

## Curriculum Vitae Of Johannes (Jan) Zaanen.

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Born: 1957, Leiden, the Netherlands

### Professional Career:

- 1982 Graduated in Chemistry from University of Groningen, Cum Laude.
- 1986 Doctorate in Physics from the University of Groningen, Cum Laude, Thesis advisor G.A. Sawatzky.
- 1987 Post-doctoral research associate (Max-Planck Stipendiat) at the Max-Planck Institut für Festkörperforschung, Stuttgart, Germany.
- 1988 Member of the scientific staff at the Max-Planck Institut für Festkörperforschung, Stuttgart, Germany.
- 1990 Resident visitor of the theory department of AT&T Bell Laboratories (Murray Hill, New Jersey, USA), supported by the dutch Foundation for Fundamental Research.
- 1993 Fellowship (5 years) of the KNAW (Dutch Academy of Sciences), at the Instituut-Lorentz for Theoretical Physics of Leiden University, The Netherlands.
- 1998 Universitair Hoofd Docent (Associate Professor) of Theoretical Physics, Leiden University, The Netherlands.
- 2000 (- present) Professor of Theoretical Physics, Leiden University, the Netherlands.
- 2004 - 2005 Visiting Professor of Theoretical Physics (on Stanford payroll), Stanford University, USA.
- 2010 Visiting professor of Theoretical Physics, Ecole Normale Supérieure, Paris, France.
- 2012 Solvay Professor of Physics, Solvay Institute, Brussels, Belgium.
- 2013 Fellow of the Newton Centre, Cambridge University, Cambridge, UK.
- 2018 - 2019 Visiting professor of Theoretical Physics (on Stanford payroll), Stanford University, USA.

## Distinctions:

- 1986 Koninklijke Shell Studiebeurzen Prijs for the best doctoral thesis in the sciences at the University of Groningen in 1986.
- 2001 Portrait in IOTA (TELEAC, dutch television)
- 2004 Senior Fellowship of the Fulbright foundation, USA.
- 2004 Winner of the Dutch National Science Quiz.
- 2005 Guestwriter of *Nature* (Journal Club column).
- 2006 Spinoza Award of the NWO.
- 2008 Outstanding referee award of the American Physical Society.
- 2008 Fellow of the American Physical Society.
- 2012 Solvay Professor, Solvay Institute, Brussels, Belgium.
- 2012 Fellow, Royal Dutch Academy of Sciences (KNAW ).
- 2013 Visiting fellow, Newton Centre, Cambridge, UK.

## Professional activities:

- 1985 Consultant of Xerox Palo Alto Research Laboratory, USA.
- 1988 Consultant of Philips Research Laboratory, The Netherlands.
- 1990-1993 Visiting scholarship of AT&T Bell Laboratories, Murray Hill, USA)
- 1996-1999 Consultant of Los Alamos National Laboratory, USA.
- 2001-2008 Chairman of the Ehrenfest Colloquium (general Physics Colloquium at Leiden University).
- 2005- Board of the DRSTP (Dutch Research School for Theoretical Physics).
- 2007- Member, Advisory board Capital Tool Company
- 2007- Member, Review Editorial Board, Science Magazine.
- 2008- Chairman, Lorentz visiting professor chair, Leiden University
- 2008-2017 Director, Casimir (Leiden-Delft) Graduate School.
- 2009- Editorial Advisor, Nature (free subscription).
- 2010- Editor, Journal of High Energy Physics.
- 2011- Member Peer Review College, Danish Council for Independent Research.
- 2013- Member International Advisory Committee (IAC), of the Crete Center of Quantum Complexity and Nanotechnology (CCQCN).
- 2016- Chairman Jury Christiaan Huygens Wetenschapsprijs.
- 2017-2018 Member Jury Lorentz Medaille

## Ph.D Students

- 1999 C.N.A. van Duin: *On Quantum Magnetism in Cuprate Superconductors.*
- 2000 O.Y. Osman: *On Stripe Correlations in Cuprate Superconductors.*
- 2003 H.V. Kruis: *On Hidden Order in Luttinger Liquids.*
- 2004 B. Hosseinkhani: *On the Thermodynamics at Quantum Phase Transitions in Two Dimensional Electron Systems.*
- 2006 V. Cvetkovic: *Quantum Liquid Crystals.*
- 2007 J. van Wezel: *Quantum Mechanics and the Big World.*
- 2007 B.W.A. Leurs: *Non Abelian Gauge Theories: Analogies in Condensed Matter Systems.*
- 2010 A. Mesaros: *Dislocations in stripes and lattice Dirac fermions.*
- 2011 A. Beekman: *Vortex duality in higher dimensions.*
- 2011 J.-H. She: *Fermions, criticality, and superconductivity.*
- 2013 M. Cubrovic: *Holography, Fermi surfaces and criticality.*
- 2013 L. Rademaker: *Fermions and bosons: excitons in strongly correlated materials.*
- 2014 M. Goykman: *Strings and AdS/CFT at finite density.*
- 2015 A. Bagrov: *The holographic glass bead game: from superconductivity to time machines.*
- 2016 R.-J. Slager: *The symmetry of crystals and the topology of electrons.*
- 2016 K. Liu: *Gauge theory and nematic order: the rich landscape of orientational phase transition.*
- 2017 N. Poovuttikul: *Transport coefficients and low energy excitations of a strongly interacting holographic fluid.*
- 2018 M. Sulangi: *Disorder and Interactions in High-Temperature Superconductors.*

## Conference Organization 2001-2017:

- 2001 (- present) Coordinator of two-yearly National Seminarium on Condensed Matter Physics, the Netherlands.
- 2001 co-organizer VII Dutch-Polish Colloquium on Condensed Matter Physics, Lorentz Center, Leiden, The Netherlands.
- 2001 organizer International Workshop on Strongly Correlated Electron Systems, Lorentz Center, Leiden, The Netherlands.
- 2002 co-organizer symposium Theory of Superconductivity, 19-th general conference of the EPS Condensed Matter Division, Brighton, United Kingdom.
- 2002 Program committee and organization, the International Conference Frontiers in condensed matter physics: electronic structure and properties FESP02, Groningen, The Netherlands.
- 2003 International Advisory Board, International conference on hidden symmetries in strongly correlated electron systems, Kings College, London, England.
- 2003 Program committee FOM Veldhoven meeting, Veldhoven, The Netherlands.
- 2004 International Advisory Board, NATO-ARW on New Challenges in Superconductivity, Miami, USA.
- 2004 International Advisory Board, Seventeenth international conference on spectroscopies in novel superconductors, Sitges, Spain.
- 2004 Co-organizer, International Workshop on Emerging Issues in heavy fermion materials physics, Lorentz Center, Leiden, The Netherlands.
- 2005 International Advisory Board, International Workshop on Electronic crystals (ECRYS 2005), Cargese, France.
- 2005 Co-organizer, International Workshop on Complex Behavior in electron systems, Lorentz Center, Leiden, The Netherlands.
- 2006 Program Committee 'Stripes 2006', Rome, Italy.
- 2007 Chairman Program Committee, Meeting of the Dutch Research School of Theoretical Physics 'Dalfsen 2007', Dalfsen, the Netherlands.
- 2007 Program Committee FOM meeting 'physics@veldhoven 2007', Veldhoven, the Netherlands.
- 2007 Coorganizer Lorentz-Center Workshop 'Gravity meets Condensed Matter', Leiden, The Netherlands.
- 2008 Director, program Committee, International Conference on Low Temperature Physics LT25, Amsterdam, The Netherlands.
- 2008 Scientific advisory board international conference "Stripes08", Cargese, Italy.
- 2008 International Advisory Board, International Workshop on Electronic crystals (ECRYS 2008), Cargese, France.
- 2008 Program director CMT32 International workshop on condensed matter theories, Loughboro, UK.
- 2009 Chairman conference organization Cambridge-Leiden, Easy meeting on quantum matter, Cambridge, UK.
- 2009 Member program committee, International conference Materials and Mechanisms of Superconductivity 2009 (M2S 2009) Tokyo, Japan.

- 2011 Co-chairman Lorentz Center workshop 100-th anniversary of superconductivity: hot topics and future directions, Leiden, The Netherlands.
- 2011 Co-chairman Lorentz Center workshop Black hole answers to condensed matter questions, Leiden, The Netherlands.
- 2011 International advisory board "Quantum Phenomena in complex matter" (Stripes11), Rome, Italy.
- 2011 International advisory board "National Conference on Novel Superconductivity in Taiwan" (ICNSCT2011), Tainan, Taiwan.
- 2011 International advisory board International Conference on Low Temperature Physics (LT26), Beijing, China.
- 2012 International advisory board, the 10th Materials & Mechanisms of Superconductivity Conference, M2S-2012, Washington, USA.
- 2012 International advisory board, international conference Superstripes 2012, Erice, Italy.
- 2012 Co-organizer, international CECAM workshop Topological Materials, Bremen, Germany.
- 2012 Co-organizer 2012-2013 IAS Program on Topological materials and Strongly Correlated Electronic Systems, Hong Kong, China.
- 2013 Organiser program workshop, Holography: from Gravity to Quantum Matter, Isaac Newton Institute, Cambridge, UK.
- 2013 Co-organizer workshop Hidden Order, Superconductivity and Magnetism in  $URu_2Si_2$ , Lorentz Center, Leiden, The Netherlands.
- 2013 Workshop Kick off of the Templeton project on AdS/CFT and quantum matter, Instituut-Lorentz, Leiden, The Netherlands.
- 2014 International Advisory board international conference Superstripes 2014, Erice, Italy.
- 2014 Co-Organizer International conference Quantum field theory, string theory and condensed matter, Orthodox Academy of Crete, Greece.
- 2014 Organizer, Templeton project meeting, Leiden University, The Netherlands.