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LIFE

DATE OF BIRTH 28. AUGUST 1987
PLACE OF BIRTH BAD FRIEDRICHSHALL, GERMANY
NATIONALITY GERMAN

EDUCATION

PONTIFICIA UNIVERSIDAD CATÓLICA DE CHILE 2016-2017
PHD IN ASTROPHYSICS
Advisor: Professor Jorge Cuadra
Exchange program between Heidelberg University and Catholic University of Santiago de Chile

RUPRECHT-KARLS-UNIVERSITÄT HEIDELBERG 2012-2017
PHD IN ASTROPHYSICS
Advisor: Professor Cornelis Petrus Dullemond

RUPRECHT-KARLS-UNIVERSITÄT HEIDELBERG 2010-2012
MASTER OF SCIENCE IN PHYSICS

RUPRECHT-KARLS-UNIVERSITÄT HEIDELBERG 2007-2010
BACHELOR OF SCIENCE IN PHYSICS

GYMNASIUM MÖCKMÜHL 1998-2007
ABITUR

GRUNDSCHULE HERBOLZHEIM 1994-1998

WORK

LUDWIG-MAXIMILIANS-UNIVERSITÄT MÜNCHEN since 2017
POSTDOCTORAL SCIENTIST AT THE UNIVERSITY OBSERVATORY MUNICH

SKILLS

ASTRONOMICAL SOFTWARE RADMC3D | CASA | DustPy | FARGO
PROGRAMMING LANGUAGES Python | Fortran | C | PHP | Java
PARALLEL COMPUTING OpenMP | MPI
CLUSTER COMPUTING Slurm | Modules
SOFTWARE DEVELOPMENT Git | Docker
PYTHON Jupyter | Anaconda | NumPy | SciPy | Matplotlib | Astropy | scikit-learn | TensorFlow
WEB DEVELOPMENT PHP | HTML | CSS | MySQL
OPERATING SYSTEMS Linux | Windows
MICROSOFT OFFICE Excel | PowerPoint | Word
MISCELLANEOUS LaTeX
LANGUAGES German (native) | English (fluent)

PUBLISHED SOFTWARE

DUSTPY
Python-Package to simulate Dust Growth in Protoplanetary Disks
written in Python and Fortran.
📄 Github: <https://github.com/stammler/dustpy/>
📄 PyPI: <https://pypi.org/project/dustpy/>
📄 Documentation: <https://stammler.github.io/dustpy/>

SIMFRAME

Python Framework for Scientific Simulations
published in the Journal of Open Source Software.

 Github: <https://github.com/stammler/simframe/>

 PyPI: <https://pypi.org/project/simframe/>

 Documentation: <https://simframe.readthedocs.io/>

 Publication: <https://doi.org/10.21105/joss.03882>

HEPHYSTO

Software to manage colloquia and seminar talks

Currently in use by the Department of Physics and Astronomy of the University of Heidelberg

 <https://www.physik.uni-heidelberg.de/hephysto/>

TEACHING

SEMINAR: CODE COFFEE	<i>Winter Semester 2021/22</i>
TUTORIAL: ASTROPHYSICS I	<i>Summer Semester 2021</i>
SEMINAR: ASTROPHYSICS OF THE SOLAR SYSTEM Mentoring of individual students	<i>Summer Semester 2021</i>
SEMINAR: CODE COFFEE	<i>Summer Semester 2021</i>
SEMINAR: CODE COFFEE	<i>Winter Semester 2020/21</i>
SEMINAR: ASTROPHYSICS OF THE SOLAR SYSTEM Mentoring of individual students	<i>Summer Semester 2020</i>
SEMINAR: CODE COFFEE	<i>Summer Semester 2020</i>
SEMINAR: CODE COFFEE	<i>Winter Semester 2019/20</i>
TUTORIAL: ASTROPHYSICS I	<i>Summer Semester 2019</i>
SEMINAR: ASTROPHYSICS OF THE SOLAR SYSTEM Mentoring of individual students	<i>Summer Semester 2019</i>
SEMINAR: CODE COFFEE	<i>Summer Semester 2019</i>
SEMINAR: CODE COFFEE	<i>Winter Semester 2018/19</i>
TUTORIAL: PROTOPLANETARY DISKS AND PLANET FORMATION	<i>Winter Semester 2017/18</i>
TUTORIAL: THE FORMATION AND EVOLUTION OF PLANETS IN PROTOPLANETARY DISKS	<i>Summer Semester 2017</i>
SEMINAR: ASTROPHYSICS OF THE SOLAR SYSTEM Mentoring of individual students	<i>Summer Semester 2017</i>
TUTORIAL: INTRODUCTION TO ASTRONOMY II	<i>Summer Semester 2013</i>
TUTORIUM: INTRODUCTION TO ASTRONOMY I	<i>Winter Semester 2012/13</i>

CONFERENCES & WORKSHOPS

KICK-OFF MEETING RESEARCH UNIT TRANSITION DISKS PAHSE II Ludwig Maximilian University Munich, Germany	<i>November 2021</i>
SPINNING FLUIDS: LABORATORY FLUID DYNAMICS FOR DISKS AND PLANETS Ringberg Castle, Kreuth, Germany	<i>September 2021</i>
CIRCUMPLANETARY DISKS AND SATELLITE FORMATION II remotely	<i>March 2021</i>
FIVE YEARS AFTER HL TAU: A NEW ERA IN PLANET FORMATION remotely	<i>December 2020</i>
PLANET FORMATION WITNESSES AND PROBES: TRANSITION DISKS remotely	<i>October 2020</i>
BUILDING BLOCKS OF PLANETS remotely	<i>April 2020</i>
PEBBLES, PLANETESIMALS AND PROTOPLANETS	<i>March 2020</i>

Ringberg Castle, Kreuth, Germany	
ORIGINS SCIENCE WEEK	<i>December 2019</i>
Max Planck Institute for extraterrestrial Physics, Garching, Germany	
FROM PROTOPLANETARY DISCS TO PLANETARY SYSTEMS	<i>September 2019</i>
Ringberg Castle, Kreuth, Germany	
TURBULENCE AND STRUCTURE FORMATION IN PROTOPLANETARY DISKS	<i>July 2019</i>
Ringberg Castle, Kreuth, Germany	
THEORETICAL AND COMPUTATIONAL CHALLENGES IN PLANET FORMATION	<i>May 2019</i>
Center for Computational Astrophysics, New York City, USA	
NEW HORIZONS IN PLANETARY SYSTEMS	<i>May 2019</i>
Victoria, British Columbia, Canada	
PLANET FORMATION AND EVOLUTION	<i>February 2019</i>
University of Rostock, Germany	
TAKE A CLOSER LOOK: THE INNERMOST REGION OF PROTOPLANETARY DISCS	<i>October 2018</i>
ESO, Garching, Germany	
JAPANESE-GERMAN MEETING ON EXOPLANETS AND PLANET FORMATION	<i>September 2018</i>
Edesheim, Germany	
WATER DURING PLANET FORMATION AND EVOLUTION	<i>February 2018</i>
University of Zürich, Switzerland	
PLANET FORMATION AND EVOLUTION	<i>September 2017</i>
University of Jena, Germany	
XIV ANNUAL SOCHIAS MEETING	<i>January 2017</i>
Marbella, Chile	
XV LATIN AMERICAN REGIONAL IAU MEETING	<i>October 2016</i>
Cartagena de Indias, Columbia	
LINKING EXOPLANET AND DISK COMPOSITIONS	<i>September 2016</i>
Space Telescope Science Institute, Baltimore, USA	
RESOLVING PLANET FORMATION IN THE ERA OF ALMA AND EXTREME AO	<i>May 2016</i>
ESO, Santiago de Chile, Chile	
DISK DYNAMICS & PLANET FORMATION	<i>June 2015</i>
UCLAN, Larnaka, Cyprus	
THE FORMATION OF THE SOLAR SYSTEM	<i>May 2014</i>
Max Planck Institute for Radio Astronomy, Bonn, Germany	
4TH ANNUAL MEETING OF THE DFG SPECIAL PRIORITY PROGRAM 1385	<i>October 2013</i>
Nördlingen, Germany	
DUST GROWTH	<i>July 2013</i>
Max Planck Institute für Astronomy, Heidelberg, Germany	
PROTOSTARS & PLANETS VI	<i>July 2013</i>
Heidelberg, Germany	
ICE AND PLANET FORMATION	<i>May 2013</i>
Lund Observatory, Sweden	
PLANET FORMATION AND EVOLUTION	<i>September 2012</i>
Ludwig Maximilian University Munich, Germany	

RESEARCH STAYS

MUNICH INSTITUTE FOR ASTRO AND PARTICLE PHYSICS	<i>4. October – 29. October 2021</i>
Garching, Germany	
EARTH-LIFE SCIENCE INSTITUTE	<i>25. March – 29. March 2019</i>
Tokyo Institute of Technology, Tokyo, Japan	
ASPEN CENTER FOR PHYSICS	<i>15. July – 5. August 2018</i>

PUBLICATIONS

Stammler, Sebastian Markus (2017), **Dissertation:** *"The Role of Ices in the Process of Planet Formation"*.

[doi:10.11588/heidok.00022784](https://doi.org/10.11588/heidok.00022784)

Stammler, Sebastian M.; Birnstiel, Tilman (2022), *Journal of Open Source Software*, 7(69), 3882: *"Simframe: A Python Framework for Scientific Simulations"*.

[doi:10.21105/joss.03882](https://doi.org/10.21105/joss.03882)

Miller, E.; Marino, S.; **Stammler, S. M.**; Pinilla, P.; Lenz, C.; Birnstiel, T.; Henning, Th (2021), *Monthly Notices of the Royal Astronomical Society*, Volume 508, Issue 4, pp.5638-5656: *"The formation of wide exoKuiper belts from migrating dust traps"*.

[doi:10.1093/mnras/stab2935](https://doi.org/10.1093/mnras/stab2935)

Gárate, Matías; Delage, Timmy N.; Stadler, Jochen; Pinilla, Paola; Birnstiel, Til; **Stammler, Sebastian Markus**; Picogna, Giovanni; Ercolano, Barbara; Franz, Raphael; Lenz, Christian (2021), *Astronomy & Astrophysics*, Volume 655, id.A18, 16 pp.: *"Large gaps and high accretion rates in photoevaporative transition disks with a dead zone"*.

[doi:10.1051/0004-6361/202141444](https://doi.org/10.1051/0004-6361/202141444)

Pinilla, P.; Kurtovic, N. T.; Benisty, M.; Manara, C. F.; Natta, A.; Sanchis, E.; Tazzari, M.; **Stammler, S. M.**; Ricci, L.; Testi, L. (2021), *Astronomy & Astrophysics*, Volume 649, id.A122, 13 pp.: *"A bright inner disk and structures in the transition disk around the very low-mass star CIDA 1"*.

[doi:10.1051/0004-6361/202140371](https://doi.org/10.1051/0004-6361/202140371)

Drażkowska, J.; **Stammler, S. M.**; Birnstiel, T. (2021), *Astronomy & Astrophysics*, Volume 647, id.A15, 11 pp.: *"How dust fragmentation may be beneficial to planetary growth by pebble accretion"*.

[doi:10.1051/0004-6361/202039925](https://doi.org/10.1051/0004-6361/202039925)

Pinilla, Paola; Lenz, Christian T.; **Stammler, Sebastian M.** (2021), *Astronomy & Astrophysics*, Volume 645, id.A70, 16 pp.: *"Growing and trapping pebbles with fragile collisions of particles in protoplanetary disks"*.

[doi:10.1051/0004-6361/202038920](https://doi.org/10.1051/0004-6361/202038920)

Lenz, Christian T.; Klahr, Hubert; Birnstiel, Tilman; Kretke, Katherine; **Stammler, Sebastian Markus** (2020), *Astronomy & Astrophysics*, Volume 640, id.A61, 21 pp.: *"Constraining the parameter space for the solar nebula. The effect of disk properties on planetesimal formation"*.

[doi:10.1051/0004-6361/202037878](https://doi.org/10.1051/0004-6361/202037878)

Li, Ya-Ping; Li, Hui; Li, Shengtai; Birnstiel, Tilman; Drażkowska, Joanna; **Stammler, Sebastian** (2020), *The Astrophysical Journal Letters*, Volume 892, Issue 2, id.L19, 8 pp.: *"Planet-induced Vortices with Dust Coagulation in Protoplanetary Disks"*.

[doi:10.3847/2041-8213/ab7fb2](https://doi.org/10.3847/2041-8213/ab7fb2)

Gárate, Matías; Birnstiel, Til; Drażkowska, Joanna; **Stammler, Sebastian Markus** (2020), *Astronomy & Astrophysics*, Volume 635, id.A149, 18 pp.: *"Gas accretion damped by dust back-reaction at the snow line"*.

[doi:10.1051/0004-6361/201936067](https://doi.org/10.1051/0004-6361/201936067)

- Laune, JT; Li, Hui; Li, Shengtai; Li, Ya-Ping; Walls, Levi G.; Birnstiel, Tilman; Drażkowska, Joanna; **Stammler, Sebastian** (2020), *The Astrophysical Journal*, Volume 885, Issue 1, article id. 91, 10 pp.: *"Ring Morphology with Dust Coagulation in Protoplanetary Disks"*.
[doi:10.3847/2041-8213/ab65c6](https://doi.org/10.3847/2041-8213/ab65c6)
- Drażkowska, Joanna; Li, Shengtai; Birnstiel, Til; **Stammler, Sebastian M.**; Li, Hui (2019), *The Astrophysical Journal*, Volume 885, Issue 1, article id. 91, 10 pp.: *"Including Dust Coagulation in Hydrodynamic Models of Protoplanetary Disks: Dust Evolution in the Vicinity of a Jupiter-mass Planet"*.
[doi:10.3847/1538-4357/ab46b7](https://doi.org/10.3847/1538-4357/ab46b7)
- Stammler, Sebastian M.**; Drażkowska, Joanna; Birnstiel, Til; Klahr, Hubert; Dullemond, Cornelis P.; Andrews, Sean M. (2019), *The Astrophysical Journal Letters*, Volume 884, Issue 1, article id. L5, 7 pp.: *"The DSHARP Rings: Evidence of Ongoing Planetesimal Formation?"*.
[doi:10.3847/2041-8213/ab4423](https://doi.org/10.3847/2041-8213/ab4423)
- Li, Ya-Ping; Li, Hui; Ricci, Luca; Li, Shengtai; Birnstiel, Tilman; Isella, Andrea; Ansdell, Megan; Yuan, Feng; Drażkowska, Joanna; **Stammler, Sebastian** (2019), *The Astrophysical Journal*, Volume 878, Issue 1, article id. 39, 15 pp.: *"Effects of Ringed Structures and Dust Size Growth on Millimeter Observations of Protoplanetary Disks"*.
[doi:10.3847/1538-4357/ab1f64](https://doi.org/10.3847/1538-4357/ab1f64)
- Cuello, N.; Montesinos, M.; **Stammler, S. M.**; Louvet, F.; Cuadra, J. (2019), *Astronomy & Astrophysics*, Volume 622, id.A43, 15 pp.: *"Dusty spirals triggered by shadows in transition discs"*.
[doi:10.1051/0004-6361/201731732](https://doi.org/10.1051/0004-6361/201731732)
- Gárate, Matías; Birnstiel, Til; **Stammler, Sebastian Markus**; Günther, Hans Moritz (2019), *The Astrophysical Journal*, Volume 871, Issue 1, article id. 53, 16 pp.: *"The Dimming of RW Auriga: Is Dust Accretion Preceding an Outburst?"*.
[doi:10.3847/1538-4357/aaf4fc](https://doi.org/10.3847/1538-4357/aaf4fc)
- Stammler, Sebastian** (2018), Take a Closer Look, 15-19 October, 2018 in ESO-HQ, Garching b. München, Germany: *"A Closer Look on Dust Growth: The Spectral Index"*.
[doi:10.5281/zenodo.1488988](https://doi.org/10.5281/zenodo.1488988)
- Pinilla, P.; Pohl, A.; **Stammler, S. M.**; Birnstiel, T. (2017), *The Astrophysical Journal*, Volume 845, Issue 1, article id. 68, 15 pp.: *"Dust Density Distribution and Imaging Analysis of Different Ice Lines in Protoplanetary Disks"*.
[doi:10.3847/1538-4357/aa7edb](https://doi.org/10.3847/1538-4357/aa7edb)
- Stammler, Sebastian Markus**; Birnstiel, Tilman; Panić, Olja; Dullemond, Cornelis Petrus; Dominik, Carsten (2017), *Astronomy & Astrophysics*, Volume 600, id.A140, 16 pp.: *"Redistribution of CO at the location of the CO ice line in evolving gas and dust disks"*.
[doi:10.1051/0004-6361/201629041](https://doi.org/10.1051/0004-6361/201629041)
- Dullemond, Cornelis Petrus; Harsono, Daniel; **Stammler, Sebastian Markus**; Johansen, Anders (2016), *The Astrophysical Journal*, Volume 832, Issue 1, article id. 91, 19 pp.: *"Forming Chondrules in Impact Splashes II Volatile Retention"*.
[doi:10.3847/0004-637X/832/1/91](https://doi.org/10.3847/0004-637X/832/1/91)
- Stammler, Sebastian M.**; Dullemond, Cornelis P. (2014), *The Astrophysical Journal*, Volume 832, Issue 1, article id. 91, 19 pp.: *"A critical analysis of shock models for chondrule formation"*.
[doi:10.1016/j.icarus.2014.07.024](https://doi.org/10.1016/j.icarus.2014.07.024)
- Dullemond, Cornelis Petrus; **Stammler, Sebastian Markus**; Johansen, Anders (2014), *The Astrophysical Journal*, Volume 794, Issue 1, article id. 91, 12 pp.: *"Forming Chondrules in Impact Splashes. I. Radiative Cooling Model"*.
[doi:10.1088/0004-637X/794/1/91](https://doi.org/10.1088/0004-637X/794/1/91)