



WASIT University
College of Science

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Academic Qualifications

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| 2012 | PhD
Jodrell Bank Centre for Astrophysics
School of Physics and Astronomy
University of Manchester, UK
Doctoral Thesis: " Silicon monoxide masers and the magnetic field of R Cassiopeia" |
| 2003 | Master of Astrophysics
Department of Astronomy
University of Baghdad, Iraq
Master's Thesis: " Interstellar Extinction Curve for the Galactic Plane " |
| 1999 | Bachelor of Physics
Department of Physics
University of Baghdad, Iraq |

Academic Employment – Teaching and Research

Assistant Professor
Department of Physics, Wasit University

Responsibilities

- Taught Introduction to Mechanics and properties of Matter to first-year level students for two semesters.
- Astronomy to Second-year level students for one semester.
- Wave and Ultrasound to third-year level students for one semester.
- English to MSc students.

Employment History – General

- 10/2003-to date **Academic Staff**
- **Deputy Dean for administrative affairs**

Publications

- **Maser observations - from the kinematics to the physics of evolved star winds.** A. M. S. Richards, K. A. Assaf, I. Bains, A. Bartkiewicz, P. J. Diamond, M. Elitzur, S. Etoke, M. D. Gray, E. A. Humphreys, K. Murakawa, M. Szymczak, H. J. van Langevelde, J. A. Yates. 10th EVN Symposium_005
- **Unexplained AGB asymmetries.** Richards, A. M. S.; Assaf, K. A.; Bains, I.; Diamond, P.; Etoke, S.; Gray, M. D.; Humphreys, E.; Murakawa, K.; van Langevelde, H. J.; Yates, J. A., 2011apn5.confE..76R
- **Stellar winds in hot water.** Richards, A. M. S.; Assaf, K.; Elitzur, M.; Etoke, S.; Gray, M.; Harper, G.; Humphreys, E.; Lim, J.; van Trung, D.; Yates, J., 2011IAUS..280P.313R
- **The 43-GHz SiO maser in the circumstellar envelope of the asymptotic giant branch star R Cassiopeiae.** K. A. Assaf, P. J. Diamond, A. M. S. Richards and M. D. Gray, Mon. Not. R. Astron. Soc. 415, 1083–1092 (2011)
- **Polarization properties of R Cas SiO masers.** Assaf, K A; Diamond, P J; Richards, A M S; Gray, M D , Volume 8, Issue S287 (Cosmic Masers - from OH to H0) January 2012, pp. 235-239
- **Polarization morphology of SiO masers in the circumstellar envelope of the asymptotic giant branch star R Cassiopeiae.** K. A. Assaf, P. J. Diamond, A. M. S. Richards and M. D. Gray. doi:10.1093/mnras/stt242
- **Power Law and Logarithmic Entropy Corrected Ricci Dark Energy Models in Brans-Dicke Chameleon Cosmology.** Antonio Pasqua • Khudhair A. Assaf • Ayman A. Aly, (2013) Int J Theor Phys, DOI 10.1007/s10773-013-1841-7
- **Possibility of detection of exomoons with inclined orbits orbiting pulsar planets using the Time-of-Arrival analysis.** Antonio Pasqua and Khudhair A. Assaf, (2014), Hindawi Publishing Corporation, Advances in Astronomy, Volume 2014, Article ID 450864, 10 pages
- **Multi-epoch Proper Motion Magnetic Field Comparison of SiO Masers around R Cas.** KA Assaf, (2018) The Astrophysical Journal 869(1), 80.
- **Detailed SiO proper motion analysis: slow net expansion and a small correlation with the magnetic field,** K Assaf, B Cotton, P Diamond, S Etoke, 14th European VLBI Network Symposium & Users Meeting (EVN 2018)

Extra-Curricular Activities

- Summer school 2009, Oxford England UK.
- 10th EVN conference 2010, Manchester, England UK.
- NAM11 conference 2011, Llandudno, Wales, UK.
- IAU 287 conference 2013, Stellenbosch, South Africa.
- MSc. Thesis examination committee member 2014.
- MSc. Thesis examination committee member 2016.
- MSc. Thesis examination committee member 2018.
- PhD. Thesis examination committee member 2021.
- PhD. Thesis examination committee member 2025
- MSc. Thesis examination committee member 2025

Research interests and experience

Evolved stars, AGB stars, Masers (SiO maser), magnetic fields, Polarization