

Silvia Toonen

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Research positions

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| Jan 2021 - Present | Assistant Professor
Permanent staff member at the Anton Pannekoek Institute, University of Amsterdam (the Netherlands)
Vidi-fellow laureate, Aspasia offer. |
| Mar. 2019 - Dec 2020 | Lecturer
Permanent staff member at the Institute of Gravitational Wave Astronomy, University of Birmingham (UK) |
| Jan. 2017 - Feb. 2019 | Veni Fellowship
Dutch national fellowship for talented researchers at the start of their scientific career. Home institute: University of Amsterdam |
| Jan. 2014 - July 2016 | Postdoctoral researcher at Leiden Observatory, the Netherlands
With Prof. Dr. Portegies Zwart at Leiden Observatory (the Netherlands) |
| Sep. 2008 - May 2013 | PhD Astronomy
Thesis: The evolution of close binaries with white dwarf components
With Prof. Dr. Nelemans at the Radboud Universiteit (the Netherlands) |

Extended work visits

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| Jan 2021 - Dec. 2023 | Honorary Lecturer
Institute of Gravitational Wave Astronomy, University of Birmingham (UK) |
| Aug 2017 - Oct. 2017 | Visiting scolar
Collaboration with Dr. Shen and Prof. Dr. Kasen at the University of California at Berkeley (USA) |
| Oct. - Dec. 2016 | Guest scientist
Collaboration with Dr. Perets at the Technion (Israel) |
| Sep. - Nov 2013 | Postdoctoral researcher
With Prof. Dr. Nelemans at the Radboud Universiteit (the Netherlands) |
| May - July 2013 | Work visit with Frye stipend
Collaboration with Prof. Dr. Gänsicke at the University of Warwick (UK) |
| Aug. 2006 - Jan. 2007 | Research intern
With Prof. Dr. Beckman and Dr. Fathi at the Instituto de Astrofísica de Canarias, Tenerife, Spain. |

Educational degree

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| 2008-2013 | PhD, Astronomy
<i>Radboud University, Nijmegen, The Netherlands</i>
Thesis: The evolution of close binaries with white dwarf components |
| 2006-2008 | Master of Science, Astronomy – Cum laude
<i>Leiden University, Leiden, the Netherlands;</i>
Resulting in two papers on different topics |
| 2002-2006 | Bachelor of Science in Astronomy
<i>Leiden University, Leiden, the Netherlands;</i> |

Fellowships & awards

- Veni-fellow 2022, host of Jan van Roestel
- (as PI) Grant from Dutch funding agencies for the organisation of the BH workshop in June. 2023; NOVA (€3920)
- Vidi Fellowship 2021, Dutch national grant as PI, (€800.000)
- Veni fellowship 2021, host of Jan van Roestel
- Marie-Curie 2021 host of Tomer Shenar
- Nominated for Outstanding Teaching Award 2020 of the University of Birmingham
- Newton-Wong 2020 host of Yan Gao
- Rubicon-Fellow 2019 host of Valeriya Korol
- Veni Fellowship 2016, Dutch national grant as PI, (€250.000)
- (as PI) Various grants from Dutch funding agencies for the organisation of the SNla workshop in Feb. 2018; KNAW (€5000), NOVA (€4000), NWO incidentele steun (€2250)
- (as PI) Various grants from Dutch funding agencies for the organisation of the triple workshop in Sep. 2018; KNAW (€5000), NWO incidentele steun (€2250)
- Various grants from Dutch private funding agency LKBF for travel in 2008-present (~€7000)
- Travel grant from Texas A&M university in 2016 (\$1000)
- Award for best talk of an early career scientist, conference in Lake Louise, Canada (2014)
- Frye Stipend 2011 for talented female PhD candidates (€3500)
- Cum laude degree, Master of Science, Astronomy, at Leiden University
- Scholarship from Leiden University Fund for a 6-month research internship at Instituto de Astrofísica de Canarias, Tenerife, Spain (2006)

Selected invited reviews, colloquia, seminars and talks

- ~30 invited colloquia & seminars at major research institutions around the world including at Oxford, Cambridge and Harvard ITC.
- ~25 invited talks & reviews at a variety of international conferences and workshops

Invited colloquia and seminars: Sheffield, UK, 2023; AEI Hannover, 2022, Hannover, Germany; Boston University, 2022, Boston, USA; Heidelberg Joint Astronomical Colloquium, 2022, Heidelberg, Germany; MPG/AEI, 2021, Potsdam, Germany; UFRGS, 2021, Porto Alegre, Brazil; Leiden Observatory, 2021, Leiden, The Netherlands; Astron/JIVE, 2021, Dwingeloo, The Netherlands; Mullard Space Science Laboratory, 2021; Groningen, The Netherlands, 2021; Liverpool John Moores University, 2021; Exeter, UK, 2021; Warwick, UK, 2021; Carnegie-Mellon & Pittsburgh, USA, 2021; Caltech, USA, 2021; Geneva & Sauvigny, Switzerland, 2020; Carnegie Observatories, USA, 2020; NRC-HIA, Victoria, Canada, 2020; JBCA & Manchester, UK, 2020; Royal Observatory, Edinburgh, UK, 2020; Oxford, UK, 2020; Cambridge, UK, 2019; Surrey, UK, 2019; London UCL, UK, 2019; Harvard ITC, USA, 2019; Nijmegen, The Netherlands, 2018; Southampton, UK, 2018; Leuven, Belgium, 2017; Lund, Sweden, 2017; Berkeley, USA 2017 (TAC Seminar); Haifa, Israel (2016).

Plenary speaker: LISA symposium 2022; NAC, Leiden, 2021; TRENDY III, Chicago, 2021;

Invited talks & reviews: Massive multiples, Leuven, Belgium, 2023; alpha Centauri, Nice, France, 2023; Cambridge, 2022; Glasgow, 2022; Quy Nhon, Vietnam, 2022; LISA star symposium, virtual, 2022; GWPAW 2021, virtual, 2021; CEPO2021, virtual, 2021; EAS SS7, Leiden, NL, 2021; EAS SS29, Leiden, NL, 2021; DDA, USA, 2021; Leuven/Bonn meeting, 2020; ESO, Garching, Germany, 2020; KITP, USA, 2019; Warsaw, Poland, 2018; Rome, Italy, 2018; Berlin, Germany, 2018; Birmingham, UK, 2017; Stockholm, Sweden (2x), 2017; Rome, Italy, 2017; Palermo, Italy, 2015; Lake Louise, Canada, 2014 (award);

- Talk: Cambridge, UK, 2019; Garching, Germany 2017; Stockholm, Sweden, 2017; Forth Worth, USA, 2017; Dallas, USA, 2016; Haifa, Israel, 2015; EWASS, Tenerife, Spain, 2015; Ulaan Baatar, Mongolia, 2014; Garching, Germany, 2012; Krakow, Poland, 2012; NAC, The Netherlands, 2012; Noordwijk, The Netherlands, 2012; NOVA meetings, The Netherlands, 2012 & 2013.
- Poster: Padua, Italy, 2011; Tübingen, Germany, 2010; Mykonos, Greece, 2010; Tucson, USA, 2010; NAC, The Netherlands, 2009 and 2010.
- Workshops: Leiden, The Netherlands, 2x in 2019; Sheffield, UK, 2018; Leiden, The Netherlands, 2018; Stockholm, Sweden, 2017; Leiden, The Netherlands, 2013; Leiden, The Netherlands, 2010; Leiden, The Netherlands, 2009; Cape Town, South-Africa, 2008; NOVA fall school, The Netherlands, 2008.

Organisational skills

Scientific organisation:

- 2022-present Core member of the 4MOST Science team, S11 survey
- 2021-present Core members the Einstein Telescope Observation Science Board, division 3 & 7
- 2020-2022 Chapter coordinator for LISA white book
- 2019-present Chair of LISA working package on ‘Demographics, formation, evolution and electromagnetic counterparts of stellar-mass compact objects’.
- 2010-2014 PI of PopCORN project
Extensive collaboration for comparison of various binary population synthesis codes. Paper published in A&A.
- 2003-2004 OC of scientific excursion of 9 days to Munich and Vienna for 40 students

Conference organisation:

- 2023 SOC: EAS S11 symposium on ‘Stellar interactions: contact binary stars and common-envelope evolution’, Krakow, Poland
- 2023 Co-chair: Workshop ‘BH detections in the local group’, Leiden, NL
- 2022 Co-chair: 3-month KITP workshop ‘ White dwarfs as probes’, CA, USA
- 2022 SOC: GWPAW Conference ‘GW physics and astronomy workshop’, Melbourne, Australia
- 2022 SOC: EWASS support session for early career astronomers, Valencia, Spain;
- 2021 SOC: EWASS S8 special session on ‘Stars on the pathway to become GW sources’, Leiden, NL
- 2021 SOC: EWASS support session for early career astronomers, Leiden, NL
- 2021 Co-chair, KITP virtual mini workshop ‘ White dwarfs as probes’, CA, USA
- 2021 SOC: Conference ‘Triple evolution & dynamics III’, ~200 participants, Chicago, USA
- 2020 SOC: ‘Triple evolution & dynamics III’, China, cancelled due to Coronavirus
- 2019 SOC: Conference ‘Compact white dwarf binaries’, ~100 participants, Armenia
- 2019 SOC: Conference ‘Binaries in the universe’, ~100 participants, Czech Republic
- 2019 SOC: Conference ‘Stars on the run II’, ~60 participants, Germany
- 2019 Co-chair: Conference ‘Beginnings & ends of double white dwarfs’, ~60 participants, DK
- 2019 Co-chair: Workshop ‘Beginnings & ends of double white dwarfs’, ~12 participants, DK
- 2019 Co-chair: EWASS special session ‘Stellar multiplicity in the Gaia era’, France
- 2019 Co-chair: Workshop ‘Electron-Capture-Initiated Stellar Collapse’, ~25 participants, NL
- 2018 **Chair:** Lorentz Centre Workshop ‘Triple evolution & dynamics II’, 55 participants, NL
- 2018 Co-chair: Workshop ‘Observational signatures of Type Ia supernovae Progenitors III’, ~55 participants, NL
- 2016 SOC: Conference ‘Stars on the run’, ~60 participants, Germany

*SOC = member of Scientific Organising Committee

Institutional responsibilities:

2022-present	Organiser of NWO's career weekend for 3th year PhD students
2021-present	Board of WiF (Women in the Faculty of Science) at Univ. of Amsterdam
2020-2021	Member of Equity, Inclusion and Diversity Committee at Univ. of Amsterdam
2019-2021	Organiser of astrophysics and space research seminar series
2019-2021	Founding organiser of PhD meet & greet with seminar speakers
2019-2021	Member of search committee for PhDs candidates at Univ. of Birmingham
2018-2021	Member of Equity, Inclusion and Diversity Committee at Univ. of Birmingham
2018-2019	Member of search committee for postdoctoral fellows at Univ. of Birmingham
2018-2020	Member of PhD recruitment panel at Univ. of Birmingham
2017-2019	Founding organiser of bi-weekly lunch meeting for postdocs Aim: foster the postdoc community and exchange ideas and experiences, regarding teaching & mentoring, job applications etc.
2014-2015	LEAPS 2015 (Leiden/ESA astrophysics Program for BSc&MSc Summer Students) REU-level internship for 22 students at Leiden Observatory, ESA and science-based companies (Airbus, TNO). Organisation included promotion of program, recruitment of candidate students and research supervisors, application procedure, housing, stipends, colloquium series etc.
2014-2015	Organisation and chair of weekly group meeting (2014-2015) on high-energy astrophysics

Teaching and mentoring experience

Mentoring and (co-) supervision of graduate and undergraduate students:

Resulting in theses and publications

- Primary supervisor of 3 PhD student (C. Bruenech, F. Kummer, University of Amsterdam, A. Dorozsmai, Birmingham)
 - Host of 4 PD fellows (J. Van Roestel & T. Shenar, Amsterdam; V. Korol & Y. Gao, Birmingham)
 - Secondary supervisor of PhD student (F. Zainol, Birmingham)
 - Primary supervisor of 4 MSc students (A. Parkosidis, G. Simion, T. Konijn, K. Temmink (paper published in A&A), Amsterdam), 4 MPhys students (Birmingham)
 - Primary supervisor of BSc student (R. Limmen, Amsterdam)
 - Primary supervisor of 2 summer students (D. Bandopadhyay, Birmingham; B. Curd, Leiden)
 - Co-supervisor of project in PhD (Y. Zenati, Technion, paper published in MNRAS)
 - Co-supervisor of 3 MSc students (F. Temmink, S. Luitjen, Amsterdam; M. Bours, Nijmegen, paper published in A&A)
 - Co-supervisor of 4 BSc students (E. Van der Grijp, Amsterdam; H. Klein Woud, Leiden; R. Castelijin, Nijmegen)
 - Mentor of 3 MSc students (Adam Parkosidis, Gabriel Simion, Iris Reitsma)
- Former students that continued in academic positions: Parkosidis (PhD in Amsterdam), K. Temmink (PhD in Nijmegen), Curd (PhD at Harvard CfA), Bours (PhD in Warwick, PD in Valparaiso), Castelijin (PhD at Nikhef)*

Teaching & course developments:

2021-present	Lecturer for MSc course 'Stellar evolution and structure'
Jan.-Apr. 2020	Lecturer for BSc course 'Introduction to Astronomy'
Oct.-Nov. 2019	Lecturer & supervisor at GrEAT program (Gravitational-wave Excellence through Alliance Training) on 'white dwarfs in the gravitational wave era'
June 2018	Guest lecturer for Dutch Astronomy Olympiad on 'binary stars & GWs'
Nov. 2015	Guest lecturer for university course 'Compact Object and Accretion'
2008-2010	Academic teaching assistant

- Courses on stellar evolution, asteroseismology, compact binaries, optics & telescopes. The responsibilities include teaching exercise classes and computer lab, development of new materials, grading
- 2003-2008 Head teacher and assistant teacher mathematics at preparation training for final exams at high school (2003-2008). The responsibilities include:
- Assist with organising and preparing 3-day courses and its accompanying materials
 - Class wide explanation of the subjects and exercise classes.
 - Responsibility over 20 to 30 students and 4 to 6 assistant-teachers

Miscellaneous

Commissions of trust:

- PhD committee member: University of Amsterdam (Lieke van Son, Sarah Brands, Geert Raaijmakers, Kenzie Nimmo, Mathieu Renzo, Manos Zapartas); University of California, Santa Cruz (Rosa Wallace Everson), University of Concepcion (Jose Manuel Pinto Pereira); Katholieke Universiteit Leuven (Soetkin Janssens); Rochester Institute of Technology (Emily Wilson); University of Warwick (Elena Cukanovaite); University of Birmingham (Coen van Neijssel); Leiden University (Alex Rimoldi).
- Funding referee for STFC, Fondecyt, Binational Science Foundation (US-Israel)
- Scientific referee of the journals Nature, A&A, ApJ, MNRAS and the HST observatory
- Member of the Education Advisory Committee of Astronomy (2006-2008) and Physics & Astronomy combined (2005-2008) at Leiden Observatory

Computer expertise:

TRES (PI)	Innovative code for modelling triple star evolution
SeBa (developer)	Fast, parameterized code for modelling binary evolution
MESA (user)	Detailed code for modelling single stellar evolution
AMUSE (user)	Software framework for astrophysical simulations to apply and couple codes from different domains (e.g. stellar evolution, stellar dynamics, hydrodynamics)
Programming languages	C++ (fluent), Python (fluent), IDL (basic), Fortran-77 (basic), LaTeX (fluent), SVN (fluent), Github (fluent)

Service and public outreach:

- Founder and moderator of the first Facebook group dedicated to triple evolution and dynamics with the aim to connect researchers working on multiple systems on diverse scales and methods. Particularly important in the time of restricted travel (2020).
- Synthetic models of Milky Way double white dwarfs for predictions and testing of data analysis pipelines of LISA, Gaia etc. Moreover, my models are integrated in the official LISA data processing flow, and as such are used e.g. in the ESA application for the L3 missions of the Cosmic Vision Programme in 2017 (arXiv:1702.00786)
- Author of popular article for scientific magazine 'Zenit'
- Several press interviews (Kijk, astronomy.com)
- General outreach through popular lectures at public observing nights, university open days, intro to physics to young girls, associations for weather and astronomy etc.
- Lecture at career day for MSc students (November 2017)
- OC of renovation of exhibits at & fundraising for the Old Observatory Museum in Leiden (2014-2015)

Observing experience:

- Photometric Survey of the Milky Way at the INT (July 2010, November 2009, July 2009)
- AMCVn spectroscopy at the WHT (November 2009)

Language skills: Dutch (native), English (fluent), German (reasonable), Spanish (reasonable)