

Curriculum vitæ

Carl Johan Hansson

BORN: November 16, 1966, in Luleå, Sweden, Swedish citizen

EXAMINA:

High School Diploma (“gymnasieexamen”) at Tornedalsskolan High School, Haparanda 1985

High School Diploma (“gymnasieingenjör”, 4-årig maskinteknisk gren), fourth year at Midskogsskolan High School, Luleå 1986

Bachelor of Science (“filosofie kandidat”) in Physics at Uppsala University, January 1993

Licentiate in Physics (“teknologie licentiat”), Luleå University of Technology, May 1996

Doctor of Philosophy in Physics, Ph.D. (“teknologie doktor”), Luleå University of Technology, March 1998. Faculty opponent: Professor Boris Kopeliovich, Max-Planck-Institut für Kernphysik, Heidelberg, Germany

Associate Professor in Physics (“docent”), Luleå University of Technology, June 2005.

Professor in Physics, Luleå University of Technology, June 2011.

THESES:

Licentiate in Physics (“teknologie licentiat”), Luleå University of Technology, May 1996. Title: “The Proton as a Laboratory for the Fundamental Structure of Matter” 1996:05 L, ISSN 0280-8242

Doctor of Philosophy in Physics, Ph.D. (“teknologie doktor”), Luleå University of Technology, March 1998. Title: “The Fundamental Structure of Matter” 1998:04, ISSN 1402-1544, ISRN: LTU-DT-98/4-SE

Thesis advisor: Professor Sverker Fredriksson

EMPLOYMENTS:

Teacher in first and secondary school (“låg-, mellan- och högstadiet”), on an hourly basis (“vikarie”), Haparanda, Sweden, 1985-88

Teacher (full time) in Mathematics and Physics in secondary school (“högstadiet”), Bålsta, Sweden, Aug - Dec 1991

PhD student employment (“doktorandtjänst”), Department of Physics, Luleå University of Technology, July 1993 to March 1998

Deputy Senior Lecturer (“vikarierande universitetslektor”) at the Department of Physics, Luleå University of Technology, April-August 1998

Researcher at the Department of Theoretical Physics, University of Turin, Italy, 29 May to 27 June 1998

Co-arranger of, and guide at, the travelling CERN exhibition “ $E = mc^2$, when energy becomes matter” at the House of Technology exhibition center (“Teknikens Hus”) in Luleå, 2 July to 13 September, 1998

Deputy Senior Lecturer (“vikarierande universitetslektor”) at the Department of Mathematics, Luleå University of Technology, September 1998 to August 1999

Senior Lecturer (“universitetslektor”) at the Department of Physics, Gävle Uni-

versity, September 1999 to December 2000 (On leave Sept-Dec 2000 conducting research at Lawrence Berkeley National Laboratory, UC Berkeley USA)
Senior Lecturer (“universitetslektor”) at the Department of Physics, Luleå University of Technology, January 2001- June 2005
Associate Professor (“docent”) at the Department of Physics, Luleå University of Technology, June 2005-June 2011 (On leave August to December 2008, at the University of Richmond, VA, USA)
Professor at the Department of Physics, Luleå University of Technology, June 2011-present

MILITARY SERVICE:

Swedish Air Force 1986-87 at Air Force Base F21, Luleå

COURSES/FURTHER EDUCATION (SELECTION):

Pedagogical competence development “Summer Institute Alumni Reunion/workshop - Student assessment and evaluation in higher education”, March 31 - April 1, 2005 (Council for the renewal of education/Rådet för högre utbildning, Sweden)
Pedagogical competence development “Winter Institute 2005 - Learners for change”, January 10-11, 2005 (Council for the renewal of education/Rådet för högre utbildning, Sweden)
Pedagogical competence development “Summer Institute 2004 - Learners for change”, June 6-11, 2004 (Council for the renewal of education/Rådet för högre utbildning, Sweden)
Pedagogical competence development “Universitetslärarstämman (SULF)”, October 16-17, 2003 (Folkets Hus, Stockholm)
“Introduction to FEMLAB”, November 18, 2002 (Comsol AB, Stockholm)
“Leadership” (*Docentkursen*), Fall-02 (Luleå University of Technology)
“Pedagogy for university teachers (2 points)”, Fall-01 (Dept. of Education, Luleå University of Technology)
The 6th International Summer School, Jyväskylä, Finland, Course: “The Standard Model to One Loop at Zero and Finite Temperature” August 5-16, 1996
Nordic School in High Energy Physics Phenomenology, Esbo, Finland, June 11-17, 1994
“CAD/CAM”, January-May, 1988 (Centek, Luleå University of Technology)

TEACHING AND SUPERVISING EXPERIENCE:

Academic Student Counsellor, Academic advisor for exchange students
Department of Physics, Luleå University of Technology, Sep 2002 - Apr 2007

Lecturing

At the *Department of Physics, Luleå University of Technology*:

Modern Physics (Aug - Oct 1993, 1994, Oct - Dec 1995)
Experimental Methods (Jan - Mar 1994, Sep - Dec 2001)
Relativity (Jan - Mar 1996, 1997, 2001, 2002, 2003, 2004). Developed the course + teaching material in 1996, when it was given for the first time
Astrophysics and Cosmology (Jan - Mar 1997, 1998, 2001, 2002, Apr-Jun 2003, 2004, 2005, 2006, 2007 (also Aug-Oct), 2008, 2009, Oct-Dec 2010, 2011, 2012, 2013, 2014, 2015, 2016). Developed the course + teaching material in 1997, when it was given for the first time
Atomic Physics (Mar - June 1998)

Engineering Thermodynamics (Mar - June 1998)
 Waves and Thermodynamics (Mar - June 2001, 2002)
 Advanced Quantum Mechanics (Sep - Nov 2001, Oct-Dec 2002)
 Quantum Mechanics (Oct-Dec 2001, Aug-Oct 2002, 2003, 2004)
 Universum för nyfikna/Physics for poets (Mar-June 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017). Developed the course + teaching material in 2002, when it was given for the first time (Roughly 200 non-science students annually)
 Applied Quantum Mechanics (Apr-June 2002)
 Nonlinear Physics with Maple (Oct-Dec 2002, 2003, 2004, 2005, 2006, 2007, 2009). Developed the course + teaching material in 2002, when it was given for the first time
 Universum - en rundresa/Universe - a Grand Tour (Aug-Oct 2004, 2005, 2009, 2011). Developed the course + teaching material in 2004, when it was given for the first time
 Conceptual Quantum Physics (Jan-Mar 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017). Developed the course + teaching material in 2004, as it was given for the first time
 General Relativity (Jan-Mar 2005, 2006, 2007, 2008, 2009, 2010, 2012, 2013, 2015, 2016, 2017). Developed this completely new course + teaching material in 2004
 Physics 1 - Mechanics, Thermodynamics and Experimental Methods (Aug-Oct 2006, Oct-Dec 2009, Jan-Mar 2010, Aug-Oct 2010, Nov-Dec 2010, Jan-Mar 2011, Apr-Jun 2011, Jan-Mar 2012, Aug-Oct 2013, Aug-Oct 2014).
 Elementary Physics ("tekniskt basår") (Sept - Dec 2009, 2011, 2012, 2013).
 Special Relativity (Apr-June 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017). Developed this *web-based distance-learning course* + teaching material in 2009, when it was given for the first time
 Chaos and Nonlinear Physics (Oct-Dec 2010, 2011, 2012, 2014, 2015, 2016). Developed the course + teaching material in 2010, when it was given for the first time
 Particle & Nuclear Physics (Aug-Oct 2011, 2012, 2013, 2014, 2015, 2016). Developed the course + teaching material in 2011, when it was given for the first time

Mini-courses: Space-engineering (for high-school students, Oct 1-3 2003, March 22-23 2004)

At the Department of Physics, Rostock University:

Astrophysics (June 2002)

At the Department of Physics, University of Richmond:

Nonlinear Physics with Mathematica (Aug-Dec 2008)

Introductory hands-on/workshop Physics (co-teaching, fall semester 2008)

At the Department of Mathematics, Luleå University of Technology:

Algebra I (Sept - Dec 1998)

Linear Algebra I (Oct - Dec 1998)

Calculus I (Sept - Dec 1998)

Algebra II (Jan - June 1999)

Linear Algebra II (Jan - June 1999)
Calculus II (Jan - June 1999)
Advanced Engineering Mathematics (Jan - Mar 1999)
Elementary Mathematics (“basår”) (Mar - June 1999)

At the Department of Physics, Gävle University:

Elementary Physics (“basår”) (Sept - Dec 1999, Jan - June 2000)
Waves and Fields (Nov - Dec 1999)
Thermodynamics (Jan - Mar 2000)

Supervisor and Examiner for the Luleå University of Technology graduate diploma (M.Sc.) theses of:

Mattias Fjellström (“Single particle tracking in circular accelerators using the exact Hamiltonian in SixTrack”, 2013)

Anna Ponga (“Pulsars: Cosmic Permanent ‘Neutromagnets’?”, 2010)

Jesper Lindkvist (“Inhomogeneous Cosmology”, 2009)

Jan Karlsson (“Preon Stars”, 2008), *Research Trainee* at Luleå University of Technology September 2007 to May 2008

Peder Ahlenius & Anna Lundgren (“Luminosity of high-z supernovae in an inhomogeneous cosmology”, 2006)

Henrik Brusheim-Johansson (“Nonlinear evolution as a possible explanation for quantum mechanical statevector reduction”, 2005)

Sina Vosough (“Optimization and Evaluation of Crucial Properties for Stainless Steel Wire Used as Guitar Strings”, 2005)

Erik Wikström (“Langmuir probe studies on the Atmosphere of Titan”, 2005)

Mathias Hamberg (“Experimental investigations of dissociative recombination (DR) of N₂O⁺”, 2004)

Åmid Hemmatian (“Implementation and usage of Maple in General Relativity”, 2004)

Kristin Wiklund (“Development of a semi-analytical method for calculation of the radial dose profile for proton beams in the 0.5-1.0 MeV energy range”, 2004)

Karin Rylander (“Development of LBNP as stimulant for fMRI”, 2004)

Ann-Louise Stefansson (“Models for elementary particle masses”, 2004)

Andreas Engvall (“Relativistic stability analysis of cosmic compact objects”, 2004)

Christian Türk (“Spin in particle physics”, 2003)

Assistant research supervisor for the Luleå University of Technology graduate diploma (M.Sc.) theses of:

Daniel Enström (“Astrophysical aspects of quark-gluon plasma”, 1998)

Christina Rönnerberg (“Neutrino oscillations and decays”, 1998)

Assistant graduate student supervisor for the Luleå University of Technology PhD studies of:

Daniel Enström (1998-99)

Fredrik Sandin (Mar 2002-Mar 2007)

Erik Elfgren (Jun 2002-Mar 2005)

Tiia Grenman (July 2002-May 2006)

Principal graduate student supervisor for the Luleå University of Technology PhD studies of:

Mattias Fjellström (Feb 2014-Present).

(Mattias is fully funded by, and based at, CERN.)

OFFICIAL COMMISSIONS, MERITS ETC:

Referee for Physics Letters B, Foundations of Physics, Astrophysics and Space Science, Physica Scripta

Member of the board for *The section for Elementary and Astroparticle Physics* of the Swedish Physical Society

Member of the Ph.D. Grading Committee during the public defence by Lars-Göran Westerberg of his doctoral thesis “Solar Wind Interaction with the Terrestrial Magnetopause”, Luleå University of Technology, Luleå, Sweden, 20 September 2007

Member of the Ph.D. Grading Committee during the public defence by Johan Arvelius of his doctoral thesis “Calibration and quality assessment of DESCARTES - grabsampler for stratospheric tracers”, Swedish Institute of Space Physics, Kiruna, Sweden, 7 October 2005

Wallenberg PhD student travel grant (USA, Jan 1995)

Main participant from Luleå University of Technology in the EC-collaboration “The Fundamental Structure of Matter” (1995-98)

Research stipend (150.000 SEK) from the Foundation Blanceflor Boncompagni-Ludovisi, née Bildt for conducting research at Lawrence Berkeley National Laboratory, UC Berkeley USA (Sept-Dec 2000)

Responsible for coordinating the seminar series in the Natural Sciences at the University of Gävle (1999-2000)

Responsible for coordinating the seminar series in Physics at Luleå University of Technology (2001-2005)

Research stipend (194.000 SEK) from *Carl Tryggers Stiftelse* for research on Preon Stars during 2007/2008

Fellowship stipend (314.000 SEK) “Excellence in Teaching” from STINT - The Swedish Foundation for International Cooperation in Research and Higher Education, for teaching at a Liberal Arts College (University of Richmond) in the USA during August to December 2008

MEMBERSHIPS:

The Swedish Physical Society; The section for Elementary and Astroparticle Physics

The Swedish Astronomical Society

Amnesty International

Red Cross (“Röda korset”)

Save the Children (“Rädda barnen”)

Blood donor (“Blodgivare”)

“SULF” The Swedish Organisation of University teachers

Sponsor (“fadder”), via Barnfonden - a politically and religiously independent sponsor organization, for the African girl Ruffine Setonon (Benin)

TRAVELS AND TALKS (SELECTION):

Exchange student (Uppsala U.) at the Department of Physics, University of Helsinki, Finland, Aug - Dec 1989

Exchange student (Uppsala U.) at the University of Sussex, England, School of Mathematics and Physics, Jan - June 1991

Summer Symposium on Physics at the CERN Large Hadron Collider and Astroparticle Physics, Utö, Sweden, 25-27 Aug 1993

Workshop on Light-Meson Production in Nuclear Reactions, Uppsala, Sweden, 16-19 May 1994

Conference: Trends in Astroparticle Physics, Stockholm, Sweden, 22-25 Sept 1994

Conference: Quark Matter'95, Monterey, CA, USA, 9-13 January 1995. Presented the poster "Diquark stars - True Lies?"

Invited to visit Lawrence Berkeley Laboratory, USA, by Professor Norman Glendenning 13-20 January 1995

Planning meeting for EC collaboration, "The Fundamental Structure of Matter", Collège de France, Paris, France, 26-31 March, 1995

Invited to INFN / University of Turin, Italy, by Professor Mauro Anselmino 4 June to 28 July 1995

TAN Astroparticle Summer School and Workshop, Thisted, Denmark 14-20 August 1995. Gave the talk "Diquark effects in Astrophysics"

Gave the popular talk "Quarks in the Cosmos", touching upon some of our research activities, to 70 visiting High-School teachers in Mathematics and Physics, Luleå, Sweden, 13 October 1995

Invited to Collège de France, Paris, by Professor Joseph Parisi 6 May to 30 June 1996

Conference: SPIN96 - 12th International Symposium on High-Energy Spin Physics, Amsterdam, The Netherlands, 10-14 September 1996. Gave the talk "Spin Measurements in $\ell p \rightarrow hX$ Deep Inelastic Scattering" (published in the proceedings)

Conference: Diquarks 3, Turin, Italy 28-30 October 1996

Meeting for EC collaboration, "The Fundamental Structure of Matter", Turin, Italy, 30 October 1996. Gave a short talk summarizing our results, and planned future work, up until that time

Invited to Université Blaise Pascal de Clermont-Ferrand II, Aubière, France, by Professor Jean-Jacques Dugne 2 April to 4 May 1997

Gave a popular talk about Relativity to visiting secondary school students, Luleå, Sweden, 11 September 1997

Invited to the Department of Theoretical Physics, Aristotle University of Thessaloniki, Greece, by Professor Argyris Nicolaidis 24 September to 25 October 1997

Invited to NORDITA (the Nordic Institute for Theoretical Physics), Copenhagen, Denmark, by Professor Paul Hoyer 10-13 January 1998. Gave the talk "A Preon Tripod"

Closing meeting for EC collaboration, "The Fundamental Structure of Matter", Chia Laguna, Italy, 4-8 April 1998. Gave the talk "Neutrino Decay in a Three-Preon Model"

Invited to INFN / University of Turin, Italy, by Professor Mauro Anselmino 29 May to 27 June 1998

Invited to the Department of Radiation Sciences ("ISV"), Uppsala University,

Sweden, by Assistant Professor Gunnar Ingelman 18 Oct 1999. Gave the talk “Nonlinear problems in QCD”

Conference: Particle Physics 2000, Edinburgh, Scotland, 11-13 April 2000

Invited to the Theory Group, Lawrence Berkeley National Laboratory, USA, by Professor Lawrence J Hall (head of theory group) 2 September to 20 December 2000

Conference: The Particle Days 2001, Uppsala, Sweden, 5-6 March 2001. Gave the talk “A simple solution to quark and gluon confinement”

Invited to the University of Rostock, Germany, by Professor David Blaschke (head of theory group) 8 to 18 June 2002

Invited to Stockholm Observatory, AlbaNova University Centre, Stockholm, Sweden, by Professor Gösta Gahm 11 February 2005. Gave the talk “Preon Stars - An Entirely New Class of Compact Objects”

Invited to the University of Richmond, USA, by Professor Cornelius Beusang (head of physics department) 20 August to 20 December 2008

Attended the *Particle Days*, a meeting of all the particle and astroparticle physics groups in Sweden arranged by the section for Elementary and Astroparticle Physics of the Swedish Physical Society, Uppsala, Sweden, 18-19 November 2010.

PUBLICATIONS (e-prints available at <http://arxiv.org/>)

Refereed journals:

- J. Hansson
“Black Holes - *Anybody* out there?”
Electronic Journal of Theoretical Physics (EJTP) **13**, No. 35, 91-94, 2016
- J. Hansson
“*Quantum machine* to solve quantum *measurement problem*?”
Advanced Studies in Theoretical Physics **9**, No. 5, 233 - 236, 2015.
doi:10.12988/astp.2015.5113
(e-print archive: arXiv:1401.5894)
- J. Hansson
“Physical Origin of Elementary Particle Masses”
Electronic Journal of Theoretical Physics (EJTP) **11**, No. 30, 87-100,
2014
(e-print archive: arXiv:1402.7033)
- J. Hansson
“On the Origin of Elementary Particle Masses”
Progress in Physics **10**, 71-73, 2014
(e-print archive: arXiv:1211.3136)
- J. Hansson
“Reality or locality?: Proposed test to decide how nature breaks Bell’s
inequality”
Physics Research International **2012**, Article ID 352543, 5 pages, 2012.
doi:10.1155/2012/352543
(e-print archive: arXiv:1104.1963)
- J. Hansson, A. Ponga
“Pulsars: Cosmic Permanent ‘Neutromagnets’?”
ISRN Astronomy and Astrophysics, **2011**, Article ID 378493, 4 pages,
2011. doi:10.5402/2011/378493
(e-print archive: arXiv:1111.3434)
- J. Hansson
“Nonlinear gauge interactions: a possible solution to the ‘measurement
problem’ in quantum mechanics”
Physics Essays **23**, 237-241, 2010
- J. Hansson, J. Lindkvist
“Inhomogeneous structure formation may alleviate need for accelerating
universe”
Open Astronomy Journal **3**, 145-149, 2010. doi:10.2174/1874381101003010145
(e-print archive: arXiv:0906.3403)
- J. Hansson
“The ‘Proton Spin Crisis’ - a Quantum Query”
Progress in Physics **3**, 51-52, 2010

- J. Hansson
 “Aspects of nonrelativistic quantum gravity”
 Brazilian Journal of Physics **39**, 707-710, 2009
 (e-print archive: gr-qc/0910.4289)
- J. Hansson, F. Sandin
 “Observational legacy of preon stars: Probing new physics beyond the CERN LHC”
 Physical Review D **76**, 125006, 2007
 (e-print archive: astro-ph/0701768)
- J. Hansson
 “A hierarchy of cosmic compact objects - without black holes”
 Acta Physica Polonica B **38**, 91-100, 2007
 (e-print archive: astro-ph/0603342)
- J. Hansson, F. Sandin
 “Preon stars: a new class of cosmic compact objects ”
 Physics Letters B **616**, 1-7, 2005
 (e-print archive: astro-ph/0410417)
- J. Hansson, D. Olevik, C. Türk, H. Wiklund
 “Comment on ‘Measurement of quantum states of neutrons in the Earth’s gravitational field’ ”
 Physical Review D **68**, 108701(1-3), 2004
 (e-print archive: quant-ph/0308108)
- J. Hansson
 “Reply to the comment by A. Aste on ‘A simple explanation of the non-appearance of physical gluons and quarks’”
 Canadian Journal of Physics **81**, 893-894, 2002
 (e-print archive: hep-ph/0302100)
- J. Hansson
 “A simple explanation of the nonappearance of physical gluons and quarks”
 Canadian Journal of Physics **80**, 1093-1097, 2002
 (e-print archive: hep-ph/0208137)
- J.-J. Dugne, S. Fredriksson, J. Hansson
 “Preon Trinity - A Schematic Model of Leptons, Quarks and Heavy Vector Bosons”
 Europhysics Letters **60**, 188-194, 2002
 (e-print archive: hep-ph/0208135)
- M. Anselmino, M. Boglione, J. Hansson and F. Murgia
 “Predictions for single spin asymmetries in $\ell p^\uparrow \rightarrow \pi X$ and $\gamma^* p^\uparrow \rightarrow \pi X$ ”
 The European Physical Journal C **13**, 519-526, 2000
 (e-print archive: hep-ph/9906418)
- L. Houra-Yaou, P. Kessler, J. Parisi, F. Murgia, J. Hansson
 “Production of Meson Pairs, involving Tensor and Pseudotensor Mesons, in Photon-Photon Collisions”
 Zeitschrift für Physik C **76** , 537-547, 1997
 (e-print archive: hep-ph/9611337)

- S. Fredriksson, J. Hansson, S. Ekelin
“A Potential Diquark in the Proton”
Zeitschrift für Physik C **75**, 107-111, 1997.
- M. Anselmino, M. Boglione, J. Hansson and F. Murgia
“Polarized inclusive leptonproduction, $\ell N \rightarrow hX$, and the hadron helicity density matrix $\rho(h)$: Possible measurements and predictions”
Physical Review D **54**, 828-837, 1996
(e-print archive: hep-ph/9512379)

Conference proceedings, preprints, etc:

M. Anselmino, M. Boglione, J. Hansson, F. Murgia
“Inclusive production of hadrons in $\ell^\uparrow p^\uparrow \rightarrow h^\uparrow X$ and spin measurements”
DFTT-33-96, Apr 1996. Published in the proceedings of the International Workshop on Deep Inelastic Scattering and Related Phenomena DIS 1996:583-589 (QCD162:D41:1996), Rome, Italy, 15-19 Apr 1996. e-print archive: hep-ph/9607334

M. Anselmino, M. Boglione, J. Hansson and F. Murgia
“Spin Measurements in $\ell p \rightarrow hX$ Deep Inelastic Scattering” Talk delivered by J. Hansson at the XII International Symposium on High Energy Spin Physics, Amsterdam, Sept 10-14, 1996. Published in the proceedings, World Scientific, 1997. e-print archive: hep-ph/9610388

L. Houra-Yaou, P. Kessler, J. Parisi, F. Murgia, J. Hansson
“Production of Meson Pairs Involving $L \neq 0$ Mesons in Photon-Photon Collisions”
Talk delivered by F. Murgia at the “Diquarks III Workshop”, Torino, Italy, October 28-30, 1996. Published in the proceedings, World Scientific 1998. e-print archive: hep-ph/9701239

L. Houra-Yaou, P. Kessler, J. Parisi, F. Murgia, J. Hansson
“A Generalization of the Brodsky-Lepage Formalism”
Talk delivered by F. Murgia at the PHOTON’97 Conference, Egmond aan Zee, The Netherlands, May 10-15, 1997. Published in the proceedings INFNCA-TH9709. e-print archive: hep-ph/9706349

J.- J. Dugne, S. Fredriksson, J. Hansson, E. Predazzi
“Higgs Pain? Take a Preon!”
Talk delivered by S. Fredriksson at the Joint Meeting of the Networks ‘The Fundamental Structure of Matter’ and ‘Tests of the Electroweak Symmetry Breaking’, Ouranopolis, Greece, May 1997. Published in the proceedings. e-print archive: hep-ph/9709227

B. Anoushirvani, D. Enström, S. Fredriksson, J. Hansson, P. Ökvist, A. Nicolaidis, S. Ekelin
“Gamma-Ray Bursts from Primordial Quark Objects in Space”
Published in the proceedings of the Joint Meeting of the Networks ‘The Fundamental Structure of Matter’ and ‘Tests of the Electroweak Symmetry Breaking’, Ouranopolis, Greece, May 1997. e-print archive: astro-ph/9711346

J.- J. Dugne, S. Fredriksson, J. Hansson, E. Predazzi
“Preon Trinity”

e-print archive: hep-ph/9802339 (published in reworked form)
D. Enström, S. Fredriksson, J. Hansson, A. Nicolaidis, S. Ekelin
“A Quark-Matter Dominated Universe”
e-print archive: astro-ph/9802236

J. Hansson
“Neutrino-Decay in a three-Preon Model”
included in PhD thesis, March 1998

S. Fredriksson, D. Enström, J. Hansson, S. Ekelin, A. Nicolaidis
“Is Dark Matter made up of Massive Quark Objects?”
Published in the Proceedings of Dark '98, Heidelberg, July 1998, Institute of
Physics Publishing, 1999. e-print archive: astro-ph/9810389

D. Enström, S. Fredriksson, J. Hansson
“Luminosities of High-Redshift Objects in an Accelerating Universe”
e-print Archive: astro-ph/9904262

A. Nicolaidis, G. Tsirigoti, J. Hansson
“TeV Neutrinos in a Dense Medium”
e-print Archive: hep-ph/9904415

J.-J. Dugne, S. Fredriksson, J. Hansson, E. Predazzi
“Preon Trinity - a new model of leptons and quarks”
Published in the Proceedings of Beyond 99, Tegernsee, June 1999
e-print Archive: hep-ph/9909569

J. Hansson
“A possible experimental test to decide if quantum mechanical randomness is
due to deterministic chaos in the underlying dynamics”
e-print Archive: quant-ph/0006079

J. Hansson
“A simple solution to color confinement”
e-print Archive: hep-ph/0011060

H. Brusheim-Johansson, J. Hansson
“A chaotic dynamical reduction model for the quantum mechanical state vector”
e-print Archive: quant-ph/0611003

Popular articles (Mostly in Swedish, i urval):

- J. Hansson, F. Sandin
“Stor som en kula men tyngre än jorden”
Forskning och Framsteg, sid 40-43, Nr.7 Okt-Nov, 2005
- J. Hansson, F. Sandin
“Preonstjärnor”
Populär Astronomi, sid 8-13, Nr.4 Dec, 2005
- J. Hansson
“Kvantfysiken på 15 minuter - Världen är (o)sannolik”
Allt Om Vetenskap, sid 106-109, Nr.9, 2007
- J. Hansson
“Relativitetsteorin på 15 minuter - Allt är inte alls relativt”
Allt Om Vetenskap, sid 106-109, Nr.10, 2007
- J. Hansson
“Kaosteorin på 15 minuter - Världen är inget urverk”
Allt Om Vetenskap, sid 104-108, Nr.11, 2007
- J. Hansson
“Partikelfysiken på 15 minuter - Vad är fundamentalt?”
Allt Om Vetenskap, sid 104-108, Nr.12, 2007
- J. Hansson
“Kosmologin på 15 minuter - Läran om allt”
Allt Om Vetenskap, sid 104-108, Nr.1, 2008
- J. Hansson
“Strängteorin på 15 minuter - Teorin om allt... eller inget?”
Allt Om Vetenskap, sid 104-108, Nr.2, 2008
- J. Hansson
“Kvantgravitationen på 15 minuter - Den gäckande teorin”
Allt Om Vetenskap, sid 104-108, Nr.3, 2008
- J. Hansson
“Big Bang på 15 minuter - Stora skrällen”
Allt Om Vetenskap, sid 104-108, Nr.4, 2008
- J. Hansson
“Svarta hål på 15 minuter - Fysikens slut?”
Allt Om Vetenskap, sid 104-108, Nr.5, 2008
- J. Hansson, L. Zernell
“Preonstjärnor - Äntligen något nytt på himlen”
Allt Om Vetenskap, sid 82-89, Nr.8, 2008
- J. Hansson,
“The 10 Biggest Unsolved Problems in Physics”
International Journal of Modern Physics and Applications, Vol. 1, No. 1, pp.
12-16, 2015

LANGUAGES:

Swedish
English (fluent)
German (fair)