

CV

WAAD SAFTLY

Doctor of Astronomy



Personal information:

- **Name:** Waad Saftly.
- **Date of birth:** 1-07-1985.
- **Situation:** Single.
- **Profession:** Assistant Professor at the Department of Mathematics, Faculty of Science , AL-Baath University (Syria).
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Professions and academic training:

- **August 2015 till now: Assistant Professor at the Department of Mathematics at Al-Baath University.**
 - Duties include:
 - teaching different topics in mathematics at the Faculty of Science and the Faculty of Information Technology Engineering at Al-Baath University (Homs-Syria), the Faculty of Information Technology and Communication Engineering at Tartus University (Tartus - Syria), and the Faculty of Computer Sciences at Antioch Syrian University (Damascus – Syria).
 - research, supervising master degree students, refereeing scientific papers, refereeing master theses, organizing workshops and conferences, leading mathematics Olympiad students in Syria.
 - Vice dean for administrative affairs at the Faculty of Health Sciences at Al-Baath University.
 - Member of the Science Faculty Council.
 - Member of the Mathematics Department Council.
 - Head of the Teachers Syndicate at the Faculty of Sciences since 11th March 2020.
 - Member of Distinction and Creativity Agency in Syria.
- **2011-2015: PhD of Astronomy from Ghent University (Belgium).**
 - Thesis Title: 3D Grid structures for realistic radiative transfer simulations of dusty galaxies.
 - Supervisor: Prof.Dr. Maarten Baes.
 - Doctoral funding is from the Syrian Ministry of higher Education.
 - Supervising a master student during my PhD.
 - Attending workshops and national/international conferences.
- **2008-2010: Professor Assistant at the department of mathematics at Al-Baath University (Syria).**
- **2004-2008: Bachelor of Applied Mathematical Sciences (Mathematical Mechanics) from AL-Baath University (Syria).**

Awards and fellowships

- 2011: PhD grant from the Syrian Ministry of higher Education.
- 2015: Grant of three months from Ghent University.
- May 2019: I got awarded from the President of Al-Baath University and the Quality Assurance Centre at Al-Baath University for my contributing to raising the ranking of Al-Baath University globally according to the Webometric Index on Google Scholar.
- 2021: Winner of the L'Oréal-UNESCO For Women in Science Levant Young Talents Program Award.
- 2022 : Winner of the L'Oréal-UNESCO For Women in Science International Rising Talents Award.
- 2023: JCI Ten Outstanding Young Persons 2023 in Syria (JCI TOYP Syria 2023)

Previous achievements:

- Groundbreaking participation in developing the most advanced code (SKIRT code <https://skirt.ugent.be>) in the astronomical community that studies the light from galaxies, both photometrically and spectroscopically.
- Studying the dust energy balance problem in spiral galaxies based on high-resolution hydrodynamics simulations.
- Publications in peer-reviewed journals.

Scientific production:

Publication list:

1. **Waad Saftly**, Khaled Abdullah, **The geometric origin of inertial frames**, Journal of AL-Baath University, 2019, Volume 41.
2. M Baes, F Allaert, P Camps, G de Geyter, I De Looze, J Fritz, G Gentile, TM Hughes, **Waad Saftly**, M Stalevski, S Viaene, **Observing and modelling the dust in nearby galaxies**, 2017, Publications de l'Observatoire Astronomique de Beograd 96, 17-26
3. Jacopo Fritz, Ilse De Looze, Maarten Baes, Peter Camps, **Waad Saftly**, Angeles Pérez Villegas, Mariana Rivaz-Sánchez, Marko Stalevski, Evanthia Hatziminaoglou, **The heating of diffuse dust at large scale in AGNs: a radiative transfer model study**, 2016, Active Galactic Nuclei: What's in a Name?, 101
4. Maarten Baes, Joris Verstappen, Ilse De Looze, Jacopo Fritz, **Waad Saftly**, Edgardo Vidal Pérez, Marko Stalevski, Sander Valcke **Erratum: "Efficient Three-dimensional NLTE Dust Radiative Transfer with SKIRT"** (2011, ApJS, 196, 22), The Astrophysical Journal Supplement Series, 2016, 223 , 17
5. Gianfranco Gentile, C Tydtgat, Maarten Baes, Gert De Geyter, Mina Koleva, GW Angus, WJG De Blok, **Waad Saftly**, Sébastien Viaene, **Disk mass and disk heating in the spiral galaxy NGC 3223**, Astronomy & Astrophysics, 2015, 576, A57
6. **Waad Saftly**, Maarten Baes, Gert De Geyter, Peter Camps, F Renaud, J Guedes, Ilse De Looze, **Large and small-scale structures and the dust energy balance problem in spiral galaxies**, Astronomy & Astrophysics, 2015, 576, A31.

7. **Waad Saftly** , **3D Grid structures for realistic radiative transfer simulations of dusty galaxies** , 2015, Ghent University .
8. **Waad Saftly**, Maarten Baes, Peter Camps, **Hierarchical octree and kd tree grids for 3D radiative transfer simulations**, Astronomy & Astrophysics, 2014, 561, A77 .
9. **Waad Saftly**, Peter Camps, Maarten Baes, KD Gordon, Sebastiaan Vandewoude, A Rahimi, Marko Stalevski, **Using hierarchical octrees in Monte Carlo radiative transfer simulations**, Astronomy & Astrophysics, 2013, 554, A10.
10. Peter Camps, Maarten Baes, **Waad Saftly**, **Using 3D Voronoi grids in radiative transfer simulations**, Astronomy & Astrophysics, 2013, 560, A35.
11. Peter Camps, Maarten Baes, Gert De Geyter, **Waad Saftly**, Ilse De Looze, **Three-dimensional continuum radiative transfer simulations of dusty systems**, 7th Annual international conference on Numerical Modeling of Space Plasma, Astronomical Society of the Pacific (ASP), 2013, 474, 53-58.
12. Maarten Baes, Gert De Geyter, Peter Camps, **Waad Saftly**, I De Looze, J Fritz, D Gadotti, M Stalevski, **Dust radiative transfer: modeling the complex interplay between dust and starlight in galaxies**, Proceedings of The Life Cycle of Dust in the Universe: Observations, 2013, 70.
13. Maarten Baes, Joris Verstappen, Ilse De Looze, Jacopo Fritz, **Waad Saftly**, Edgardo Vidal Pérez, Marko Stalevski, Sander Valcke, **Efficient three-dimensional NLTE dust radiative transfer with SKIRT**, The Astrophysical Journal Supplement Series, 2011, 196 (2), 22.

Conferences and workshops:

- **Methods of Modern Teaching Workso**p, Al-Baath University, Homs, Syria, 19-23 February 2017.
- **The Scientific Day at the Faculty of Science**, Al-Baath University, Homs, Syria, 16 May 2016.
- **Third annual CHARM Science Meeting**, Brussels, Belgium 18-19 September 2014.
- **69th Dutch Astronomy Conference NAC**, Noordwijkerhout, Netherlands, from: 19 to 21 May 2014. Poster presentation: Hierarchical Octree and k-d tree grids for 3D radiative transfer simulations.
- **The Passage of Light within Spiral Galaxies**, Leiden, Netherlands, from 6 to 9 May 2014. Oral presentation: Can a complex geometry explain the dust energy balance problem in spiral galaxies?
- **FNRS Contact Group meeting** in Brussels, Belgium, 30 April 2014.
- **Second annual CHARM Science Meeting**, Ghent, Belgium, on 30 -31 January 2014.
- **RT13 conference** in Grenoble, France, from 9 to 11 October 2013. Oral presentation: The use of hierarchical octrees and kd-trees in Monte Carlo radiative transfer simulations.
- **CosmoComp/CHARM 2013 spring school on “Radiative transfer treatments for astrophysical applications”**, Leiden, Netherlands, from 27 to 31 May 2013. Poster presentation.
- **NAC conference** in Lommel, Belgium from 17 to 19 May 2013. Poster presentation: Using hierarchical octrees in Monte Carlo radiative transfer simulations.
- **FNRS Contact Group “Astronomy and Astrophysics”** in Brussels, Belgium, on 29 April 2013.
- **First annual CHARM Science Meeting**, Brussels, Belgium, on 18-19 April 2013. Oral presentation: Using hierarchical octrees in Monte Carlo radiative transfer simulations.
- **CHARM kick-off meeting**, Leuven, Belgium, on 8-9 October 2012.
- **NAC conference** (Dutch Astronomer’s Conference), Amelend, Netherlands, from 23 to 25 May 2012.
- **FNRS Contact Group meeting “Astronomy and Astrophysics”**, Brussels, Belgium on 14 May 2012.
- **NAC conference** (Dutch Astronomer’s Conference), Texel, Netherlands, from 18 to 20 May 2011.

Activities having an impact on the development of scientific research:

- Supervising seven master students at the department of mathematics, Al-Baath University.
- I have more than 6 years' experience in teaching courses in different topics in mathematics like: General Mathematics, Probabilities and Statistics, Differential Equations, Numerical Analysis, Discrete Mathematics, Linear Algebra, and Classical Mechanics.
- Organizer of the Mathematics and Informatics Workshop at the Faculty of Science, Al-Baath University, 12 March 2019.

Skills:

Teaching, Research, Applied Mathematics, Numerical Methods, Numerical Analysis, Statistics, C++, 3D Spatial Grids, 3D Modelling, Expertise in Linux and Macintosh operating system, ICDL, Astronomy & Astrophysics, Galaxies, 3D Monte Carlo Radiative transfer.

Communication skills:

- Excellent contact and communication skills with colleagues and students gained through my experience as a lecturer at the university.
- Good organisational skills gained from Organizing conferences and workshops.
- Excellent verbal and written communication skills.
- Deep knowledge and passion for my subject matter.
- The ability to build caring relationships.
- Strong work ethic.

Languages:

Arabic: Mother tongue.

English: Fluent.

French: Average.

Dutch: Average.