Marc van der Sluys

Publication list

1. Publication summary

Refereed publications:	100	Online publications:	17
Non-refereed publications:	11	Scientific software packages:	21
Citations:	24852	Contributions to conferences:	24
H-index:	61	Seminar talks and colloquia:	21
i10-index:	88	Popular talks and lectures:	160

2. Refereed publications

2.1. Refereed short-author-list publications

1. Meijer, Q., van der Sluys & Caudill 2024, arXiv/2410.07855, submitted: **Robustness of Deep Learning Models to Precession in Gravitational-Wave Searches for Intermediate-Mass Black Hole Binaries**
2. Martins, A., et al. 2024, arXiv/2409.05068, submitted: **Improving Early Detection of Gravitational Waves from Binary Neutron Stars Using CNNs and FPGAs**
3. van der Sluys, M. & van Kan, P., 2022, arXiv/2209.01557, submitted: **SolTrack: a free, fast and accurate routine to compute the position of the Sun**
4. Catau, R., et al. 2020, Urban and Transit Planning, 415: **High-Concentration Solar Energy Systems for the Built Environment**
5. Sonneveld, P., et al. 2019, GreenSys 1296, 715: **A concentrated-solar system to reduce greenhouse heat load and generate energy**
6. Verbunt, F., & van der Sluys, M. 2019, Journal for the History of Astronomy 50.4, 383: **Why Halley did not discover proper motion and why Cassini did**
7. van der Sluys, M., van Kan, P., & Sonneveld, P. 2015, AIPC, 1679, 080003: **CPV in the built environment**
8. P. Sonneveld, M. van der Sluys, A. van Rhijn & M. Hebbink, GreenSys 1170, 477, 2015: **Feasibility study of an electricity delivering Fresnel greenhouse**
9. van Haaften, L. M., Nelemans, G., Voss, R., van der Sluys, M. V., & Toonen, S. 2015, A&A, 579, A33: **Population synthesis of classical low-mass X-ray binaries in the Galactic Bulge**
10. Veitch, J., et al. 2015, PhRvD, 91, 042003: **Parameter estimation for compact binaries with ground-based gravitational-wave observations using the LALInference software library**
11. Sidery, T., et al. 2014, PhRvD, 89, 084060: **Reconstructing the sky location of gravitational-wave detected compact binary systems: Methodology for testing and comparison**
12. Shah, S., Nelemans, G., & van der Sluys, M. 2013, A&A, 553, A82: **Using electromagnetic observations to aid gravitational-wave parameter estimation of compact binaries observed with LISA. II. The effect of knowing the sky position**
13. Ratti, E. M., et al. 2013, MNRAS, 431, L10: **IGR J19308+0530: Roche lobe overflow on to a compact object from a donor 1.8 times as massive**
14. van Haaften, L. M., Nelemans, G., Voss, R., Toonen, S., Portegies Zwart, S. F., Yungelson, L. R., & van der Sluys, M. V. 2013, A&A, 552, A69: **Population synthesis of ultracompact X-ray binaries in the Galactic bulge**
15. Shah, S., van der Sluys, M., & Nelemans, G. 2012, A&A, 544, A153: **Using electromagnetic observations to aid gravitational-wave parameter estimation of compact binaries observed with LISA**
16. Veitch, J., et al. 2012, PhRvD, 85, 104045: **Estimating parameters of coalescing compact binaries with proposed advanced detector networks**
17. Woods, T. E., Ivanova, N., van der Sluys, M. V., & Chaichenets, S. 2012, ApJ, 744, 12: **On the Formation of Double White Dwarfs through Stable Mass Transfer and a Common Envelope**

18. Loveridge, A. J., van der Sluys, M. V., & Kalogera, V. 2011, ApJ, 743, 49: **Analytical Expressions for the Envelope Binding Energy of Giants as a Function of Basic Stellar Parameters**
19. M. Politano, M.V. van der Sluys, R.E. Taam, and B. Willems, 2010, ApJ 720, 1752: **Population Synthesis of Common Envelope Mergers: I. Giant Stars with Stellar or Substellar Companions**
20. V. Raymond, M.V. van der Sluys, I. Mandel, V. Kalogera, C. Röver, N. Christensen, 2010, CQG 27, 114009: **The effects of LIGO detector noise on a 15-dimensional Markov-chain Monte-Carlo analysis of gravitational-wave signals**
21. G. Nelemans, L.R. Yungelson, M.V. van der Sluys and Christopher A. Tout, 2010, MNRAS 401, 1347: **The chemical composition of donors in AM CVn stars and ultra-compact X-ray binaries: observational tests of their formation**
22. Marc van der Sluys, Ilya Mandel, Vivien Raymond, Vicky Kalogera, Christian Röver and Nelson Christensen, 2009, CQG 26, 204010: **Parameter estimation for signals from compact binary inspirals injected into LIGO data**
23. B. Aylott et al. 2009, CQG 26, 165008: **Testing gravitational-wave searches with numerical relativity waveforms: Results from the first Numerical INJection Analysis (NINJA) project**
24. V. Raymond, M.V. van der Sluys, I. Mandel, V. Kalogera, C. Röver and N. Christensen 2009, CQG 26, 114007: **Degeneracies in Sky Localisation Determination from a Spinning Coalescing Binary through Gravitational Wave Observations: a Markov-Chain Monte-Carlo Analysis for two Detectors**
25. L. Cadonati et al. 2009, CQG 26, 114008: **Status of NINJA: the Numerical INJection Analysis project**
26. M.V. van der Sluys, C. Röver, A. Stroeer, V. Raymond, I. Mandel, N. Christensen, V. Kalogera, R. Meyer and A. Vecchio 2008, ApJ 688, L61: **Gravitational-wave astronomy with inspiral signals of spinning compact-object binaries**
27. M. Politano, R.E. Taam, M.V. van der Sluys, and B. Willems 2008, ApJ 687, L99: **Common Envelope Mergers: A Possible Channel for Forming Single sdB Stars**
28. M.V. van der Sluys, V. Raymond, I. Mandel, C. Röver, N. Christensen, V. Kalogera, R. Meyer and A. Vecchio 2008, CQGra 25, 184011: **Parameter estimation of spinning binary inspirals using Markov-chain Monte Carlo**
29. K. Belczynski, R.E. Taam, E. Rantsiou and M.V. van der Sluys 2008, ApJ 682, 474: **Black-hole spin evolution: implications for short hard gamma-ray bursts and gravitational-wave detection**
30. M.V. van der Sluys, F. Verbunt and O.R. Pols 2006, A&A 460, 209: **Modelling the formation of double white dwarfs**
31. J. in 't Zand, A. Cumming, M. van der Sluys, F. Verbunt and O. Pols 2005, A&A 441, 675: **On the possibility of a helium white dwarf donor in the presumed ultracompact binary 2S 0918-549**
32. M.V. van der Sluys, F. Verbunt and O.R. Pols 2005, A&A 440, 973: **Reduced magnetic braking and the magnetic capture model for the formation of ultra-compact binaries**
33. M.V. van der Sluys, F. Verbunt and O.R. Pols 2005, A&A 431, 647: **Creating ultra-compact binaries in globular clusters through stable mass transfer**
34. S.-C. Yoon, N. Langer, and M. van der Sluys 2004, A&A 425, 207: **On the stability of thermonuclear shell sources in stars**
35. M.V. van der Sluys and H.J.G.L.M. Lamers 2003, A&A 398, 181: **The dynamics of the nebula M1-67 around the run-away Wolf-Rayet star WR 124**

2.2. Refereed LIGO-Virgo Collaboration (LVC) publications

36. The LIGO Scientific Collaboration, et al. 2024, arXiv, arXiv:2403.03004: **Ultralight vector dark matter search using data from the KAGRA O3GK run**
37. The LIGO Scientific Collaboration, et al. 2023, arXiv:2308.03822: **Search for Eccentric Black Hole Coalescences during the Third Observing Run of LIGO and Virgo**
38. Abbott, R., et al. 2023, ApJS, 267, 29: **Open Data from the Third Observing Run of LIGO, Virgo, KAGRA, and GEO**

39. Acernese, F., et al. 2023, PhRvL, 131, 041403: **Frequency-Dependent Squeezed Vacuum Source for the Advanced Virgo Gravitational-Wave Detector**
40. Acernese, F., et al. 2023, JPhCS, 2429, 012039: **The Advanced Virgo+ status**
41. Acernese, F., et al. 2023, JPhCS, 2429, 012040: **Advanced Virgo Plus: Future Perspectives**
42. Abbott, B. P., et al. 2016, PhRvX, 6, 041014: **Improved Analysis of GW150914 Using a Fully Spin-Precessing Waveform Model**
43. Abbott, B. P., et al. 2016, PhRvL, 116, 241102: **Properties of the Binary Black Hole Merger GW150914**
44. Aasi, J., et al. 2016, PhRvD, 93, 042007: **First low frequency all-sky search for continuous gravitational wave signals**
45. Aasi, J., et al. 2016, PhRvD, 93, 042006: **Search of the Orion spur for continuous gravitational waves using a loosely coherent algorithm on data from LIGO interferometers**
46. Abbott, B. P., et al. 2016, PhRvD, 93, 042005: **All-sky search for long-duration gravitational wave transients with initial LIGO**
47. Abbott, B. P., et al. 2016, LRR, 19, 1: **Prospects for Observing and Localizing Gravitational-Wave Transients with Advanced LIGO and Advanced Virgo**
48. Aasi, J., et al. 2015, ApJ, 813, 39: **Searches for Continuous Gravitational Waves from Nine Young Supernova Remnants**
49. Aasi, J., et al. 2015, CQGra, 32, 115012: **Characterization of the LIGO detectors during their sixth science run**
50. Acernese, F., et al. 2015, JPhCS, 610, 012014: **The Advanced Virgo detector**
51. Accadia, T., et al. 2015, ppyc.conf, 261: **Advanced Virgo Interferometer: a Second Generation Detector for Gravitational Waves Observation**
52. Aasi, J., et al. 2015, PhRvD, 91, 062008: **Directed search for gravitational waves from Scorpius X-1 with initial LIGO data**
53. Aasi, J., et al. 2015, PhRvD, 91, 022004: **Narrow-band search of continuous gravitational-wave signals from Crab and Vela pulsars in Virgo VSR4 data**
54. Aasi, J., et al. 2015, PhRvD, 91, 022003: **Searching for stochastic gravitational waves using data from the two colocated LIGO Hanford detectors**
55. Acernese, F., et al. 2015, CQGra, 32, 024001: **Advanced Virgo: a second-generation interferometric gravitational wave detector**
56. Aasi, J., et al. 2014, PhRvL, 113, 231101: **Improved Upper Limits on the Stochastic Gravitational-Wave Background from 2009-2010 LIGO and Virgo Data**
57. Aartsen, M. G., et al. 2014, PhRvD, 90, 102002: **Multimessenger search for sources of gravitational waves and high-energy neutrinos: Initial results for LIGO-Virgo and IceCube**
58. Aasi, J., et al. 2014, PhRvD, 90, 062010: **First all-sky search for continuous gravitational waves from unknown sources in binary systems**
59. Accadia, T., et al. 2014, CQGra, 31, 165013: **Reconstruction of the gravitational wave signal h(t) during the Virgo science runs and independent validation with a photon calibrator**
60. Aasi, J., et al. 2014, PhRvL, 113, 011102: **Search for Gravitational Waves Associated with γ-ray Bursts Detected by the Interplanetary Network**
61. Aasi, J., et al. 2014, PhRvD, 89, 122004: **Methods and results of a search for gravitational waves associated with gamma-ray bursts using the GEO 600, LIGO, and Virgo detectors**
62. Aasi, J., et al. 2014, PhRvD, 89, 122003: **Search for gravitational radiation from intermediate mass black hole binaries in data from the second LIGO-Virgo joint science run**
63. Aasi, J., et al. 2014, CQGra, 31, 115004: **The NINJA-2 project: detecting and characterizing gravitational waveforms modelled using numerical binary black hole simulations**
64. Aasi, J., et al. 2014, PhRvD, 89, 102006: **Search for gravitational wave ringdowns from perturbed intermediate mass black holes in LIGO-Virgo data from 2005-2010**

65. Aasi, J., et al. 2014, PhRvL, 112, 131101: **Constraints on Cosmic Strings from the LIGO-Virgo Gravitational-Wave Detectors**
66. Aasi, J., et al. 2014, CQGra, 31, 085014: **Application of a Hough search for continuous gravitational waves on data from the fifth LIGO science run**
67. Aasi, J., et al. 2014, ApJ, 785, 119: **Gravitational Waves from Known Pulsars: Results from the Initial Detector Era**
68. Aasi, J., et al. 2014, ApJS, 211, 7: **First Searches for Optical Counterparts to Gravitational-wave Candidate Events**
69. Aasi, J., et al. 2013, PhRvD, 88, 102002: **Directed search for continuous gravitational waves from the Galactic center**
70. Aasi, J., et al. 2013, NaPho, 7, 613: **Enhanced sensitivity of the LIGO gravitational wave detector by using squeezed states of light**
71. Abadie, J., et al. 2012, ApJ, 755, 2: **Implications for the Origin of GRB 051103 from LIGO Observations**
72. Abadie, J., et al. 2011, PhRvL, 107, 261102: **Directional Limits on Persistent Gravitational Waves Using LIGO S5 Science Data**
73. Abadie, J., et al. 2011, ApJ, 737, 93: **Beating the Spin-down Limit on Gravitational Wave Emission from the Vela Pulsar**
74. Abadie, J., et al. 2011, PhRvD, 83, 042001: **Search for gravitational waves associated with the August 2006 timing glitch of the Vela pulsar**
75. Abadie, J., et al. 2011, PhRvD, 83, 122005: **Search for gravitational waves from binary black hole inspiral, merger, and ringdown**
76. Abadie, J., et al. 2011, ApJ, 734, L35: **Search for Gravitational Wave Bursts from Six Magnetars**
77. Abadie, J., et al. 2011, PhRvD, 83, 042001: **Search for gravitational waves associated with the August 2006 timing glitch of the Vela pulsar**
78. Abadie, J., et al. 2010, NIMPA, 624, 223: **Calibration of the LIGO gravitational wave detectors in the fifth science run**
79. Abadie, J., et al. 2010, PhRvD, 82, 102001: **Search for gravitational waves from compact binary coalescence in LIGO and Virgo data from S5 and VSR1**
80. Abadie, J., et al. 2010, ApJ, 722, 1504: **First Search for Gravitational Waves from the Youngest Known Neutron Star**
81. Abadie, J., et al. 2010, CQGra, 27, 173001: **TOPICAL REVIEW: Predictions for the rates of compact binary coalescences observable by ground-based gravitational-wave detectors**
82. Abadie, J., et al. 2010, ApJ, 715, 1453: **Search for Gravitational-wave Inspiral Signals Associated with Short Gamma-ray Bursts During LIGO's Fifth and Virgo's First Science Run**
83. Abbott, B. P., et al. 2010, ApJ, 715, 1438: **Search For Gravitational-wave Bursts Associated with Gamma-ray Bursts using Data from LIGO Science Run 5 and Virgo Science Run 1**
84. Abadie, J., et al. 2010, PhRvD, 81, 102001: **All-sky search for gravitational-wave bursts in the first joint LIGO-GEO-Virgo run**
85. Abbott, B. P., et al. 2010, ApJ, 713, 671: **Searches for Gravitational Waves from Known Pulsars with Science Run 5 LIGO Data**
86. Abbott, B. P., et al. 2009, PhRvD, 80, 102002: **Search for high frequency gravitational-wave bursts in the first calendar year of LIGO's fifth science run**
87. Abbott, B. P., et al. 2009, PhRvD, 80, 102001: **Search for gravitational-wave bursts in the first year of the fifth LIGO science run**
88. Abbott, B. P., et al. 2009, PhRvD, 80, 062002: **First LIGO search for gravitational wave bursts from cosmic (super)strings**
89. Abbott, B. P., et al. 2009, PhRvD, 80, 062001: **Search for gravitational wave ringdowns from perturbed black holes in LIGO S4 data**

90. Abbott, B. P., et al. 2009, PhRvD, 80, 047101: **Search for gravitational waves from low mass compact binary coalescence in 186 days of LIGO's fifth science run**
91. Abbott, B. P., et al. 2009, PhRvD, 80, 042003: **Einstein@Home search for periodic gravitational waves in early S5 LIGO data**
92. Abbott, B. P., et al. 2009, Natur, 460, 990: **An upper limit on the stochastic gravitational-wave background of cosmological origin**
93. Abbott, B. P., et al. 2009, ApJ, 701, L68: **Stacked Search for Gravitational Waves from the 2006 SGR 1900+14 Storm**
94. Abbott, B. P., et al. 2009, RPPh, 72, 076901: **LIGO: the Laser Interferometer Gravitational-wave Observatory**
95. Abbott, B., et al. 2009, NJPh, 11, 073032: **Observation of a kilogram-scale oscillator near its quantum ground state**
96. Abbott, B. P., et al. 2009, PhRvD, 79, 122001: **Search for gravitational waves from low mass binary coalescences in the first year of LIGO's S5 data**
97. Abbott, B. P., et al. 2009, PhRvL, 102, 111102: **All-Sky LIGO Search for Periodic Gravitational Waves in the Early Fifth-Science-Run Data**
98. Abbott, B., et al. 2009, PhRvD, 79, 022001: **Einstein@Home search for periodic gravitational waves in LIGO S4 data**
99. Abbott, B., et al. 2008, CQGra, 25, 245008: **First joint search for gravitational-wave bursts in LIGO and GEO 600 data**
100. Abbott, B., et al. 2008, PhRvL, 101, 211102: **Search for Gravitational-wave Bursts from Soft Gamma Repeaters**
101. Abbott, B., et al. 2008, ApJ, 683, L45: **Beating the Spin-Down Limit on Gravitational Wave Emission from the Crab Pulsar**
102. Abbott, B., et al. 2008, CQGra, 25, 114051: **Astrophysically triggered searches for gravitational waves: status and prospects**

3. Non-refereed publications

1. Aasi, J., et al. 2017, yCat, J/ApJ/785/119: **VizieR Online Data Catalog: Gravitational waves from known pulsars (Aasi+, 2014)**
2. van der Sluys, M. 2011, ASPC, 447, 317: **Gravitational Waves from Compact Binaries**
3. Woods, T. E., Ivanova, N., van der Sluys, M., & Chaichenets, S. 2011, ASPC, 447, 127: **On The Formation of Double White Dwarfs: Reevaluating How We Parametrise the Common Envelope Phase**
4. Woods, T. E., Ivanova, N., van der Sluys, M., & Chaichenets, S. 2010, AIPC, 1314, 24: **The Formation of Low-Mass Double White Dwarfs through an Initial Phase of Stable Non-Conservative Mass Transfer**
5. van der Sluys, M., Politano, M., & Taam, R. E. 2010, AIPC, 1314, 13: **Masses and Envelope Binding Energies of Primary Stars at the Onset of a Common Envelope**
6. The LIGO Scientific Collaboration, et al. 2010, arXiv:1003.2481: **Sensitivity to Gravitational Waves from Compact Binary Coalescences Achieved during LIGO's Fifth and Virgo's First Science Run**
7. Nelemans, G., et al. 2009, astro, 2010, 221: **The astrophysics of ultra-compact binaries**
8. Michael Politano, R.E. Taam, M. van der Sluys and B. Willems, 2009, AAS 21343215: **Mergers During Common Envelope Evolution Involving a Giant Star and a Stellar or Substellar Companion**
9. M.V. van der Sluys, C. Röver, A. Stroeer, N. Christensen, V. Kalogera, R. Meyer, A. Vecchio and I. Mandel 2008, APS APRB10004: **Bayesian inference on spinning compact-binary inspirals with ground-based gravitational-wave laser interferometers**
10. M.V. van der Sluys, A. Stroeer, A. Vecchio and V. Kalogera 2006 AAS 209.7416: **Bayesian Inference and Observations of Massive Black-hole Binaries with LISA**

11. M.V. van der Sluys, F. Verbunt and O.R. Pols 2005, AIPC 797, 627, in *Interacting binaries: accretion, evolution, and outcomes:* **Creating ultra-compact binaries through stable mass transfer**

4. Books

1. Marc van der Sluys and Frank Verbunt: **Computing celestial phenomena with Python**, Radboud University press, 2025, in preparation.[1]
2. Frank Verbunt and Marc van der Sluys: **Het leven van sterren** (the life of stars), Epsilon press, 2024, 3rd edition, in preparation.

5. Online publications

These "living documents", lecture notes, tutorials, technical documents, et cetera *can be found through* `pub.vandersluys.nl`. *Online documents are easily updated, hence "living". The date of the most recent version is listed. Where applicable, I indicate whether the document was (originally) written or used for Utrecht University (UU), the HAN University of applied sciences (HAN) or the Radboud University (RU).*

1. MvdS 2023-12: **Binary evolution in a nutshell** (RU MSc tutorial/cheat sheet)
2. MvdS 2023-09: **Getting started with Bash, Emacs, Python and Git** (UU MSc tutorial)
3. MvdS 2023-09: **Efficient use of the Linux command line in the Bash shell** (HAN BSc tutorial)
4. MvdS 2023-09: **Getting started with Emacs** (HAN BSc tutorial)
5. MvdS 2023-07: **Celestial mechanics in a nutshell** (technical document)
6. MvdS 2021-08: **Sunlight and solar energy** (HAN MSc lecture notes)
7. MvdS 2021-07: **Writing a short scientific paper: LaTeX template and instructions** (HAN MSc tutorial)
8. MvdS 2021-02: **Installing Arch Linux ARM on a Raspberry Pi** (HAN BSc tutorial)
9. MvdS 2020-11: **Operating systems and Linux system programming** (HAN BSc lecture notes)
10. MvdS 2020-10: **Solar-concentration optics** (HAN technical note)
11. MvdS 2020-10: **Insolation in the Netherlands** (HAN technical fact sheet)
12. MvdS, PvK 2020-08: **Code development with Python** (HAN MSc tutorial)
13. PvK, MvdS 2020-07: **Modelling the COP of heat pumps as a function of temperature** (HAN technical paper)
14. MvdS 2019-04: **A brief C tutorial, with code examples** (HAN BSc tutorial)
15. MvdS 2016-09: **Errata NEN 5060 Hygrothermische eigenschappen van gebouwen – Referentieklimaatgegevens** (HAN technical report: errata on Dutch insolation norm)
16. MvdS 2015-11: **Availability of wind in the Netherlands** (HAN technical fact sheet)
17. MvdS 2000-10: **Bepaling van de rotatiesnelheid van de Zon** (measuring the rotational velocity of the Sun in the context of a high-school physics exam)

6. Authored scientific software packages

Most of my free and open-source software (FOSS) has been released under the EUPL or (L)GPL licence as source code and/or packages and can be found on the following websites:

GitHub	`github.com/MarcvdSluys`	Source code
Sourceforge	`sourceforge.net/u/marcvdsluys`	Source code and packages
PyPI	`pypi.org/user/MarcvdSluys`	Python packages

The following list gives a selection of my most relevant, science-related software packages. See `software.vandersluys.nl` *for more open-source projects. As of December 2023, my packages have been downloaded more than* **230.000 times**.

1. libSUFR: a **lib**rary containing **S**ome **U**seful **F**ortran **R**outines, GPL, `libsufr.sf.net` (2002–2024).

[1] A sneak preview can be found on `https://astro.ru.nl/~sluys/Stuff/CCP-book/ComputingCelestialPhenomena.pdf`

2. LIBTHESKY: a **lib**rary to compute the positions of bodies in **The Sky** (Moon, planets, stars) and events (conjunctions, eclipses), GPL, libthesky.sf.net; core of the code that generates the popular-astronomy website hemel.waarnemen.com (2002–2023).
3. SLUYSPY: all the useful Python functions I should have found elsewhere but didn't, EUPL, pypi.org/project/sluyspy (2022–2024).
4. SOLTRACK: free, fast and accurate C/C++, Python and Arduino routines to compute the position of the Sun, EUPL/(L)GPL, soltrack.sf.net, pypi.org/project/soltrack (2014–2024).
5. SOLARENERGY: a Python package to do simple modelling in the field of solar energy, EUPL, pypi.org/project/solarenergy (2020–2023).
6. ASTROTOOL: a Python package for astronomical calculations, EUPL, pypi.org/project/astrotool (2021–2024).
7. ASTROCONST: a Python package that provides astronomical constants, EUPL, pypi.org/project/astrotool (2022–2024).
8. METEOSERVER: a Python package to obtain and read Dutch weather data from Meteoserver.nl, GPL, pypi.org/project/meteoserver (2020–2023).
9. HISTASTRO: a Python package for historical-astronomy calculations of Sun, Moon and planets, GPL, pypi.org/project/histastro (2019–2023).
10. GWTOOL: simple command-line tools for working with gravitational waves, GPL, gwtool.sf.net (2007–2021).
11. ROCHEPLOT: schematically illustrate the key stages in the evolution of a binary star, several contributions, GPL, rocheplot.sf.net (2012–2021).
12. EVTOOLS: Fortran tools to reduce, analyse and present output from the binary stellar-evolution code ev, GPL, evtools.sf.net (2002–2024).
13. EVTOOL: Python tools to reduce, analyse and present output from the binary stellar-evolution code ev, EUPL, evtools.sf.net (2023).
14. PG2PLPLOT: aids the transition from Fortran code linked against PGPlot to linking it against PLplot, GPL, pg2plplot.sf.net (2013–2024).
15. ELP-MPP02: accurate Moon positions using the lunar solution ELP/MPP02 in Python, GPL, pypi.org/project/elp-mpp02 (2019–2023).
16. EV: also known as STARS, TWIN, or "The Eggleton code": a detailed binary-stellar evolution code by Peter Eggleton; several contributions to the "Utrecht branch" of this code, stars.vandersluys.nl (2005–2023).
17. ASTROTOOLS: assorted command-line tools for astronomy and astrophysics, written in Fortran, GPL, astrotools.sf.net (2002–2022).
18. PG2PLPLOT: aids the transition from Fortran code linked against PGPlot to linking it against PLplot, GPL, pg2plplot.sf.net (2013–2022).
19. ANALYSEMCMC: analyses and presents output from the MCMC codes SPINSPIRAL and LALINFERENCE_MCMC, GPL, analysemcmc.sf.net (2006–2022).
20. SPINSPIRAL: a PT-MCMC parameter-estimation code to analyse gravitational-wave binary-inspiral signals detected with LIGO/Virgo, including spin effects, GPL, spinspiral.sf.net (2006–2022).
21. RTSCHEDULE: a real-time-schedule generator to create and present simple and idealised RT schedules from task lists, GPL, rtschedule.sf.net (2016–2021).
22. LALINFERENCE_MCMC: parameter-estimation code using LAL to analyse GW binary-inspiral signals detected with LIGO/Virgo, several contributions, GPL, tiny.cc/lal (2010–2015).

7. CONTRIBUTIONS TO CONFERENCES AND WORKSHOPS

1. April 15, 2013, *Third Bonn workshop on formation and evolution of neutron stars*, Bonn, Germany. Talk: **Measuring neutron-star properties with LIGO and Virgo**
2. August 16, 2012, *EuroWD12*, Krakow, Poland. Talk: **The formation of double white dwarfs**

3. June 25, 2012, *Virgo week 2012*, Pisa, Italy. Talk: **Using astrophysical knowledge in gravitational-wave data analysis of binary inspirals**
4. April 12, 2011, *NOVA Network-3 meeting*, Leiden, The Netherlands. Talk: **Using astrophysical knowledge in gravitational-wave data analysis of binary inspirals**
5. March 11, 2011, *The evolution of compact binaries*, Viña del Mar, Chile. Talk: **Using astrophysical knowledge in gravitational-wave data analysis of binary inspirals**
6. March 9, 2011, *The evolution of compact binaries*, Viña del Mar, Chile. Invited review: **Gravitational waves from compact binaries**
7. January 28, 2011, *GWPAW-15*, Milwaukee, WI, U.S.A. Talk: **Using astrophysical knowledge in gravitational-wave data analysis of binary inspirals**
8. November 5, 2010, *Dutch Physics Society (NVV)*, Lunteren, The Netherlands. Talk: **Using astrophysical knowledge in gravitational-wave data analysis**
9. June 22, 2010, *Binary star evolution: mass loss, accretion and mergers*, Mykonos, Greece. Talk: **Population synthesis of common-envelope mergers on the giant branches**
10. September 29, 2009, *Stellar Mergers workshop*, Leiden, the Netherlands. Talk: **The formation of single sdB stars through common-envelope mergers / Observing BH/NS mergers with LIGO/Virgo**
11. June 4, 2009, *LSC-Virgo meeting*, Orsay, France. Talk (on behalf of the CBC group): **Bayesian inference in the CBC follow-up pipeline**
12. March 17, 2009, *Wild Stars in the Old West II*, Tucson, Az, USA. Talk: **Magnetic capture and the CV formation channel for AM CVn stars**
13. January 19–22, 2009, *GWDAW-13*, San Juan, Puerto Rico. Poster: **Gravitational-wave astronomy using Markov-chain Monte-Carlo parameter estimation for compact binary inspirals with spinning objects**
14. September 20–25, 2008, *LSC-Virgo meeting*, Amsterdam, The Netherlands. Talk: **Dependence of sky-position degeneracies on the detector network and black-hole spin**
15. September 1–5, 2008, *2nd International Workshop on AM CVn stars*, Cape Town, S.A. Talk: **Formation of double white dwarfs and AM CVn stars**
16. June 10, 2008, *LIGO-Virgo meeting*, Orsay, France. Talk: **The effect of spin on the accuracy of parameter estimation of binary black-hole inspirals**
17. April 12, 2008, *American Physical Society Meeting*, St. Louis, Mo, USA. Talk: **Parameter estimation of spinning binary black-hole inspirals using MCMC**
18. March 15–20, 2008, *CBC F2F, LIGO-Virgo meeting, Caltech*, Pasadena, Ca, USA. Talk: **Parameter estimation of spinning binary black-hole inspirals using MCMC on LIGO data**
19. December 13–16, 2007, *GWDAW 12, MIT, Boston*, Boston, Ma, USA. Poster: **Parameter estimation of spinning binary inspirals using MCMC**
20. October 20–25, 2007, *CBC F2F, LIGO-Virgo meeting*, Hannover, Germany. Talk: **Bayesian follow-up in the CBC pipeline**
21. August 29 – 31, 2005: Workshop: *Modest 6*, Evanston, Il, USA. Poster: **Creating ultra-compact X-ray binaries in globular clusters**
22. July 4 – 8, 2005 *Workshop on AM CVn Stars*, Nijmegen, The Netherlands. Talk: **Modelling the evolution of double white-dwarf systems**
23. December 15 – 17, 2004: Workshop: *Modest 5a*, Edinborough, Scotland. Talk: **Creating ultra-compact binaries in globular clusters through stable mass transfer**
24. July 4 – 10, 2004: Conference: *Interacting binaries*, Cefalù, Sicily, Italy. Poster: **Creating ultra-compact binaries through stable mass transfer**

8. Selected talks for colloquia, seminars and group meetings

1. March 19, 2024, Monash University, Melbourne Australia, Astrophysics seminar: **The formation of (double-lined) double white dwarfs and other GW sources**

2. March 21, 2012, Centro de Astrofisica, Universidad de Valparaíso, Chile, Astrophysics colloquium: **Compact binaries and gravitational waves**
3. March 20, 2012, ESO Vitacura office, Santiago, Chile, Astrophysics colloquium: **Compact binaries and gravitational waves**
4. May 12, 2010, Astronomical Institute/SRON, Utrecht University, Astrophysics Colloquium: **Gravitational-wave astronomy with LIGO and Virgo**
5. May 11, 2010, Astron, Dwingeloo, the Netherlands, Colloquium: **Population synthesis of common-envelope mergers on the giant branches**
6. May 4, 2010, Max Planck Institute for Astrophysics, Garching, Germany, Astrophysics seminar: **Population synthesis of common-envelope mergers on the giant branches**
7. May 3, 2010, Innsbruck University, Astrophysics colloquium: **Gravitational-wave astronomy with LIGO and Virgo**
8. April 29, 2010, Leiden Observatory, Leiden University, Astrophysics colloquium: **Gravitational-wave astronomy with LIGO and Virgo**
9. April 27, 2010, Department of astrophysics, Radboud Universiteit Nijmegen, Astrophysics seminar: **Gravitational-wave astronomy with LIGO and Virgo**
10. March 11, 2010, Canadian Institute for Theoretical Astrophysics, University of Toronto, CITA seminar: **Gravitational-wave astronomy with LIGO and Virgo**
11. March 3, 2010, Department of physics & astronomy, McMaster University, astrophysics seminar: **Population synthesis of common-envelope mergers on the giant branches**
12. January 11, 2010, Department of physics & astronomy, University of British Columbia, astrophysics colloquium: **Population synthesis of common-envelope mergers on the giant branches / Gravitational-wave astronomy with LIGO and Virgo**
13. March 27, 2008, Center for gravitational-wave physics, Penn State University, seminar: **Parameter estimation of spinning binary black-hole inspirals using MCMC**
14. October 19, 2007, University of Birmingham, Gravity group meeting: **The formation of ultra-compact binaries in globular clusters**
15. October 4, 2007, Northwestern University, Theoretical astrophysics group meeting: **Parameter estimation of spinning binary black-hole inspirals using MCMC**
16. October 19, 2006, Northwestern University, Theoretical astrophysics group meeting: **How the Giant lost its mantle and became a Dwarf**
17. October 7, 2004, Student Seminar, Utrecht University: **How not to create ultra-compact binaries in globular clusters**
18. December 4, 2003, Student Seminar, Utrecht University: **No double white dwarfs from stable mass transfer**
19. December 17, 2002, Astrophysical Seminar, University of Innsbruck: **Backward evolutionary calculations to explain double white dwarf systems**
20. March 27, 2002, Colloquium, University of Innsbruck: **The dynamics of the nebula M1-67 around the run-away Wolf-Rayet star WR 124**
21. August 27, 2001, Graduation Talk, Utrecht University: **A bowshock model for the run-away Wolf-Rayet star WR 124**

9. Editor of conference proceedings

1. **International conference on binaries**, in celebration of Ron Webbink's 65th birthday, Mykonos, Greece, 22–25 June 2010. Editors: Vicky Kalogera and Marc van der Sluys. Melville, New York, 2010, AIP Conference Proceedings 1314.

10. Editor, columns, letters and Wikipedia

1. **Sonnenborgh Berichten**, newsletter of Sonnenborgh public observatory in Utrecht: chief editor and column (1995–1997).

2. **Sterrenwachtpost**, newsletter of Sonnenborgh public observatory in Utrecht: chief editor and column (1998–2001).
3. **Vrijbrief**, newsletter of the Dutch Linux user group (NLLGG): columns (2021–2022).
4. **Volkskrant**, Dutch national newspaper: six of my 91 letters to the editor since 2011 were published (though in some cases (a) similar letter(s) was/were published instead).
5. **Wikipedia edits**: 461 (Dutch, English, German; varying from typos to new pages).