - Seasonal Institute, Operator Algebras and Mathematical Physics), Tohoku University, Sendai, August 2016
- "Kubo-Martin-Schwinger, Non-equilibrium thermodynamics and Conformal Field Theory", Paul Martin Memorial, Harvard University, Cambridge, October 2016
- "Operator Algebras and Conformal Field Theory", (mini-course at the Newton Institute) Cambridge, January 2017
- "Matematica e Fisica al crocevia" - Colloquium di Macroarea (joint with M. Bianchi) Roma Tor Vergata, May 2017
- "Standard Subspaces", (two talks) North British Functional Analysis Seminar, Centre for Mathematical Sciences, Cambridge, May 2017
- "Modular Theory and Entropy Bounds in Physics", Operator Algebras at UCLA, a celebration of Masamichi Takesaki, Los Angeles, April 2018
- "Noncommutativity, time and entropy bounds", Vatican City, Pontifical Lateran University, November 2018
- "The emergence of time", Danish Institute for Advanced Study (public lecture) – September 2019
- "The emergence of time", (colloquium), Münster University – January 2020
- "The information in a wave", (on line talk), Mathematical Picture Language Project Seminar, Harvard University, May 2020
- "The emergence of time", (on line talk), Free Probabilty Seminar, University of California, Berkeley, October 2020
- "The massive modular Hamiltonian", (on line talk), Webinar "Analysis, Quantum Fields, and Probability", March 2021
- "The massive modular Hamiltonian and classical/quantum information theory", Colloquium, University of Göttingen, November 2021
- "The massive modular Hamiltonian and classical/quantum information theory", Global

Noncommutative Geometry Seminar, YouTube (on line talk), December 2021

- "Modular time and Quantum Information", PROTEUS Seminar Series, Department of Philosophy, University of Milan (on line), February 2022
- "Frammenti nel dialogo tra Matematica e Fisica", Colloquium dei XL, Accademia Nazionale delle Scienze, Roma (on line), February 2022
- "Black hole entropy and signal communication: a mathematical perspective", Vatican City, Pontifical Lateran University, October 2022
- "Inaugurazione anno accademico 2022/23", Università di Roma Tor Vergata
- "Signal communication and modular theory", Tsinghua University and BIMSA, Beijing (on line) November 2023
- "von Neumann algebras and a Bekenstein-type bound in QFT", Scuola Normale Superiore, Pisa, January 2025

Organization of international conferences (from 2006)

- "Brazilian Operator Algebras Conference" Florianopolis, July 2006.
- "Recent Advances in Operator Algebras", INDAM, Rome, November 2006 (scientific committee)
- "Conference on Geometry and Operator Theory", Ancona, September 2007 (scientific committee)
- "Operator Algebras, Conformal Field Theory and related topics", Schrödinger Institute, Vienna, September 2008
- "Quantum Spacetime and Noncommutative Geometry", Rome, September-October 2008
- "Noncommutative Geometry and Quantum Field Theory", Rome, October 2008
- "Noncommutative Geometry and Quantum Physics", Vietri sul Mare, September 2009
- "Quantum Systems", ICM 2010 satellite conference, Chennai, August 2010
- "Seminal Interactions between Mathematics and Physics", Accademia dei Lincei, Rome, September 2010
- "Noncommutative Geometry", Cortona, (member of the scientific committee), June 2012
- "Mathematical Aspects of Quantum Field Theory and Quantum Statistical Mechanics", Hamburg, July 2012
- "Noncommutative Geometry and Applications to Physics", Milan, December 2012 (scientific committee)
- "Operator and Geometric Analysis on Quantum Theory", CIRM, Levico September 2014
- "Gauge Theory, Strings and Holography", INdAM, Roma, Italy, June , 201
- "Operator Algebras and Quantum Field Theory", INFN, Frascati 2016
- "Mathematics and Physics at the Crossroad", Giornata conclusiva, INdAM October 2016
- "Subfactors, K-theory and conformal field theory ", Cambridge, Newton Institute, June 2017
- "Advances in Mathematics and Theoretical Physics", Accademia dei Lincei, Rome, September 2017
- "Quantum Information and Operator Algebras", Rome, INdAM February 2018
- "Foundations and Constructive Aspects of QFT", 43rd LQP workshop, Galileo Galilei Institute, Florence February 2019
- "Operator Algebras and Applications", Simons Center, Stony Brooks, June 2019 (with S. Hollands, V. Jones and G. Lechner)
- "Entropy and QFT", Rome, Tor Vergata, May 2021 (with F. Ciolli, V. Morinelli and G Ruzzi)
- "Seminal Interactions between Mathematics and Physics. II", Accademia dei Lincei, Rome, September 2021 (CMTP conference)
- "Cross fertilization between Physics and Mathematics", Accademia Nazionale dei Lincei, Roma, May 27, 2022
- "Standard Subspaces in Quantum Field Theory and Representation Theory", Oberwolfach mini-workshop (with M. Adamo, G Lechner, K.-H. Neeb), October 2023
- "Operator Algebras in High Energy Physics", Nordita, (with H. Casini, S. Hollands, E. Tonni), September 2024
- "Operator Algebras and Mathematical Physics", ICMS Edinburgh, (with D. Evans, Y. Kawahigashi, K. Reizner), scheduled in September 2025

Organization of international research programs and congresses (from 2006)

- Focussed Research Team "Infinite dimensional Lie algebras and local von Neumann algebras in CFT", BIRS, Banff, May 2006 (with V.G. Kac)

- International Congress on Mathematical Physics, (Operator Algebras session org.), Rio de Janeiro, August 2006
- Semester on "Operator Algebras and Conformal Field Theory", Erwin Schrödinger Institute, Vienna, August-December 2008 (with Y. Kawahigashi and K.-H. Rehren)
- Fourteenth Marcel Grossmann Meeting – MG14, Rome, July 2015 (local organizing committee)
- INdAM Intensive Period "Mathematics and Physics at the Crossroad", INFN, Frascati June-October 2016 2016 (organizing committee)
- Program "Operator Algebras", Newton Institute, Cambridge, January-June 2017 (scientific advisory board member)
- Fifteenth Marcel Grossmann Meeting – MG15, Rome, July 2018 (local organizing committee)
- Program "Operator Algebras and Quantum Physics", Simons Center, Stony Brooks, June 2019 (with S. Hollands, V. Jones and G. Lechner)

Other services

- National coordinator of the various Italian PRIN research networks on "Operator Algebras"
- Italian coordinator (pro-tempore) of the European Research Training Network "Noncommutative Geometry"
- Referee for CIRV, "Comitato di Indirizzo per la Valutazione della Ricerca"
- Referee for ANVUR, "Italian National Agency for the Evaluation of Universities and Research Institutes"
- Referee for the European Research Council
- Referee for the European Commission
- Referee for the Italian PRIN
- Referee for the National Science Foundations of several countries
- Panel member for the National Science Foundation, USA
- Panel member of DAAD selection committee
- Member of the scientific committee of the France-Italy network GREFI-GENCO INDAM network "Noncommutative Geometry" 2011-14
- Member of the PhD school in Mathematics board, Roma Tor Vergata
- Member of hiring committees for Full and Associate Professors, Researchers, Postdocs.
- Referee for major mathematical journals, e.g. Advances in Mathematics, Annals of Mathematics, Communications in Mathematical Physics, Forum Mathematics Pi, Inventiones Mathematicae, Journal of Functional Analysis.
- Referee for the Kyoto Prize
- Member of the panel for the creation of the MAECI Italian School of Advanced Science of Kyoto 2017-20
- Panel member of the SwissMAP, The Mathematics of Physics National Centre of Competence in Research

Publications of Roberto Longo

1. Longo R., *A simple proof of the existence of the modular automorphisms in approximately finite dimensional von Neumann algebras*, Pacific Journal of Mathematics 70 (1978), 199.
2. Longo R., *On perturbed derivations of C*-algebras*, Reports on Mathematical Physics 12 (1977), 1.
3. Longo R., *Automatic relative boundedness of derivations of C*-algebras*, Journal of Functional Analysis, 34 (1979), 21.
4. Longo R., *Some aspects of C*-dynamics*, Colloque Internationaux du CNRS n. 274, (1979).
5. Longo R., *Notes on algebraic invariants for non-commutative dynamical systems*, Communications in Mathematical Physics 69 (1979), 47.
6. D'Antoni C., Longo R., Zsido L., *A spectral mapping theorem for locally compact groups of operators*, Pacific Journal of Mathematics, 103 (1980), 17-24.
7. Herman R., Longo R., *A note on the spectrum of an automorphism group*, Duke Mathematical Journal 47, (1980), 27.
8. Longo R., *A remark on crossed product of algebras*, Journal of the London Mathematical Society (2) 23, (1981), 531.
9. Longo R., *Simplicity of the crossed product and the derivations theorem*, Bollettino dell'Unione Matematica Italiana 18 A(1981), 417-422.
10. Hislop P.D., Longo R., *Modular structure of the von Neumann algebras associated to the free massless scalar field theory*, Communications in Mathematical Physics, 84 (1982), 71-85.
11. Longo R., *Algebraic and modular structure of von Neumann algebras of Physics*, Proceedings of Symposia in Pure Mathematics 38, (1982), Part 2, 551.
12. D'Antoni C., Longo R., *Interpolation by type I factors and the flip automorphism*, Journal of Functional Analysis 51, (1983), 361.
13. Doplicher S., Longo R., *Local aspects of superselection rules II*, Communications in Mathematical Physics 88, (1983), 361.
14. Doplicher S., Longo R., *Standard and split inclusions of von Neumann algebras*, Inventiones Mathematicae 75, (1984), 493-536.
15. Longo R., *Solution of the factorial Stone-Weierstrass conjecture*, Inventiones Mathematicae 76, (1984) 145-155.
16. Peligrad C., Longo R., *Non commutative topological dynamics and compact actions on C*-algebras*, Journal of Functional Analysis 58, (1984), 157.
17. Longo R., *Remarks on pseudonormalcy*, in Lecture Notes in Mathematics n. 1139, Springer-Verlag, (1985), 347-349.
18. Buchholz D., Doplicher S., Longo R., *On Noether's theorem in quantum field theory*, Annals of Physics 170 (1986), 1-17.
19. D'Antoni C., Doplicher S., Fredenhagen K., Longo R., *Convergence of local charges and continuity properties of W*-inclusions*, Communications in Mathematical Physics 110 (1987), 325-348.
20. Longo R., *Simple injective subfactors*, Advances in Mathematics 63 (1987), 152-171.
21. Longo R., *The joint modular structure for inclusions of von Neumann algebras*, Contemporary Mathematics 62, (1987), 529-538.
22. Longo R., *Maximal abelian subalgebras with simple normalizer*, Proceedings of the American Mathematical Society, 107 (1989), 165-168.

23. Longo R., *Restricting a compact action to an injective subfactor*, Ergodic Theory and Dynamical Systems, 9 (1989), 127-135.

24. Buchholz D., D'Antoni C., Longo R., *Nuclear maps and modular structures I. General properties*, Journal of Functional Analysis 88 (1990), 223-250.

25. Longo R., *Index of subfactors and statistics of quantum fields. I,* Communications in Mathematical Physics 126 (1989), 217-247.

26. Buchholz D., D'Antoni C., Longo R., *Nuclear maps and modular structures. II Applications to quantum field theory,* Communications in Mathematical Physics 129 (1990), 115-138.

27. Longo R., *Index of subfactors and statistics of quantum fields. II: Correspondences, braid group statistics and Jones polynomial*, Communications in Mathematical Physics 130 (1990), 285-309.

28. Kosaki H., Longo R., *A remark on the minimal index of subfactors*, Journal of Functional Analysis 107 (1992), 458-470.

29. Longo R., *Minimal index and braided subfactors*, Journal of Functional Analysis 109 (1992), 98-112.

30. Guido D., Longo R., *Relativistic invariance and charge conjugation in Quantum Field Theory,* Communications in Mathematical Physics 148 (1992), 521-551.

31. Buchholz D., Doplicher S., Longo R., Roberts J.E., *A new look at Goldstone theorem*, Reviews in Mathematical Physics, Special Issue (1992) 49-83.

32. Accardi L., Longo R., *Martingale convergence of generalized conditional expectations*, Journal of Functional Analysis 118 (1993), 119-130.

33. Buchholz D., Doplicher S., Longo R., Roberts J.E., E*xtensions of automorphisms and gauge symmetries,* Communications in Mathematical Physics 155 (1993), 123-134.

34. Brunetti R., Guido D., Longo R., *Modular structure and duality in conformal Quantum Field Theory*, Communications in Mathematical Physics 156 (1993), 201-219.

35. Longo R., *A duality for Hopf algebras and for subfactors. I*, Communications in Mathematical Physics 159 (1994), 133-150.

36. Brunetti R., Guido D., Longo R., *Group cohomology, modular theory and space-time symmetries*, Reviews in Mathematical Physics 7 (1995), 57–71.

37. Guido D., Longo R., *An algebraic spin and statistics theorem. I*, Communications in Mathematical Physics 172 (1995), 517-533.

38. Longo R., Rehren K.H., *Nets of subfactors,* Reviews in Mathematical Physics 4 (1995), 567-597.

39. Guido D., Longo R., *The conformal spin and statistics theorem,* Communications in Mathematical Physics 181, 11-35, (1996).

40. Longo, R., Roberts, J.E., A *Theory of dimension,* K-Theory 11 (1997), 103-159.

41. Longo R., *On the spin-statistics relation for topological charges*, Proceedings of the conference 'Operator algebras and quantum Field Theory', Rome, July 1996, International Press, Cambridge 1997.

42. Longo R., *An analogue of the Kac-Wakimoto formula and black hole conditional entropy,* Communications in Mathematical Physics 186 (1997), 451-479.

43. Izumi M., Longo R., Popa S., *A Galois correspondence for compct groups of automorphisms of von Neumann algebras with a generalization to Kac algebras*, Journal of Functional Analysis 155 (1998), no. 1, 25–63.

44. Bertozzini P., Conti R., Longo R., *Covariant sectors and positivity of the energy*, Communications in Mathematical Physics 141 (1998), 471-492.

45. Guido D., Longo R., Wiesbrock H.W. *Extensions of conformal nets and superselection structure,* Communications in Mathematical Physics 192 (1998), 217-244.

46. D'Antoni C., Longo R., Radulescu F., *Conformal nets, maximal temperature and models from free probability,* Journal of Operator Theory 45 (2001), 217-244.

47. Longo R. *The Bisognano-Wichmann theorem for charged states and the conformal boundary of a*

black hole, Electronic Journal of Differential Equations, Conf. 04, 2000, pp. 159-164.

48. Kawahigashi Y., Longo R., Müger, M. *Multi-interval subfactors and modularity of representations in conformal field theory*, Communications in Mathematical Physics 219 (2001), 631-669.
49. Buchholz D., Longo R. *Graded KMS-functionals and the breakdown of supersymmetry*, Adavances in Theoretical and Mathematical Physics 3, 615-626 (2001). Addendum: ibidem 6, 1909-1910 (2001).
50. Guido D., Longo R., Roberts J.E., Verch R. *Charged sectors, spin and statistics in quantum field theory on curved spacetimes*, Reviews in Mathematical Physics 13 (2001), 125-198
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