

Curriculum Vitae

Joop Schaye

August 2018

Personal

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Employment

2011– Full Professor, Leiden University, The Netherlands
2007–2011 Associate Professor, Leiden University, The Netherlands
2005–2007 Assistant Professor, Leiden University, The Netherlands
2002–2005 Long-term Member, Institute for Advanced Study, Princeton, USA
2000–2002 Member, Institute for Advanced Study, Princeton, USA

Education

1997–2000 Institute of Astronomy, University of Cambridge, U.K.:
• PhD Astrophysics, advisor: Prof. George P. Efstathiou
1996–1997 Department of Applied Mathematics and Theoretical Physics,
University of Cambridge, U.K.:
• Certificate of Advanced Study in Mathematics
1992–1997 University of Groningen, The Netherlands
• MSc Astronomy
• MSc Theoretical Physics

Publications

Authored or co-authored over 280 refereed publications, 55 when normalized by number of authors (according to NASA's ADS)

See <http://home.strw.leidenuniv.nl/~schaye/publications.html>

Honors

- 2015 VICI grant, NWO Innovational Research Incentives Scheme (PI)
- 2014 Nominated for annual teaching award of the Faculty of Science, Leiden University
- 2011 European Research Council Starting Grant (PI)
- 2010 Pastoor Schmeits prize (awarded every 3 years to an astronomer - who either has the Dutch nationality or works in the Netherlands - for work done before the age of 40)
- 2007 Elected key researcher of NOVA (Dutch research school for astronomy)
- 2006 VIDI grant, NWO Innovational Research Incentives Scheme (PI)
- 2004 Marie Curie Excellence Grant (PI)
- 2002 Long-term membership, Institute for Advanced Study, Princeton
- 1998 Kamerlingh Onnes Prize (for highest final GPA in physics), University of Groningen
- 1997 Isaac Newton Studentship, University of Cambridge
- 1997 MSc Astronomy: Distinction
MSc Theoretical Physics: Distinction
- 1996 Benefactor's scholarship, St. John's College, Cambridge
- 1993 Propaedeuse prize (for best 1st year exam results in physics), University of Groningen

Grants awarded as PI

2018	EUR	219,336	over 4 years	NOVA phase 5, network 1	PI
	EUR	4,500		NOVA workshop	PI
2017	EUR	4,500		NOVA workshop	PI
2015	EUR	1,500,000	over 5 years	NWO VICI	PI
	EUR	4,000		NOVA workshop	PI
2013	EUR	207,366	over 4 years	NOVA phase 4, network 1	PI
	EUR	4,200		NOVA workshop	PI
2011	EUR	1,496,000	over 5 years	ERC starting grant	PI
2010	EUR	221,635	over 3 years	NWO open competition	PI
2009	EUR	201,140	over 4 years	NOVA phase 3, network 1	PI
	EUR	10,000		Lorentz Center workshop	PI
2008	EUR	314,000	over 5 years	NOVA phase 3, instrumentation	co-PI
2006	EUR	4,500		NOVA workshop	PI
	EUR	8,580		Lorentz Center workshop	PI
	EUR	600,000	over 5 years	NWO VIDI	PI
2005	USD	380,663	over 3 years	NSF AST-0507117	co-PI
2004	EUR	1,000,427	over 4 years	EU Marie Curie Excellence Grant	PI

Grants awarded as co-I (incomplete)

2018	EUR	19,496,000	over 10 years	NWO Roadmap Athena	co-I
	EUR	54,834	over 4 years	NOVA phase 5, network 1	co-I
2016	EUR	1,350,000	over 4 years	EU staff exchange network	co-I
2011	EUR	779,100	over 4 years	EU IRSES network	co-I
2009	EUR	4,646,615	over 4 years	EU RTN network	co-I
	EUR	201,140	over 4 years	NOVA phase 3, network 1	co-I
	EUR	201,140	over 4 years	NOVA phase 3, cross network	co-I
	EUR	201,140	over 4 years	NOVA phase 3, network 3	co-I
2008	EUR	4,500		NOVA workshop	co-I
	EUR	9,000		Lorentz Center workshop	co-I

Teaching

2015–2018	Large-scale Structure and Galaxy Formation, graduate course, Leiden University
2006–2017	“De Melkweg en andere sterrenstelsels”, lectures for high school students
2012–2015	MSc Study advisor
2011–2013	Stellar Structure and Evolution, graduate course, Leiden University
2007	Galaxies, NOVA graduate school
2005–2009	The Formation of Galaxies, graduate course, Leiden University
1997–2000	Physical Cosmology (supervisor), Part II Astrophysics, University of Cambridge
1997–1999	Theory of Relativity (supervisor), Part II Astrophysics, University of Cambridge

Supervision of MSc students (primary supervisor only)

Olivera Rakic (06-07), Eveline van Scherpenzeel (07), Freeke van de Voort (07-08), Akila Jee-son Daniel (07-08), Juan David Delgado (08-09, minor), Marcel van Daalen (09-10), Caroline Straatman (10-11), Willem de Pous (10-11), Nadiyah Bremer (11), Marijke Segers (12, minor), Jorryt Matthee (13-14), Geert Jan Talens (13-14), Gunjan Bansal (14-15), Stijn Debackere (15-16), Charlotte Brand (16-17)

Supervision of PhD students (primary supervisor only)

Andreas Pawlik (05-09), Robert Wiersma (05-10), Alan Duffy (06-09; with Richard Battye/Scott Kay), Marcel Haas (06-10), Olivera Rakic (07-11; with Charles Steidel), Freeke van de Voort (08-12), Alireza Rahmati (09-13), Marcel van Daalen (10-14; with Simon White), Alex Richings (11-15), Monica Turner (11-15), Marco Velliscig (11-15), Bart Clauwens (13-17; with Marijn Franx), Marijke Segers (13-17), Chris Barber (14-18), Jorryt Matthee (16-20; with David Sobral and Huub Rottgering), Nastasha Wijers (16-20), Stijn Debackere (17-21)

Supervision of postdocs

Claudio Dalla Vecchia (05-09), Craig Booth (07-11), Denis Serre (08-10), Ben Oppenheimer (09-13), Milan Raicevic (10-13), Rob Crain (11-15), Thomas Martinsson (11-14), Marcello Cacciato (with Henk Hoekstra) (12-14), Joakim Rosdahl (12-16), Sylvia Ploeckinger (14-19), Lorrie Straka (14-18), Camila Correa (16-19), Sowgat Muzahid (16-19), James Trayford (18-21)

Recent professional activities

PI, EAGLE collaboration (Evolution and Assembly of GaLaxies and their Environments)
PI, MUSE survey of QSO absorbers
PI, OWLS collaboration (OverWhelmingly Large Simulations)
Member of the executive board, MUSE (Multi Unit Spectroscopic Explorer)
Member of the steering committee, Virgo Consortium for cosmological supercomputer simulations
Scientific Editor, Monthly Notices of the Royal Astronomical Society
Editorial Board member, Scientific Reports (Nature publishing group)
Builder, MUSE GTO team
Co-I, Athena X-IFU
Member, Athena X-IFU science team
Core member, LOFAR Epoch of Reionization science team
Member, Euclid cosmological simulations working group (co-lead on baryonic effects)
Member, WEAVE QSO science team
Member of the board, "Stichting Studiefonds J.C. Kapteyn"
Member of the board, Pastoor Schmeits prize
External PhD thesis examiner, Aarhus, Cambridge, Durham, Edinburgh, Groningen, Oslo, Potsdam
Lots of funding committee and referee work
Member, the permanent committee for academic practice of the faculty of science
Member, Observatory strategy committee

Organization of scientific meetings

- Chair, LOC, “Computational cosmology”, Leiden, Dec 2018
- Chair, LOC, “MUSE busy week”, Volendam, Nov 2017
- Chair, LOC, “Computational cosmology”, Leiden, Dec 2015
- Chair, LOC, “MUSE busy week”, Haarlem, Nov 2014
- Chair, LOC, “The chemical enrichment of the intergalactic medium”, May 2009
- Chair, LOC, “Computational cosmology”, Jan 2007
- Member, SOC, “Warm and Hot Baryonic Matter in the Cosmos”, Vienna, Austria, August 2018
- Member, SOC, “Intergalactic Interconnections”, Marseille, France, July 2018
- Member, SOC, “European week of astronomy and space science”, Liverpool, UK, April 2018
- Member, SOC, “Frontiers of astrophysical modeling”, Leuven, Belgium, Sep 2017
- Member, SOC, “A Decade of the Star-Forming Main Sequence”, Leiden, the Netherlands, Sep 2017
- Member, SOC, “What matter(s) around galaxies”, Durham, UK, June 2017
- Member, SOC, “Deconstructing Galaxies at Cosmic Noon”, Leiden, the Netherlands, Aug 2016
- Member, SOC, “Feedback in galaxy formation”, Leiden, the Netherlands, May 2016
- Member, SOC, “Computational cosmology”, Leiden, the Netherlands, Dec 2015
- Member, SOC, “The challenges of upcoming HI surveys”, Dwingeloo, March 2014
- Member, SOC, “Challenges in UV astronomy”, Garching, Germany, Oct. 2013
- Member, SOC, “Intergalactic Interactions”, Edinburgh, UK, June 2013
- Member, SOC, “Circumgalactic Medium-Galaxy Interface”, Leiden, The Netherlands, June 2013
- Member, SOC, “COSMOCOMP workshop”, Trieste, Italy, September 2012
- Member, SOC, “The picture of galaxy evolution painted with Lyman alpha”, Rome, Italy, July 2012
- Member, SOC, “The physics of galaxy formation”, Durham, UK, July 2011
- Member, SOC, “The cosmic odyssey of baryons”, Marseille, France, June 2011
- Member, SOC, “Gas in galaxies: from cosmic web to molecular clouds”, Seeon, Germany, June 2011
- Member, SOC, “Cosmological reionization”, Allahabad, India, Feb. 2010
- Member, SOC, “Galaxies in real life and simulations”, Leiden, the Netherlands, Sep 2008
- Member, SOC, “Theory in the Virtual Observatory”, Garching, Germany, Apr 2008
- Member, SOC, “Dark galaxies and lost baryons”, Cardiff, UK, June 2007

Invited conference talks (2004-)

- 2018 The role of feedback in galaxy formation: from small-scale winds to large-scale outflows, Potsdam, USA
Circumgalactic medium workshop, Evanston, USA
Intergalactic interconnections, Marseille, France
Galactic winds, Elmau, Germany
European week of astronomy and space science, Liverpool, UK (*plenary*)
Computational galaxy formation, Ringberg, Germany
Preparing the science of galaxy clusters & WHIM with Athena & Sesto, Italy
- 2017 Distant galaxies from the far south, Bariloche, Argentina (*review*)
Chemical evolution of the universe, Tarrytown, USA
The galaxy ecosystem. Flow of baryons through galaxies, Garching, Germany
Whereabouts and Physics of the Roaming Baryons in the Universe, Sesto, Italy
Damped Ly-alpha absorbers (DLAs): in absorption, in emission, Prague, Czech republic (*review*)
Star formation, metals, and feedback in galaxies, Prague, Czech republic (*review*)
What matter(s) around galaxies, Durham, UK (*conference summary*)
Quantifying and understanding the galaxy-halo connection, Santa Barbara, USA (*review*)
Lifecycle of metals throughout the universe, Baltimore, USA
Carving through the Codes: Challenges in Computational Astrophysics, Davos, Switzerland
The dawn of galaxies, Obergurgl, Austria
- 2016 The galaxy's life-cycle: From activity to quiescence and back across cosmic times, Venice, Italy (*review*)
ESO-Athena Synergy Team workshop, Garching, Germany
Crossing the Rubicon: the fate of gas in galaxies, Santarcangelo di Romagna, Italy
JWSTROE, Edinburgh, UK (*review*)
Illuminating the dark ages: Quasars and galaxies in the reionization epoch, Heidelberg, Germany
National astronomy meeting, plenary talk, Nottingham, UK
Feedback in Galaxy Formation, Leiden, The Netherlands
Galactic winds, Elmau, Germany
Formation and Evolution of Galaxy Outskirts, Toledo, Spain
- 2015 From Galaxies to Large Scale Structure and the CMB, Cambridge, UK
Scale-free processes in the Universe, Honolulu, USA (*review*)
Theoretical and observational progress on large-scale structure of the Universe, Garching, Germany
A 3D view on galaxy evolution: from statistics to physics, Heidelberg, Germany
Cosmological simulations: From galaxies to large scales, Sesto, Italy
What happened to the gas? Understanding the evolution of galaxies, La Laguna, Tenerife (*review*)
Reionization: A multi-wavelength approach, Kruger Park, South Africa
Back at the edge of the Universe, Sintra, Portugal (*review*)
Extracting information from weak lensing: Small scales = Big problem, Leiden, the Netherlands
- 2014 Quenching and quiescence, Heidelberg, Germany (*conference summary*)
Galaxy evolution, Ringberg, Germany
The formation and growth of galaxies in the young universe, Obergurgl, Austria (*review*)
Fire down below: The impact of feedback on star and galaxy formation, Santa Barbara, USA
Galactic superwinds: beyond phenomenology, Puerto Rico

- 2013 Blaauw symposium: Star Formation (Laws) in Galaxies, Groningen, the Netherlands
The future of dark matter astro-particle physics: Insights and perspectives, Trieste, Italy (*review*)
Galaxy bias: Non-linear, non-local and non-gaussian, Trieste, Italy
Cosmology with small-scale structure, Tokyo, Japan
Mind the gap: from microphysics to large-scale structure in the universe, Cambridge, UK (*review*)
Circumgalactic medium-galaxy interface, Leiden, the Netherlands
- 2012 The dynamic nature of baryons in halos, Leiden, the Netherlands (*review*)
Gas, stars, and black holes in the galaxy ecosystem, Leiden, the Netherlands
The quest for dark energy: when theory meets simulations, Ringberg, Germany
UV astronomy: HST and beyond, Kauai, USA (*review*)
Missing baryons in the local universe, Cervia-Milano Marittima, Italy (*review*)
Disc galaxy formation in a cosmological context, Heidelberg, Germany
Theory goes out on a limb: Predictions for $z > 1$ galaxies, Leiden, the Netherlands
Gas flows in galaxies, Baltimore, USA (*review*)
- 2011 Does the redshift zero universe look as predicted by models?, Heidelberg, Germany (*review*)
The Cosmic Odyssey of Baryons, Marseille, France (*conference summary*)
The physics of galaxy formation, Durham, U.K. (*review*)
Gas in galaxies: from cosmic web to molecular clouds, Seon, Germany (*review*)
Galaxy evolution, Ringberg, Germany
- 2010 Pastoor Schmeitz prize lecture, National astronomy meeting, Cuijk, The Netherlands
Galaxies in the distant universe: Dynamics, gas, and early evolution, Ringberg, Germany
Oort workshop: Emergence of the Hubble Sequence at $1 < z < 3$, Leiden, the Netherlands
How to weigh clusters of galaxies, Leiden, the Netherlands
- 2009 Hunting for the dark: The hidden side of galaxy formation, Malta
The first galaxies: Theoretical predictions and observational clues, Rio de Janeiro, Brazil (*review*)
SFR@50: Filling the cosmos with stars, Spineto, Italy
Harvesting the desert: The universe between redshifts 1 and 3, Marseille France (*review*)
The cosmic evolution of helium and hydrogen, Ringberg, Germany (*review*)
- 2008 The impact of simulations in cosmology and galaxy formation, Trieste, Italy
The interplay between the interstellar and intergalactic media, Montreal, Canada
Far Away: Light in the young universe at redshift beyond three, Paris, France
Theory in the Virtual Observatory, Garching, Germany
- 2007 Gas accretion and star formation in galaxies, Garching, Germany
Dark galaxies and lost baryons, Cardiff, U.K. (*review*)
HI survival through cosmic times, Spineto, Italy
- 2006 The Kennicutt-Schmidt law, San Diego, USA
Non-virialized X-ray components in clusters of galaxies, Bern, Switzerland
The scientific requirements for Estremo/WFXRT, Bologna, Italy
- 2005 The scientific requirements for extremely large telescopes, Cape Town, South Africa (*review*)
Probing early structure formation with mass, light and chemistry, Minneapolis, USA
Open questions in cosmology: The first billion years, Garching, Germany
Reionizing the universe, Groningen, The Netherlands
From lithium to uranium: Elemental tracers of early cosmic evolution, Paris, France (*review*)
- 2004 Galaxy-intergalactic medium interactions, Santa Barbara, USA
The quest for a concordance cosmology and beyond, Cambridge, U.K.
CIAR meeting, Banff, Canada

Invited colloquia (2003-)

2018	University of Oslo	Norway
	University of Groningen	The Netherlands
2017	University of Helsinki	Finland
	Aix-Marseille University	France
2016	Durham University	UK
	CEA Saclay	France
	UC Berkeley	USA
	UC Santa Cruz	USA
2015	University of Zurich	Switzerland
	Instituto de Astrofisica de Canarias	Spain
	Liverpool John Moores University	UK
2014	Canadian Institute for Theoretical Astrophysics (CITA)	Canada
	University of Leicester	UK
	Stockholm University	Sweden
2013	UC Berkeley	USA
	Stanford University	USA
	University of Chicago	USA
	University of Geneva & Ecole Polytechnique Fédérale de Lausanne	Switzerland
2012	Astron	The Netherlands
	Heidelberg joint ARI/ITA/LSW/MPIA/MPIK/HITS	Germany
2011	Massachusetts Institute of Technology	USA
	University of Nottingham	UK
2010	University of Texas	USA
	University of Cambridge	UK
2009	University of Hawaii	USA
2008	Joint ESO, MPA, MPE	Germany
	New York University	USA
	Institute for Advanced Study	USA
2007	University of Edinburgh	U.K.
2006	Institut d'Astrophysique de Paris	France
	Nijmegen University	The Netherlands
2005	Utrecht University	The Netherlands
	University of Amsterdam	The Netherlands
	ETH Zurich	Switzerland
	Joint ICTP-SISSA	Italy
2004	Leiden University	The Netherlands (2x)
	University of Toronto	Canada
	University of British Columbia	Canada
	University of Texas	USA
	University of Washington	USA (2x)
	University of Victoria	Canada (2x)
	Princeton University	USA
	Stanford University	USA
	University of Michigan	USA

2003	Columbia University	USA
	Penn State University	USA
	UC Santa Barbara	USA
	Yale University	USA
	University of Cambridge	U.K.
	University of Groningen	The Netherlands
	Max-Planck Institut für Astrophysik	Germany