ILIAS M. FERNINI

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EDUCATION:

Ph.D. in Physics (Major: Astrophysics), 1991
University of New Mexico, Albuquerque (USA)

MS. in Astrophysics, 1985
Iowa State University, Ames, Iowa (USA)

BS. in Solid State Physics, 1982
University of Science and Technology, Algiers (Algeria)

WORK EXPERIENCE:

01/2021-Present: Professor, University of Sharjah
02/2016-Present: Director – Space Sciences Department
Sharjah Academy for Astronomy, Space Sciences, and Technology
02/2016-01/2021: Associate Professor, University of Sharjah
03/2002-12/2015: Associate Professor, *United Arab Emirates Univ*
09/1997-03/2002: Assistant Professor, *United Arab Emirates Univ.*
09/1995-08/1997: Math Instructor, *Dona Ana Comm. Coll., Las Cruces, NM (USA)*
01/1996-07/1997: Math/Physics Instructor, *El Paso Comm. Coll., El Paso, TX (USA)*
08/1994-08/1997: Post-Doc, *New Mexico State University, Las Cruces, NM (USA)*
04/1992-07/1994: Assistant Professor, *University of Blida, Algeria*
05/1989-08/1989: VLA Summer Student Research Assistant (*National Radio Astronomy Observatory, Socorro, NM, USA)*
08/1984-12/1986: Teaching Assistant, *Iowa State University, Ames, Iowa (USA)*

AWARDS:

4th Research Prize, ICES 2023 (Feb. 06-08, 2023), Riyadh, Saudi Arabia

Merit Award for World Top 1% Journal Publications for 2014 (Astrophysical Journal Supplement Series) – United Arab Emirates University, December 2015

Merit Award for Best Faculty Member – College of Science, United Arab Emirates University, June 2006.

Best Non-Funded Research, 6th UAEU Research Conference, April 24-26, 2005.

RESEARCH INTERESTS

Active galactic nuclei / Radio Galaxies / Quasars
Mars Atmosphere / Meteorite / Lunar crescent visibility problem
CubeSat Technologies
History of Islamic Science

LECTURES:

- **General Public Lectures / Astronomical Observations: More than 600**
  - *Public Schools*
  - *Government Agencies*
  - *Clubs*
  - *Universities*

- **Specialized Lectures: More than 150**
  - *International Conferences*
  - *Universities*
  - *Workshops*

MSc SUPERVISION

MSc in Physics (Co-Supervisor)

Student: Ibrahim Jamal alghoul
University: United Arab Emirates University
Thesis Title: "Assembly & Deployment of a 256-element Radio Array for Space Sciences"
Year: Summer 2022

MSc in Astronomy and Space Sciences (Main Supervisor)

Student: Alya BinAhsour
University: University of Sharjah
Thesis Title: "Analysis and Forecasting of Geomagnetic Storms using Machine Learning"
Year: Fall 2023

MSc in Astronomy and Space Sciences (Main Supervisor)

Student: Salem Shuhail
University: University of Sharjah
Thesis Title: "Effects of the Solar Radio Bursts on the Space Weather over the Gulf Region"
Year: Spring 2023

ACADEMIC PROFILE:

I am deeply rooted in academia since I started my graduate studies. While preparing for my MSc. in Astronomy at Iowa State University, I was an Astronomy Teaching Assistant for two academic years (1984-1986). My teaching duty was to teach the astronomy practical sessions using a special classroom equipped with a planetarium. It was a golden opportunity to touch the sky and help the students appreciate the universe through simulations and animations. It was the first time I had to practice my vocation and love of astronomy. An unforgettable experience that has marked my professional life up to today.

Since then, I was able to teach and develop several astronomy courses and astronomy programs at different universities:

- **Iowa State University (Ames, IA, USA, 1984-1986)**
    - Astronomy Teaching Assistant
- **University of Blida (Algeria, 1992-1994)**
    - Participated in the establishment of an MSc in Astrophysics
    - Taught several undergraduate and graduate courses
- **Dona Ana Community College (Las Cruces, New Mexico, USA, 1995-1997)**
    - Math instructor
- **El Paso Community College (El Paso, Texas, USA, 1996-1997)**
    - Math/Physics instructor
- **United Arab Emirates University (Al-Ain, UAE, 1997-2015)**
    - Developed the course "Introduction to Astronomy" in English
    - Developed the course "Introduction to Astrophysics" in English
    - Introduced a minor in Astronomy
    - Prepared the foundation for an "Astronomy Center."
- **University of Sharjah (Sharjah, UAE, 2016-Present)**
    - Developed the course "Introduction to Astronomy and Space Sciences."
    - Developed the course "Foundations of Astronomy and Space Sciences."
    - Developed the course "Astrophysics I: Stars."
    - Developed the course "Astrophysics II: Galaxies."
    - Wrote the program of the MSc. in Astronomy & Space Sciences
    - Developed several graduate courses for the MSc. in Astronomy and Space Sciences

I teach by vocation and not by profession. And this is well felt by the students from the first day of class. A teacher is to light up the mind of students and invite them to join him in a formidable journey of knowledge and learning. It is like embarking on a boat, and any wrongdoing from any passengers will definitely sink the boat. Our students are the future teachers, engineers, leaders, and professionals who will lead and build a better society for later generations. Giving them the right knowledge and teaching them the principle of responsibility is to open the doors for a better future for everyone.

INTERNATIONAL CONFERENCES:

5th COSPAR 2023 – Space Sciences with Small Satellites - Apr. 16-21, 2023, Singapore

SpaceOps 2023 – 17th International Conference on Space Operations – Mar. 06-10, 2023, Dubai, UAE

ICES 2023, Feb. 06-08, 2023, Riyadh, Saudi Arabia

73rd International Astronautical Congress, Sep. 18-22, 2022, Paris, France

Global Aerospace Summit – May 24-26, 2022 (Abu-Dhabi, UAE)

72nd International Astronautical Congress, Oct. 25-29, 2021, Dubai, UAE

American Institute of Aeronautics and Astronautics, ASCEND 2021, Nov. 15-17, 2021, Las Vegas, Nevada

71st International Astronautical Congress 2020, Cyber Space Edition, 12-14 October 2020

Recent Advances in Space Technologies 2019 (RAST 2019), Jun. 11-14, 2019 (Istanbul, Turkey)

First Sharjah International Conference on Particle Physics, Astrophysics, and Cosmology (FISICPAC), Nov. 11-13, 2018, Sharjah (UAE)

Fourth Algerian Conference on Astronomy and Astrophysics, "Active Galactic Nuclei - Unification of FR II Radio Galaxies & Quasars," Mar. 27-29, 2017, Khenchela (Algeria)

Frontiers in Theoretical and Applied Physics (FTAPS 2017), "Radio Properties of FR II Radio Galaxies and Quasars," Mar. 22-25, 2017, Sharjah (UAE)

"RTG Renewable Conference – University of Oldenburg," Invited Speaker: "Radio Observations of Radio Galaxies and Quasars," Oct. 04 – 07, 2016, Oldenburg (Germany)

Second Middle East-Africa, Regional International Astronomical Union Meeting (MEARIM 2011), 10-15 April 2011, Cape Town (South Africa)

216th Meeting of the American Astronomical Society, May 23-27, 2010, Miami (FL, USA).

International Astronomical Union – UNESCO Symposium 260 (IAUS 260) – The Role of Astronomy in Society and Culture, 19-23 January 2009, Paris (France)

First Middle East-Africa, Regional International Astronomical Union Meeting (MEARIM 2008), 05-10 April 2008, Cairo (Egypt)

"Extragalactic Jets: Theory and Observation – From Radio to Gamma Ray," 21-24 May 2007, Girdwood, Alaska (USA)

First Emirates Astronomical International Conference: Applications of Astronomical Calculations", Abu-Dhabi (UAE), Dec. 13-14, 2006.

208th Meeting of the American Astronomical Society, 04-08 June 2006, Calgary (Canada).

National Astronomy Meeting 2006, 04-08 April, 2006, University of Leicester - England
UN/ESA/NASA/UAE Workshop on the International Heliophysical Year 2007, 20-23 November 2005, (Al-Ain, UAE)

204th Meeting of the American Astronomical Society, May 30- June 03, 2004, Denver (Colorado, USA)

195th Meeting of the American Astronomical Society, 11 – 15 January 2000, Atlanta (Georgia, USA).

Space Telescope Science Institute: *Life Cycles of Radio Galaxies*, July 15- July 17, 1999, Baltimore (Maryland, USA).

UNIVERSE 98**:** 110th Annual Meeting of the Astronomical Society of the Pacific, June 25 – July 1, 1998, Albuquerque, (New Mexico, USA)

International Symposium on Teaching Astronomy to Non-Science Majors, Astronomical Society of the Pacific, June 29 – June 30, 1998, Albuquerque, (New Mexico, USA)

REGIONAL CONFERENCES:

2nd UAE-Japan Workshop "Planetary Exploration and Meteorite Search", Dec. 24-25, 2019, Sharjah Academy for Astronomy, Space Sciences, and Technology (UAE).

1st Workshop on Space Sciences Education Research in the Middle East (2019), International Astronomical Union (IAU) Commission C1 Astronomy Education and Development, Sharjah Academy for Astronomy, Space Sciences, and Technology, Oct. 28-29, 2019.

"Astronomy Teachers Workshop", September 29, 2019, Sharjah Academy for Astronomy, Space Sciences, and Technology (UAE).

15th Gulf Astronomy Colloquium, "SAASST Research Laboratories," September 28, 2019, Sharjah Academy for Astronomy, Space Sciences, and Technology (UAE).

1st UAE-Japan Space Exploration Symposium, University of Sharjah/Sharjah Academy for Astronomy and Space Sciences, Feb. 17-18, 2018.

"Do Black Holes Exist? Observations - Challenges – Opportunities," International Workshop, Sharjah Center for Astronomy and Space Sciences, March 6 – 7, 2017.

13th Gulf Astronomy Colloquium, "High-Resolution VLA Observations of FR II Radio Sources at 3.6 cm", April 13-14, 2013, American University of Sharjah, Sharjah (UAE).

12th Gulf Astronomy Colloquium, "Statistical Analysis of the Crescent Visibility Criteria," April 14, 2012, New York University, Abu-Dhabi (UAE).

11th Forum, Astronomy in the Gulf, Bahrain Astronomical Society, "The FRII Radio Galaxies and Quasars at High-Redshifts: Similarities and Differences," April 18-19, 2011 (Bahrain).

"International Year of Astronomy 2009: A Year of Educational Activities in the UAE," New York University, Abu-Dhabi Institute, "Frontiers in Physics," January 11-13, 2010, Abu-Dhabi (UAE).

9th Gulf Astronomy Colloquium: "The FRI/FRII Classification of Extragalactic Radio Sources", UAE University, March 28, 2009, Al-Ain (UAE).

"Al-Battani's Astronomy Teachers Workshop," International Year of Astronomy 2009, UAE University, March 29, 2009,

The Eighth Annual U.A.E. University Research Conference. April 2007, "Hot Spots Position as an Orientation Indicator in FRII's Radio Galaxies and Quasars."

The Eighth Annual U.A.E. University Research Conference. April 2007, "Yallop's Criterion as a Test for the Earliest Crescent Visibility."

Third Annual Conference for Middle East Teachers of Science, Mathematics and Computing, "Teaching Astronomy to Non-Science Majors," Mar. 17-19, 2007, Abu-Dhabi (UAE)

7th Gulf Astronomy Colloquium: "Hot Spots Location in Radio Galaxies and Quasars," February 22, 2007, University of Bahrain/Bahrain Astronomical Society, Bahrain.

The Seventh Annual U.A.E. University Research Conference. April 2006, "Hot Spots Analysis in FR II 3CR Radio Sources with $0.3 < z < 2.0$".

The Sixth Annual U.A.E. University Research Conference, April 2005, "8.4 GHz High-Resolution Observations of Fanaroff-Riley II 3CR Radio Sources with $0.3 < z < 2.0$. II. Ten New Images.

6th Gulf Astronomy Colloquium: Astronomy in the Gulf, March 30, 2006, "The Extragalactic Zoo: Quasars, Radio Galaxies, Blazars", American University of Sharjah – UAE

6th Gulf Astronomy Colloquium: Astronomy in the Gulf, March 30, 2006, "Islamic Astronomy: Golden Names, Forgotten Civilization", American University of Sharjah – UAE

4th Gulf Astronomy Colloquium: Astronomy in the Gulf, December 04, 2003, "A Model for the Depolarizing Medium for Radio Galaxies and Quasars," University of Bahrain/Bahrain Astronomical Society," Bahrain.

4th Gulf Astronomy Colloquium: Astronomy in the Gulf, December 04, 2003, "Teaching Digitally," University of Bahrain/Bahrain Astronomical Society," Bahrain.

3rd Gulf Astronomy Colloquium: Astronomy in the UAE, May 22, 2003, "Radio Galaxies and Quasars Unification Scheme: The Observational View," American University of Sharjah, United Arab Emirates

2nd Gulf Astronomy Colloquium: Astronomy in the UAE, May 09, 2002, "Radio Observations of Hot Spots," UAE University, United Arab Emirates.

1st Gulf Astronomy Colloquium: Astronomy in the UAE, November 23, 2000, "Teaching Astronomy to Non-Science Majors," American University of Sharjah, United Arab Emirates.

1st Gulf Astronomy Colloquium: Astronomy in the UAE, November 23, 2000, "FRII Radio Galaxies and Quasars: The Depolarization Test," American University of Sharjah, United Arab Emirates.

PUBLICATIONS:

"Leveraging Space to achieve sustainable development: The UAE Approach as an example," Noora Alameri, Maryam Alqasimi, Ilias Fernini, Hamid Al-Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

"First Light of Sharjah-Sat-1: Potential targets and early science," Antonios Manousakis, Ilias Fernini, Emrah Kalemci, Noora Alameri, Maryam Alqasimi, Yousuf Faroukh, Tarifa AlKaabi, Mohamed BinAshour, Amel Alhammadi, Maryam Alansaari, Fatima Alketbi, Hamid Al-Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

"The Role of Space-based telescopes in unraveling the existence of Dark Matter: (From Hubble to Nancy Grace Roman Telescope)," Noora Alameri, Ilias Fernini, Maryam Alqasimi, Antonios Manousakis, Hamid Al-Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

"UAE's Space Culture Flourishing Through Art and Astrophotography," Maryam Alqasimi, Mohammad Musharraf, Noora Alameri, Ilias Fernini, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

"Recent Survey on Black Hole-Neutron Star Mergers," Maryam Alqasimi, Arzoo Noorani, Noora Alameri, Antonios Manousakis, Ilias Fernini, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

"Sharjah-Sat-3 Mission Design Analysis with STK Software: Orbit Determination, Lifetime Analysis, and Power Generation," Amel Alhammadi, Maryam Alansaari, Fatima Alketbi, Tarifa AlKaabi, Mohamed BinAshour, Yousuf Faroukh, Ilias Fernini, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

"Assessing the Effectiveness of Different Deployable Solar Panel Setups on Sharjah-Sat-2, an Earth Observational 6U CubeSat, Using the CubeSat Toolbox," Fatima Alketbi, Amel Alhammadi, Tarifa AlKaabi, Mohamed BinAshour, Maryam Alansaari, Yousuf Faroukh, Ilias Fernini, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

"The Growth of the CubeSat industry in the Arabian Gulf," Tarifa AlKaabi, Fatima Alketbi, Maryam Alansaari, Amel Alhammadi, Mohamed BinAshour, Yousuf Faroukh, Ilias Fernini, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

"Developing a Toolkit for Efficient Analysis of Cadi Ionosonde Data," Sultan Suhail Halawa, Muhammad Mubasshir Shaikh, Ilias Fernini, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

"Anomalously High Amplitude Scintillation Observed from GLONASS Satellites during Low Solar Activity," Muhammad Mubasshir Shaikh, Abdollah Darya, Sultan Halawa, Manar Abusirdaneh, Ilias Fernini, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

"Investigation on the Semidiurnal Descent of Sporadic-E Layer using Ionosonde Height-Time-Intensity Data," Muhammad Mubasshir Shaikh, Sultan Halawa, Manar Abusirdaneh, Abdollah Darya, Ilias Fernini, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

“Space Debris Surveillance in the UAE: Insights from the UAEMMN's First Five Years of Operation,” Ilias Fernini, Maryam Sharif, AlReem Alzarouni, Aisha Al-Owais, Salma Subhi, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

“A 1.4 GHz Survey of 46 Giant Radio Sources,” Arzoo Noorani, Ilias Fernini, Abdollah Masoud, Mohammad Musharraf, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

Decametric and Metric Spectral Solar Radio Observations using the Low-Frequency Radio Telescope in SAASST Mohammad Rihan, Ilias Fernini, Rihab Sultan, Samar Hassan, Aisha Al Owais, Noora Al Amiri, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

“Radio Astronomy Data Acquisition Through HTTP Requests,” Mohammad Musharraf, Ilias Fernini, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

“The Sharjah Very Long Radio Interferometer – A Unique Radio Observatory in the MENA Region,” Ilias Fernini, Abdollah Massoud, Arzoo Noorani, Mohammad Musharraf, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

“Martian Crater Classification Using LightGBM,” Abdollah Masoud Darya, Ahmed Bouridane, Sultan Suhail Halawa, Ilias Fernini, Hamid Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

“Leveraging Machine Learning for Streamlined Meteor Reduction,” Aisha Al-Owais, Munya Al-Khalifa, Maryam Sharif, Ilias Fernini, Hamid Al-Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

“Classification of Incoming Radio Data from a Solar Radio Spectrometer,” Aisha Al-Owais, Munya Al-Khalifa, Mohammad Rihan, Ilias Fernini, Hamid Al-Naimiy,74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

“Summer Students Internship Program at the Sharjah Academy for Astronomy, Space Sciences, and Technology,” Ilias Fernini, Mohamed Rihan, Yusuf Faroukh, Tarifa Al-Kaabi, Mohamed BinAhsour, Amel Al-Hammadi, Maryam Al-Ansaari, Fatima Al-Ketbi, Maryam Sharif, Salma Subhi, Noora Al-Ameri, Maryam al-Qasimi, Antonios Manousakis, Mubasshir Shaikh, Abdollah Masoud, Sultan Suhail, Aisha Al-Owais, Hamid H.K. Al Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

“Modern Aspects of the 11th - 16th c. Asian Islamic Astronomical Observatories,” Ilias Fernini, Aisha Al-Owais, Hamid M. K. Al-Naimiy, 74th International Astronautical Congress, Oct. 02-06, 2023, Baku, Azerbaijan

“Sharjah-Sat-2: A Low-Cost High-Resolution Earth Observation Microsatellite,” Yousef Faroukh, Tarifa Al-Kaabi, Maryam Alansaari, Fatima Alketbi, Maryam Sharif, Mohammed Bin-Ashour, Amal Alhammadi, Ilias Fernini, Hamid Al Naimiy

“Monitoring and Validation of GNSS Signal's Integrity Using Sharjah-Sat-2 Microsatellite,” Yousef Faroukh, Abdollah Masoud Darya, Maryam Sharif, Maryam Alansaari, Tarifa Al-Kaabi, Mohammed Bin-Ashour, Amal Alhammadi, Fatima Alketbi, Ilias Fernini, Hamid Al Naimiy

“Utilization of Sharjah-Sat-1 Improved X-ray Detector for Space Situational Awareness,” Tarifa Al-Kaabi, Yousef Faroukh, Maryam Alansaari, Fatima Alketbi, Amal Alhammadi, Mohammed Bin-Ashour, Maryam Sharif, Ilias Fernini, Hamid Al Naimiy

“Reporting Abnormally High Amplitude Scintillation with GLONASS L1 during Low Solar Activity” Muhammad Mubasshir Shaikh, Abdollah Masoud Darya, Ilias Fernini, ION GNSS+ 2023, Sep. 11-15, 2023, Denver, CO, USA

"Meteor Detection and Localization using YOLOv3 and YOLOv4,” Aisha Alowais, Maryam Sharif, Sarra Ghali, Maha Abu Serdaneh, Omar Belal, Ilias Fernini, Neural Computing and Applications, 2023

"Capacity Building through the Series of Sharjah-Sat CubeSat Missions," Tarifa Al-Kaabi, Maryam Al-Ansaari, Yousuf Faroukh, Mohamed Bin Ashour, Amel Al-Hammadi, Maryam Sharif, Fatima Alketbi, Ilias Fernini, Hamid M. K. Alnaimy, 5th COSPAR Symposium "Space Science with Small Satellites," Apr. 16-21, 2023, Singapore

"Mission Analysis of Sharjah-Sat-2: 6U Earth Observation Hyperspectral CubeSat," Fatima Alketbi, Maryam Sharif, Amel Alhammadi, Yousuf Faroukh, Maryam Alansaari, Tarifa Alkaabi, Mohamed Bin Ashour, Ilias Fernini, Hamid M. K. Alnaimy, 5th COSPAR Symposium "Space Science with Small Satellites," Apr. 16-21, 2023, Singapore

"Analyzing the Performance of Deployable Solar Panel Configurations on Sharjah-Sat-2 (6U Earth Observation Hyperspectral CubeSat) using the CubeSat Toolbox," Fatima Alketbi, Amel Alhammadi, Maryam Alansaari, Tarifa Alkaabi, Maryam Sharif, Mohamed Bin Ashour, Yousuf Faroukh, Ilias Fernini, Hamid M. K. Alnaimy, 5th COSPAR Symposium "Space Science with Small Satellites," Apr. 16-21, 2023, Singapore

"Sharjah-Sat-3: A Low-Cost 6U CubeSat for Space Weather Applications," Ilias Fernini, Alim Rüstem Aslan, Emrah Kalemci, Tahar Amari, Yousuf Faroukh, Tarifa Alkaabi, Mohamed Bin Ashour, Amel Alhammadi, Maryam Alansaari, Fatima Alketbi, Maryam Sharif, Antonios Manousakis, Muhammad Mubasshir Shaikh, Abdollah Darya, Hamid M. K. Alnaimy, 5th COSPAR Symposium "Space Science with Small Satellites," Apr. 16-21, 2023, Singapore

"Sharjah-Sat-1: A 3U+ X-ray Observation Satellite," Ilias Fernini, Tarifa Alkaabi, Mohamed Bin Ashour, Yousuf Faroukh, Amel Alhammadi, Maryam Alansaari, Maryam Sharif, Fatima Alketbi, Hamid M. K. Alnaimy, 5th COSPAR Symposium "Space Science with Small Satellites," Apr. 16-21, 2023, Singapore

"Sharjah-Sat-2: A Hyperspectral 6-U CubeSat Earth Observing Tool," Ilias Fernini, Tarifa Alkaabi, Mohamed Bin Ashour, Yousuf Faroukh, Maryam Alansaari, Amel Alhammadi, Fatima Alketbi, Maryam Sharif, Hamid M. K. Alnaimy, 5th COSPAR Symposium "Space Science with Small Satellites," Apr. 16-21, 2023, Singapore

"The Improved X-ray Detector (iXRD) on Sharjah-Sat-1, design principles, tests, and ground calibration," Emrah Kalemci, Ali M. Altıng ̈un, Ayhan Bozkurt, A. Rustem Aslan, Refik Yalcın, Kaya Gokalp, Kaan Vezirо ̆glu, Ilias Fernini, Antonios Manousakis, Ali Yasar, Milad Diba, Bo ̆gac Karabulut, Egemen Catal, and Onur Oztekin, Experimental Astronomy, https://doi.org/10.1007/s10686-023-09890-z, 2023

'Martian Ionosphere Electron Density Prediction Using Bagged Trees', A. M. Darya, N. Al-Ameri, M. Shaikh, I. Fernini, H. Al-Naimiy, The International Conference on Electrical and Computing Technologies and Applications (ICECTA 2022), American Univ. of Ras Al-Khaimah, Nov. 23-25, 2022, https://ieeexplore.ieee.org/document/9990500

"Abnormal Phase Scintillation Observed From GLONASS Signals", Abdollah Masoud Darya, Muhammad Mubasshir Shaikh, Ilias Fernini, and Hamid AlNaimiy, The International Conference on Electrical and Computing Technologies and Applications (ICECTA 2022), American Univ. of Ras Al-Khaimah, Nov. 23-25, 2022, https://ieeexplore.ieee.org/document/9990125

"The Sharjah 20.1 MHz Decametric Radio Telescope – A Unique Tool for Solar Radio Bursts Observations in the Gulf Region," I. Fernini, M. B. Rihan, S. Al-Qahtani, I. Zein, A. Adwan, H. Al-Naimiy, International Conference and Exhibition For Science (ICES2023), Feb. 6-8, 2023 (Riyadh, Saudi Arabia)

Space Sciences Research at the Sharjah Academy for Astronomy, Space Sciences, and Technology," I. Fernini, H. Al-Naimiy, International Conference and Exhibition For Science (ICES2023), Feb. 6-8, 2023 (Riyadh, Saudi Arabia)

"Observing Space Debris with the UAE Meteor Monitoring Network," I. Fernini, M. Sharif, A. Al-Owais, S. Subhi, A. Adwan, H. Al-Naimiy, International Conference and Exhibition For Science (ICES2023), Feb. 6-8, 2023 (Riyadh, Saudi Arabia)

"Sharjah-Sat-2: A 3U CubeSat for Space Weather Applications," I. Fernini, Y. Faroukh, T. Al-Kaabi, I. Al-Sabt, M. S. Binashour, M. Al-Ansari, F. Al-Ketbi, A. Al-Hammadi, H. Al-Naimiy, International Conference and Exhibition For Science (ICES2023), Feb. 6-8, 2023 (Riyadh, Saudi Arabia)

Prospecting Clumpy wind Accretion in the Supergiant High Mass X-ray Binary IGR J17252-3616 using XMM-Newton," N. Alameri, A. Manousakis, M. Alqasimi, I., H. Alnaimy, International Conference and Exhibition For Science (ICES2023), Feb. 6-8, 2023 (Riyadh, Saudi Arabia)

"Spectral analysis of two obscured sgHMXBs with pile-up treatment," M. Alqasimi, A. Manousakis, N. Alameri, I. Fernini, H. Al Naimiy, International Conference and Exhibition For Science (ICES2023), Feb. 6-8, 2023 (Riyadh, Saudi Arabia)

"Seasonal Variation of the GNSS Ionospheric Delay Observed Over the UAE," Hind Yousif Alhammadi, Noor A. Almahri, Shaikha Alzaabi, Halima Obaid Alnaqbi, Shaima Ibrahim Rafi, Abdollah Masoud Darya, Sultan Suhail, Ilias Fernini, The 17th International Conference on Space Operations, SpaceOps2023, Dubai (Mar. 06-10, 2023)

"SolSat: A Low-Cost 3-U CubeSat System for Space Weather applications," Y. Faroukh, I. Fernini, A. Rustem, E. Kalemci, T. Amari, R. Fernini, T. al-kaabi, A. Al-hammadi, M. A. Al-ansaari, F. Al-ketbi, I. H. Al-sabt, M. BinAshour, M. Sharif, A. Manousakis, M. Shaikh, A. M. Darya, H. M. K. Al-Naimiy, The 17th International Conference on Space Operations, SpaceOps2023, Dubai (Mar. 06-10, 2023)

"The Absence of Laws Regulating the Proliferation of Space Debris and its Implications on Space Operations," I. H. Alsabt, M. A. Alansaari, M. Sharif, Y. Faroukh, F. Alketbi, M. BinAshour, T. Alkaabi, A. Alhammadi, I. Fernini, H. M. K. Al-Naimiy, The 17th International Conference on Space Operations, SpaceOps2023, Dubai (Mar. 06-10, 2023)

"Mission Design of the SolSat CubeSat," F. Alketbi, A. Alhammadi, T. Alkaabi, Y. Faroukh, M. BinAshour, M. A. Alansaari, I. H. Alsabt, I. Fernini, M. Sharif, H. M. K. Al-Naimiy, The 17th International Conference on Space Operations, SpaceOps2023, Dubai (Mar. 06-10, 2023)

"Mapping of S4 Over the Arabian Peninsula During Solar Minimum," A. Massud, M. M. Shaikh, I. Fernini, H. M. K. Al-Naimiy, Accepted for Publication, IEEE Geoscience and Remote Sensing Letters (GRSL), https://doi.org/10.1109/LGRS.2022.3202245, 2022

"Analyzing Meteorites at the Sharjah Academy for Astronomy, Space Sciences, and Technology," Ilias Fernini, Salma Subhi, Gaffar Attaelmanan, Yassir A. Abdul, and Hamid Al-Naimiy, Mediterranean Geosciences Union (MedGU) Meeting, Marrakech, 27-30 November, 2022

"Observations of Fireballs with the UAE Meteor Monitoring Network," Maryam Essa Sharif, Aisha Al-Owais, Ilias Fernini, Masa Al-Naser, and Hamid Al-Naimiy, Mediterranean Geosciences Union (MedGU) Meeting, Marrakech, 27-30 November, 2022

"Global Ionospheric Total Electron Content Response to the November 2021 Geomagnetic Storm," Abdollah Masoud Darya, Muhammad Mubasshir Shaikh, Ilias Fernini, Hamid Al-Naimiy, Mediterranean Geosciences Union (MedGU) Meeting, Marrakech, 27-30 November, 2022

"Artificial Phase Scintillation Observed from GLONASS Signals," Abdollah Masoud Darya, Sultan Suhail, Muhammad Mubasshir Shaikh, Ilias Fernini, International Workshop on GNSS Ionosphere (IWGI 2022), Submitted, 2022

"The UAE Meteor Monitoring Network observations: 2018 – 2020," Maryam E. Sharif, Ilias Fernini, Aisha Al-Owais, Masa Alnaser, Yousef Eisa Yousef Doostkam, Anas Omar Adwan, Issam Abu-Jami, Hamid Al-Naimiy, eMeteorNews, Vol. 7, Issue 4, pp. 250-256, 2022

"Amplitude Scintillation Forecasting using Bagged Trees," Darya A.M., Al-Owais A., Shaikh M.M., Fernini I. IEEE IGARSS 2022, **DOI:** 10.1109/IGARSS46834.2022.9883380, Kuala Lumpur, Malaysia, 2022.

"A Comparative Analysis of Global vs. Regional Model at High-latitudes," Shaikh M.M. and Fernini I. ION GNSS+ 2022, the Institute of Navigation, Denver Colorado, USA, 2022

"Artificially Induced Phase Scintillation Observed from GLONASS Signals," Darya A.M., Shaikh M.M., Fernini I., and Al-Naimy H., Under review at journal Advances in Space Research, 2022.

"NeQuick2 Validation using Multi-satellite and Ground Data", M. Shaikh, Sahar, N., and I. Fernini, under review at NAVIGATION – Journal of the Institute of Navigation, 2022.

"The United Arab Emirates Radio Astronomy Observatories," Ilias Fernini, Mohamed Baker Rihan, Abdollah Masoud, Hamid H.K. AlNaimiy," XXXIst General Assembly of International Astronomical Union (IAUGA 2022), IAUS 368, IAUGA 2022, Aug. 02-11, 2022.

"Neural Networks for Meteorite and Meteor Recognition," Aisha Al-Owais, Antonios Manousakis, Maryam Sharif, Masa Al-Naser, Ilias Fernini, XXXIst General Assembly of International Astronomical Union (IAUGA 2022), IAUS 368, IAUGA 2022, Aug. 02-11, 2022.

"Pile-up treatment and spectral analysis of an HMXB using XMM-NEWTON," Maryam AlQasimi, Antonios Manousakis, Noora AlAmeri, Ilias Fernini, Hamid AlNaimy, XXXIst General Assembly of International Astronomical Union (IAUGA 2022), IAUS 370, IAUGA 2022, Aug. 02-11, 2022.

"Understanding Accretion in High Mass X-ray Binaries: The Case study of VELA X-1", Antonios, Manousakis, Noora Al-Ameri, Maryam Al-Qasimi, Ilias Fernini, Hamid Al-Naimiy, XXXIst General Assembly of International Astronomical Union (IAUGA 2022), IAUS 370, IAUGA 2022, Aug. 02-11, 2022.

"Design, testing, and validation of a space-based improved x-ray detector onboard Sharjah-Sat-1", Yousuf Faroukh, Tarifa Alkaabi, Emrah Kalemci, Ibrahim Al-Sabt, Mohamed BinAshour, Ali Murteza Altingun, Kaya Gokalp, Refik Yalcin, Fatima Alketbi, Amel Alhammadi, Maryam Alansaari, Bogac Karabulut, Egemen Çatal, Ilias Fernini, Alim R. Aslan, and Hamid M. K. Al-Naimiy Proc. SPIE 12191, X-Ray, Optical, and Infrared Detectors for Astronomy X, 121910J (29 August 2022); https://doi.org/10.1117/12.2628134

"Development of a novel optical camera subsystem onboard Sharjah-Sat-1 CubeSat", Onur Oztekin, Tarifa Alkaabi, Yousuf Faroukh, Ibrahim Al-Sabt, Mohammed BinAshour, Maryam Alansaari, Fatima Alketbi, Amel Alhammadi, Bogac Karabulut, Egemen Çatal, Ilias Fernini, Alim R. Aslan, and Hamid M. K. Al-Naimiy Proc. SPIE 12188, Advances in Optical and Mechanical Technologies for Telescopes and Instrumentation V, 121882M (29 August 2022); https://doi.org/10.1117/12.2629356

"Present and Future Space Exploration in the United Arab Emirates," Ilias Fernini, Hamid Al-Naimiy, Proc. 73rd International Astronautical Congress 2022, IAC-22-A3-1-8, 18-22 September 2022

"Building a Solar Radio Spectrometer," Mohammad Baker Rihan, Ilias Fernini, Ismail Zein, Abdullah Atoui, Issam Abujami, Anas Adwan, Hamid M. K. Alnaimy, Proc. 73rd International Astronautical Congress 2022, IAC-22-A7-2-1, 18-22 September 2022

"Diurnal and Seasonal Variations of GNSS Based Ionospheric Slab Thickness over Arabian Peninsula," Muhammad Mubasshir Shaikh, Abdollah M Darya, Sultan Suhail, Manar Anwer Abusirdaneh, Sahar Sowdagar, Ilias Fernini, Hamid M. K. Alnaimy, Proc. 73rd International Astronautical Congress 2022, IAC-22-B2-IP.-4,18-22 September 2022

"A GPS Simulator for the Design and Development of a Future Low-Cost GNSS," Sultan Suhail, Muhammad Mubasshir Shaikh, Ilias Fernini, Hamid M. K. Alnaimy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"GPS Carrier-to-Noise Density Prediction Using Regression Trees," Abdollah Darya, Khawla Alnajjar, Muhammad Mubasshir Shaikh, Saeed Abdallah, Ilias Fernini, Hamid M. K. Alnaimy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"The iXRD on Sharjah-Sat-1 CubeSat, the Science Mission and Ground Calibration," Emrah Kalemci, Fatima Alketbi, Yousuf Faroukh, Ali Murteza Altingun, Tarifa AlKaabi, Amel Alhammadi, Maryam Alansaari, Ayhan Bozkurt, Ilias Fernini, Alim R¨ustem Aslan, Bogac Karabulut, Antonios Manousakis, Hamid Al Naimiy, Refik Yalcin, Kaya Gokalp, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"The United Arab Emirates Next 50 Years of Space Exploration," Ilias Fernini, Hamid AL-Naimiy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"Calculating Station Bias for Uncalibrated GNSS Stations Uing Close-range Calibrated GNSS Station Data," Sahar Sowdagar, Muhammad Mubasshir Shaikh, Ilias Fernini, Hamid M. K. Alnaimy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"The Living Contribution of Islamic Science to Space Exploration," Ilias Fernini, Hamid Al-Naimiy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"Human and Technological Capacity Building Through the Sharjah-Sat-1," Tarifa AlKaabi, Ilias Fernini, Yousuf Faroukh, Fatima Alketbi, Amel Alhammadi, Maryam Alansaari, Alim Rustem Aslan, Bogac Karabulut, Emrah Kalemci, Hamid M.K. Al-Naimiy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"Sharjah-Sat-1 Structural Design and Analysis," Maryam Alansaari, Tarifa AlKaabi, Fatima Alketbi, Yousuf Faroukh, Ibrahim Alsabt, Mohamed BinAshour, Amel Alhammadi, Ilias Fernini, Onur ¨Oztekin, Egemen Catal, Bogac Karabulut, Alim Rustem Aslan, Hamid M.K. Al-Naimiy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

“Sharjah-Sat-1 Space-to-Ground Telecommunication Operations,” Ibrahim Alsabt, Yousuf Faroukh, Amel Alhammadi, Tarifa AlKaabi, Fatima Alketbi, Maryam Alansaari, Mohamed BinAshour, Ilias Fernini, Emirhan Eser G¨ul, Bogac Karabulut, Alim Rustem Aslan, Emrah Kalemci, Hamid M.K. Al-Naimiy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"Reconstruction of Incoherent Scatter Radar Vertical Electron Density Profiles Using Regression Trees," Manar Anwer Abusirdaneh, Abdollah Darya, Ilias Fernini, Muhammad Mubasshir Shaikh, Hamid M. K. Alnaimy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"Accretion environment in sgHMXB with small satellites" Antonios Manousakis, Noora Alameri, Maryam Al-Qasimi, Ilias Fernini, Hamid AlNaimy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"Multipurpose Approaches for mapping and Analyzing Meteorites," Masa Alnaser, Ilias Fernini, Salma Subhi, Maryam Sharif, Aisha Alowais, Hamid M. K. Alnaimy, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"Supervised Machine Learning Applications on Meteors and Meteorites," Aisha Alowais, Maryam Sharif, Ilias Fernini, Antonios Manousakis, Proc. 73rd International Astronautical Congress 2022, 18-22 September 2022

"Human and Technological Capacity Building through the Sharjah-Sat-1 CubeSat Project," Ilias Fernini, Tarifa Alkaabi, Yousuf Faroukh, Fatima Alketbi, Amel Alhammadi, Maryam Alansaari, Alim Rüstem Aslan, Emrah Kalemci, Hamid M. K. Alnaimy, 44th COSPAR Scientific Assembly - COSPAR 2022, Athens, Greece, 16 - 24 July 2022

"The Sharjah-Sat-1 CubeSat for Monitoring the Hard X-ray Sky," Emrah Kalemci, Yousuf Faroukh,

Fatima Alketbi, A.murtaza Altingun, Tarifa Alkaabi, Amel Alhammadi, Maryam Alansaari, Ayhan Bozkurt, Ilias Fernini, Alim Rüstem Aslan, Bogaç Karabulut, Antonios Manousakis, Hamid M. K. Alnaimy, 44th COSPAR Scientific Assembly - COSPAR 2022, Athens, Greece, 16 - 24 July 2022

"Introducing the Sharjah Decametric Radio Telescope for Solar Radio Undergraduate Research," Mohammed Rihan, Ismail Zein, Salim Shuhail, Ilias Fernini, Hamid M. K. Alnaimy, 44th COSPAR Scientific Assembly - COSPAR 2022, Athens, Greece, 16 - 24 July 2022

"Utilization of Artificial Intelligence for Meteor and Meteorite Recognition," Aisha Alowais, Ilias Fernini, Maryam Sharif, Omar Belal, Hamid M. K. Alnaimy, 44th COSPAR Scientific Assembly - COSPAR 2022, Athens, Greece, 16 - 24 July 2022

"Multidisciplinary Approaches Towards the Science of Meteorites," Aisha Alowais, Maryam Sharif, Masa Al-Naser, Salma Hassan Subhi, Ilias Fernini, Hamid M. K. Alnaimy, 44th COSPAR Scientific Assembly - COSPAR 2022, Athens, Greece, 16 - 24 July 2022

"The accreting environment around the sg-HMXB IGR J18027-2016 through X-ray wind tomography," Antonios Manousakis, Noora Alameri, Maryam Al-Qasimi, Ilias Fernini, Hamid M. K. Alnaimy, 44th COSPAR Scientific Assembly - COSPAR 2022, Athens, Greece, 16 - 24 July 2022

"The UAE Space Situational Awareness and Space Weather Programs at the Sharjah Academy for Astronomy, Space Sciences, and Technology," Ilias Fernini, Mubasshir M. Shaikh, Abdolla M. Darya, Aisha Al-Owais, Maryam E. Sharif, Mohamed B. Rihan, Mohamed Talafha, Hamid M. K. Al-Naimiy, American Institute of Aeronautics and Astronautics, AIAA 2021-4089, 2021, https://doi.org/10.2514/6.2021-4089

“Technical Overview of Sharjah-Sat-1”, I. Fernini, A. Rüstem, B. Karabulut, O. Öztekin, H. Al-Naimiy, T. M. Al-Kaabi, I. Al-Sabt, E. Çatal, Kaan Sarıca, E. Kalemci, 12th European CubeSat Symposium, Nov. 23-26, 2021, École Polytechnique, Palaiseau, France.

"Antenna Analysis for VHF/UHF Monopole Antennas Under Varying Geometrical Constraints for a 3U CubeSat," K. Sarica, B. Karabulut, A. Rüstem, I. Fernini, H. Al-Naimiy, 12th European CubeSat Symposium, Nov. 23-26, 2021, École Polytechnique, Palaiseau, France.

"Searching for a Martian soil simulant in UAE & Al Hajar Mountains-First simulant CUOS and MUOS," M. Fikri, A. Alhazbaa, K. Pavlopoulos, B. Pracejus, I. Fernini, A. Manousakis, B. Suleiman, M. Shameer, M. Irshad, D. Moraetis, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Development of a Machine Learning Model for Martian Electron Density using MGS Data," N. Al-Ameri, A. Masoud, M. Shaikh, I. Fernini, H. M. K. Al-Naimiy, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Attitude Determination and Control System of Sharjah-Sat-1," M. S. BinAshour, T. M. Al-Kaabi, B. Karabulut, A. R. Aslan, I. Fernini, H. M. K. Al-Naimiy, E. Kalemci, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Scientific Contribution of Sharjah-Sat-1 in X-ray Observations," E. Kalemci, A. Manousakis, I. Fernini, A. Bozkurt, A. M. Altıngün, K. Vezıroğlu, I. Al-Sabt, T. M. Al-Kaabi, S. R. Madara, M. M. Shaikh, A. R. Aslan, B. Karabulut, O. Oztekin, H. M. K. Al-Naimiy, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Fireballs Captured by the UAE Meteor Monitoring Network," M. E. Sharif, A. Al-Owais, I. Fernini, M. B. M. Alnaser, H. M. K. Al-Naimiy, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Meteorite Analysis as an Educational Tool at the Sharjah Academy for Astronomy, Space Sciences, and Technology," I. Fernini, S. Subhi, G. Attaelmanan, Y. A. Abdu, H. M. K. Al-Naimiy, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Correlation between the Jupiter-Io Observations and the Solar Radio Bursts using the Sharjah Decametric Radio Telescope (SDRT)," A. Y. Mustafa, M. B. Rihan, S. A. A. S. Al-qahtani, N. A. S. Al-Hindawi, S. Madara, I. Fernini, H. M. K. Al-Naimiy, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Monitoring of the Sunspots and Solar Radio Bursts for the 25th Solar Cycle Using the Sharjah Observatories," S. A. A. S. Al-qahtani, N. A. S. Al-Hindawi, M. B. Rihan, A. Y. Mustafa, M. Talafha, S. Madara, I. Fernini, H. M. Al-Naimiy, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Observing Giant Radio Sources at 1.4 GHz," I. Fernini, A. Alhameed, A. Noorani, H. M. K. Al-Naimiy, A. J. A. Butt, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Revealing accretion geometry on supergiant High Mass X-ray Binaries through X-ray wind tomography," A. Manousakis, N. Al Al-Ameri, M. Alqassimi, I. Fernini, H. M. K. Al-Naimiy, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Regional Ionospheric Range Errors – A Comparison Between Sharjah and Bahrain GPS Receiver Station Data," S. N. Sowdagar, M. Musharraf, M. M. Shaikh, I. Fernini, H. M. K. Al-Naimiy, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"The Role of the UAE New Space Science Centers in Promoting STEM Education," I. Fernini & H. M. K. Al-Naimiy, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"The Sharjah Academy for Astronomy, Space Sciences, and Technology Space Sciences Education and Outreach Program," I. Fernini, H. M. K. Al-Naimiy, M. A. S. Al Wardat, M. A. Shwaiki, M. M. Shaikh, A. Manousakis, 72nd International Astronautical Congress, Oct. 25-29, 2021 (Dubai, UAE)

"Retrieval of Ne(h) Profile for Ionosonde by Assimilating Collocated Radio Occultation Data into NeQuick2," Shaikh M.M., and Fernini I. Proceedings of ION GNSS+, Institute of Navigation, Saint Louis, USA (virtual), 2021

"Contribution of Meteor Flux in the Occurrence of Sporadic-E over Arabian Peninsula," Shaikh M. M., Gopakumar G.,., A. Al-Owais, and M. Sharif, Fernini, I (2021), Annales Geophysicae, 39, 471–478, 2021; DOI: https://doi.org/10.5194/angeo-39-471-2021

"Reporting Pre-Sunset Scintillation on GNSS Frequencies over Arabian Peninsula," M. M. Shaikh and I. Fernini, Proceedings of the 2021 International Technical Meeting, ION ITM 2021, January 25-28, 2021, https://doi.org/10.33012/2021.17857

"Daytime GNSS scintillation due to Es over Arabian Peninsula in Low Solar Activity," Shaikh M. M., Gopakumar G., AbdelRahman H. K., Kashcheyev A., and Fernini I. (2020), Results in Physics, https://doi.org/10.1016/j.rinp.2020.103761.

"Sharjah Academy for Astronomy, Space Sciences, and Technology (SAASST): A Higher Education Space Sciences Oasis in the Middle East." I. Fernini. Higher Education Digest Magazine, October 14, 2020. https://www.highereducationdigest.com/sharjah-academy-for-astronomy-space-sciences-and-technology-saasst-a-higher-education-space-sciences-oasis-in-the-middle-east/

"Detection of Jovian Radio Emission at 20.1 MHz with a Decametric Radio Array", I. Fernini, M. Rihan, A. Yousef, S. R. Madara, F. Al Aydaroos, and A. AlHameed, IAC 2020 Cyber Space Edition, 12-14 October 2020

"Observing at 1.4 GHz with the Sharjah New 40-m Radio Interferometer", A. Asmaa, I. Fernini, A. Manousakis, H. AlNaimiy, A. Noorani, and A. Javed, IAC 2020 Cyber Space Edition, 12-14 October 2020

"The High Energy Astrophysics Group in the Light of Sharjah-Sat-1 and Future Projects", A. Manousakis, N. AlAmeri, M. AlQasimi, E. Kalamci, I. Fernini, and H. AlNaimiy, IAC 2020 Cyber Space Edition, 12-14 October 2020

"Promoting STEM through the Sharjah Academy for Astronomy, Space Sciences, and Technology," I. Fernini and H. AlNaimiy, IAC 2020 Cyber Space Edition, 12-14 October 2020

"Sustainability of Artificial Martian Atmosphere," I. Fernini, R. Fernini, A. Noorani, M. AlShamsi, and M. AlQasimi, IAC 2020 Cyber Space Edition, 12-14 October 2020

"SharjahSat-1 Thermal Analysis for Orbit-Launch Selection", I. AlSabt, T. AlKaabi, S. R. Madara, I. Fernini, B. Karabulut, E. Catal, H. Telli, H. AlNaimiy, and A. R. Aslan, IAC 2020 Cyber Space Edition, 12-14 October 2020

"Lunar Flashes," M. Talafha, I. Fernini, H. AlNaimiy, F. Chogle, and A. Pratap, IAC 2020 Cyber Space Edition, 12-14 October 2020

"SAASST Ground Station: Satellite Tracking and Control for High Data Rates," T. AlKaabi, I. AlSabt, S. R. Madara, I. Fernini, B. Karabulut, A. R. Aslan, and H. AlNaimiy, IAC 2020 Cyber Space Edition, 12-14 October 2020

"Reporting Pre-sunset Scintillation on GNSS Frequencies over Arabian Peninsula." Shaikh M. M. and Fernini I. 33rd General Assembly and Scientific Symposium, International Union of Radio Science, Rome 2020.

"Occurrence of Pre-sunset L-band and E-band Scintillation Due to Strong Presence of Sporadic-E over Arabian Peninsula," M. M. Shaikh, I. Fernini, G. Gopakumar, N. M. Alameri, Advances in Space Research, https://doi.org/10.1016/j.asr.2020.02.011, 2020

"Decametric Radio Observations of Jupiter-Io Emission at 20.1 MHz," I. Fernini, M. B. Rihan, A. Y. Mustafa, S. R. Madara, R. Fernini, F. Al-Aydaroos, URSI GASS 2020, Rome, Italy, August 29 - September 05 2020

"The UAE Meteor Monitoring Network," I. Fernini, H. M. Al-Naimiy, M. Talafha, I. Abu Jami, A. Al-Owais, R. Fernini, A. Ahmad, M. Sharif, M. Al-Naser, Y. Eisa, S. Zarafshan, S. Subhi, Journal of Instrumentation, DOI: 10.1088/1748-0221/15/06/T06007 - 2020

"Sharjah Five-Meter Radio Telescope," I. Fernini, H. M. Al-Naimiy, A. Alhameed, A. Noorani, A. Javed, and A. Abujami, Journal of Instrumentation, 15, P01033, 2020

"UAE launches meteor and debris monitoring network," I. Fernini, M. Talafha, S. Subhi, A. Alowais and M. Sharif, Room Space Journal, Issue 21, 100-103, 2019

"Meteor Double and Triple Detections," I. Fernini, M. Talafha, A. Al-Owais, Y. E. Yousef, M. Sharif, M. Al-Naser, S. Zarafshan, H. Al-Naimiy, A. H. Harriri, I. Abu-Jami, S. Subhi, Y. Al-Nahdi, R. Fernini, A. O. Adwan, Proceedings of the International Meteor Conference, Bollmannsruh, Germany, 60-62, 2019

"Meteorite Hunting Using Deep Learning and UAVs," A. A. Alowais, S. Naseem, T. M. Dawdi, M. A. Ahmed, A. O. Adwan, Y. M. Elkalyoubi, K. A. I. K. Hassan, and I. Fernini, 2019 International Conference on Signal Processing and Information Security (ICSPIS2019), DOI: 10.1109/ICSPIS48135.2019.9045905, IEEE Xplore: March 26 2020.

"Astronomical Handbook 2020", I. Fernini, SAASST Publications, 200 pages, 2020.

"Hot Spots Properties of a Sample of 98 Fanaroff-Riley II Radio Sources," Fernini, I., & Eckart, A., Proceedings of First Sharjah International Conference on Particle Physics, Astrophysics and Cosmology (FISICPAC), IOP Conf. Series: Journal of Physics: Conf. Series 1258 (2019) 012022, doi: 10.1088/1742-6596/1258/012022

"The UAEMMN: A prominent meteor monitoring system in the Gulf Region," I. Fernini, A. Alowais, M. Talafha, M. Sharif, Y. Eisa, M. Alnaser, S. Mohammad, A. Hassan, I. Abujami, R. Fernini, and S. Subhi, MeteorNews, Vol. 4, Issue 5, pp. 275-276, 2019

"Unification of Fanaroff-Riley II Radio Sources with $0.1 < z < 2.0$ – 8.4 GHz VLA Observations of 15 Sources – Final Sample", I. Fernini, J. Phys.: Conf. Ser. 1269 012009, 2019

"Sharjah Investment in the UAE Space Sector," I. Fernini, J. Phys.: Conf. Ser. 1269 012003, 2019

"VLA Observations of 20 FR II Radio Sources at 8.4 GHz," I. Fernini, Astrophys Space Sci (2019) 364: 167. https://doi.org/10.1007/s10509-019-3654-5

"Space Technology Capacity Building in Support of SDG 2030 through CubeSat Sharjah-Sat-1," A. R. Aslan, H. M.K. Al-Naimiy, I. Fernini, A. Manousakis, M. Shaikh, S. R. Madara, T. Al-Kaabi, B. Karabulut, O. Oztekin, S. Turkoglu & E. Kalemci, Recent Advances in Space Technologies, Jun. 11-14, Istanbul, 2019

"Building an Artificial Martian Atmosphere," M. Al-Qasemi, M. Al-Shamsi, R. Fernini, A. al-Noorani & I. Fernini, 233rd Meeting of the American Astronomical Society, American Astronomical Society (USA), 2019

"Meteorite Hunting Using Machine Learning and UAVs," K. Hassan, M. Abdisalam, T. Dawdi, Y. Elkalyoubi & I. Fernini, 7th Undergraduate Research Competition (Abu-Dhabi Univ., UAE), 2019

"UAE Meteor Monitoring Network," A. Ahmad, M. Alnaser, S. Zarafshan & I. Fernini, 7th Undergraduate Research Competition (Abu-Dhabi Univ., UAE), 2019

"SHARJAH-SAT-1 CubeSat," A. Ruhi, M. Musharraf & I. Fernini, 7th Undergraduate Research Competition (Abu-Dhabi Univ., UAE), Apr. 2019

"Longitudinal Variability Study of Ionospheric Ranging Errors Around 20° N Geomagnetic Latitude." Darya A. M., Shaikh M. M., and Fernini I. 6th *IEEE* Int. Conf. on Space Science and Communication (ICONSPACE) 2019, Johor Bahru, Johor, Malaysia.

"Environmental Monitoring using CanSat," Y. M. Faroukh, A. Alhammadi, A. Al-Ali, A. O. Adwan, A. M. Faroukh, M. M. Shaikh, I. Fernini, 6th International Conference on Space Science and Communication (IconSpace), IEEE Explore Digital Library, pp. 239-244, https://doi: 10.1109/IconSpace.2019.8905942.2019.

"Variation of Ionospheric Range Errors for L1 frequency GPS users during 23rd solar cycle", Darya A. M., Shaikh M. M., Fernini I. Advances in Space Research, Vol. 64, Issue 5, pp. 1034-1045, 2019, https://doi.org/10.1016/j.asr.2019.05.044.

"Building a Decametric Radio Telescope Array," A. Alhameed, M. Abdelsalam, D. Nouichi, I. Fernini, H. Al Naimiy, I. Abujami, R. Misbahulhaque, M. Rihan and M. Talafha, Journal of Instrumentation, 14, P08022, 2019

"Comparative Planetology of Martian Ionosphere." Alameri N.A., Shaikh M. M**.**, and Fernini I. 70th International Astronautical Congress 2019, Washington D.C., USA.

"Astronomical Handbook 2019", I. Fernini, SAASST Publications, 200 pages, 2019.

"Development of Sharjah-Sat-1: An improved Z-ray Detector Onboard a 3U CubeSat," Madara S.M., AlKaabi T., Fernini I., Manousakis A., Shaikh M.M., et al. 11th European Cubesat Symposium, Luxembourg, 2019

"Analysis of Space Debris Re-Entry over the Arabian Peninsula (2004 to 2018)," A. M. Darya and I. Fernini, *2018 International Conference on Signal Processing and Information Security (ICSPIS)*, IEEE Xplore, DOI: 10.1109/CSPIS.2018.8642726, 2018

"Environmental Monitoring using CanSat," Y. M. Faroukh, A. Al-Hammadi1, A. A. M. A. Al-Ali, R. A. S. A. Al-Yammahi, M. M. Shaikh, and **I. Fernini**, 6th UAE Undergraduate Research Competition, 2018.

"Building An Artificial Martian Atmosphere," M. Al-Shamsi, M. Al-Qasemi, R. Fernini, A. Noorani, and **I. Fernini**, 6th UAE Undergraduate Research Competition, 2018.

"Effects of 23rd Solar Cycle on TEC Measurement over Bahrain - A Case Study", A. M. Darya, M. M. Shaikh, and **I. Fernini**, Advances in Science and Engineering Technology Multi-Conference (ASET'18), IEEEXplore, DOI: 10.1109/ICASET.2018.8376814 , 2018

"Evaluation of Geomagnetic Storms - A Case Study," W. F. Al-Sadoon, M. M. Shaikh, and **I. Fernini**, Aviation and Space Technology International Conference, Advances in Science and Engineering Technology Multi-Conference (ASET'18), IEEEXplore , DOI: 10.1109/ICASET.2018.8376812, 2018.

"Astronomical Handbook 2018", I. Fernini, SAASST Publications, 200 pages, 2018.

"Modern Foundation of Astronomy," **Fernini, I.**, Noor Publishing Co. (Ger.), ISBN: 978-3-330-85021-7, 2017, 213 pages.

"Hijri Calendar 1437 AH / 2015-2016 Astronomy Almanac," Al-Naimiy, H.M., **Fernini, I.**, and Sakhr S., Emirates Heritage Club, 232 pages, 2015.

"Hijri Calendar 1436 AH / 2014-2015 Astronomy Almanac," Al-Naimiy, H.M., **Fernini, I.**, and Sakhr S., Emirates Heritage Club, 232 pages, 2014.

"VLA Images at 8.4 GHz of 40 Fanaroff-Riley II 3CR Radio sources with 0.1 < z < 2.0.", **Fernini, I.,** *Astrophysical Journal Supplement Series*, 212, 19, 2014.

"Hijri Calendar 1435 AH / 2013-2014 Astronomy Almanac," Al-Naimiy, H.M., **Fernini, I.**, and Sakhr S., Emirates Heritage Club, 232 pages, 2013.

"Hijri Calendar 1434 AH / 2012-2013 Astronomy Almanac," Al-Naimiy, H.M., **Fernini, I**., and Sakhr S., Emirates Heritage Club, 232 pages, 2013.

"High-Resolution VLA Observations of FR II Radio Galaxies and Quasars at 3.6 cm," **Fernini, I.,** Proc. of the 2nd Middle-East and Africa Regional IAU Meeting, Cape Town, South Africa, 10-15 April 2011, *African Skies*, No. 16, 56-58, 2012.

"Hijri Calendar 1433 AH / 2012 Astronomy Almanac," Al-Naimiy, H.M., **Fernini, I**., and Sakhr S., Emirates Heritage Club, 2012, 232 pages.

"Astronomy at the Service of the Islamic Society," Fernini, I., "The Role of Astronomy in Society and Culture," *Proceedings of the International Astronomical Union Symposium 260*, eds. D. Valls-Gabaud & A. Boksenberg, Vol. 5, 514-521, 2011.

"Hijri Calendar 1432 AH / 2011 Astronomy Almanac," Al-Naimiy, H.M., **Fernini, I.**, and Sakhr S., Emirates Heritage Club, 232 pages, 2011.

"Hot Spots in FR II Radio Galaxies and Quasars with 0.1 < z < 2.0," **Fernini, I.,** Bull. American Astron. Soc., 42, 2010.

"Hijri Calendar 1431 AH / 2010 Astronomy Almanac," Al-Naimiy, H.M, **Fernini, I.**, and Sakhr S., Emirates Heritage Club, 232 pages, 2010.

"Hijri Calendar 1430 AH," Al-Naimiy, H.M., **Fernini, I.**, and Sakhr S., Emirates Heritage Club, 229 pages, 2009.

"Hijri Calendar 1429 AH," Al-Naimiy, H.M., **Fernini, I.**, and Sakhr S., Emirates Heritage Club, 229 pages, 2008.

"Multi-Wavelength Observations of FR II Radio Galaxies and Quasars," **Fernini, I.**, Proceedings of the Extragalactic Jets Conference: From Radio to Gamma-Rays (Girdwood, USA), eds. T.A. Rector & D. S. de Young, ASP Conf. Series Vol. 386, 120, 2008.

"8.4 GHz High-Resolution Observations of Fanaroff-Riley II 3CR Radio Sources with 0.3 < z < 2.0. II. Ten New Images," **Fernini, I.,** Astronomical Journal, Vol. 134, No. 1, 158, 2007.

"Teaching Astronomy to Non-Science Majors," **Fernini, I.**, Proceedings of the Third Annual Conference for Middle East Teachers of Science, Mathematics, and Computing, Eds. Stewart, S. M. & et al ., Abu-Dhabi (UAE), 153, 2007.

"Astronomical Crescent Visibility Criteria," **Fernini, I.**, Proceedings of the First Emirates Astronomical Conference, Applications of Astronomical Calculations, Eds. Guessoum, N. & Odeh, M., Center for Documentation and Research, Abu-Dhabi (UAE), 29, 2007.

"Hot Spots Position as an Orientation Indicator in FRII's Radio Galaxies and Quasars," **Fernini, I.**, The Eighth Annual U.A.E. University Research Conference, 322-327, 2007.

"Yallop's Criterion as a Test for the Earliest Crescent Visibility," **Fernini, I.**, The Eighth Annual U.A.E. University Research Conference, 328-344, 2007.

"Hijri Calendar 1428 AH," Al-Naimiy, H.M., **Fernini, I.**, and Sakhr S., Emirates Heritage Club, 227 pages, 2007.

"Hot Spots Analysis in FR II 3CR Radio Sources with 0.3 < z < 2.0," **Fernini, I.**, The Seventh Annual U.A.E. University Research Conference, 181-186, 2006.

"Edged and Recessed Hot Spot in FR II 3CR Radio Sources with z > 0.3," **Fernini, I.,** Bull. American Astron. Soc., 38, 194, 2006.

"Hijri Calendar 1427 AH," Al-Naimiy, H.M., **Fernini, I.,** and Sakhr S., Emirates Heritage Club, 212 pages, 2006.

"8.4 GHz High-Resolution Observations of Fanaroff-Riley II 3CR Radio Sources with 0.3 < z < 2.0. II. Ten New Images, **Fernini, I.,** The Sixth Annual U.A.E. University Research Conference, 244-257, 2005.

"Hijri Calendar 1426 AH," Al-Naimiy, H.M., **Fernini, I.**, and Obeidallah, I. M., Emirates Heritage Club, 212 pages, 2005.

"Morphology, Location, and Compactness of Hot Spots in FR II Radio Galaxies and Quasars," **Fernini, I.,** Bull. American Astron. Soc., 36, 690, 2004.

"Hijri Calendar 1425 AH," Al-Naimiy, H.M., **Fernini, I.**, and Obeidallah, I. M., Emirates Heritage Club, 211 pages, 2004.

"Hijri Calendar 1424 AH," Al-Naimiy, H.M., **Fernini, I.**, and Obeidallah, I. M., Emirates Heritage Club, 211 pages, 2003.

"8.4 GHz High-Resolution Observations of Five FR II 3CR Radio Sources," ***Fernini, I***., *Astronomical Journal, 123:132-141, 2002.*

"FRII Radio Galaxies and Quasars: The Depolarization Test," ***Fernini, I.,*** *Astronomical Journal, 122:83-92, 2001.*

"FRII Radio Galaxies and Quasars: Correlated Asymmetries and the Unification Scheme," **Fernini, I.,** *Bull. American Astron. Soc., 32, 1435, 2000.*

"Depolarization Analysis of 13 FR II Radio Galaxies and 13 Quasars", **Fernini, I.***, Bull. American Astron. Soc., 31, 1458, 1999.*

"A Bibliography of Scholars in Medieval Islam*", **Fernini, I.,** Publisher: Cultural Foundation of Abu Dhabi (UAE), 611 pages, 1998.*

"VLA Imaging of Fanaroff-Riley II 3CR Radio Galaxies: II New Images and Comparisons with 3CR Quasars", ***Fernini.** I., Burns, J.O., and Perley, R.A., Astronomical Journal, 114:2292-2312, 1997.*

"VLA Imaging of Five Fanaroff-Riley II 3CR Radio Galaxies: I", ***Fernini, I.,** Burns, J.O., Bridle, A.H., and Perley, R.A., Astronomical Journal, 105:1690-1709. 1993*

"Artificially-Generated Atmosphere near a Lunar Base", *Burns, J.O., **Fernini, I.**, Sulkamen, M., Duric, N., Taylor, J., and Johnson, S., Lunar Bases and Space Activities in the 21st Century, Vol. I, 347-350, NASA, Johnson Space Center, 1992.*

"Depolarization Asymmetry in the Quasar 3C 47", ***Fernini, I.,** Leahy, J.P., Burns, J.O., and Basart, J.P., Astrophysical Journal, 381:63-71, 1991.*

"Dispersal of Gases Generated near a Lunar Outpost," ***Fernini, I.,** Burns, J.O., Taylor, J., Sulkamen, M., Duric, N., and Johnson, S., Journal of Spacecraft and Rockets, Vol. 27, No, 5, 527-538, 1990.*

"Depolarization Asymmetry in the Quasar 3C 47*," **Fernini, I.,** Leahy, J.P., Burns, J.O, and Basart, J.P., Bull. American Astron. Soc., 22, 800, 1990.*

"Astronomical Science from a Lunar Base," *Duric, N., **Fernini, I.,** and Burns, J.O., Engineering, Construction, and Operations in Space II; Proc. of Space 90, The Second International Conference, Albuquerque, NM, Apr. 22-26, 1990, Vol. 1, New York, American Society of Civil Engineers, 666-676, 1990.*

"Correction Scheme for Polarized Intensity," *Leahy, J.P., and **Fernini, I.**, Very Large Array Scientific Memorandum, No.161, NRAO, 1989.*

"Site Selection Criteria for Astronomical Observatories on the Moon," Taylor, G.J., Burns, J.O., **Fernini,** I. and Johnson, S., *2nd Conference on Lunar Bases and Space Activities of the 21st Century, Houston (USA)*, 238, 1988.

"Artificially-Generated Atmosphere near a Lunar Base," Burns, J.O., **Fernini, I.**, Sulkamen, M., Taylor, G.J., and Johnson, S., *2nd Conference on Lunar Bases and Space Activities of the 21st Century, Houston (USA)*, 42, 1988.

BOOKS UNDER EDITING:

"The Solar System," ***Fernini, I.,*** *250 pages, under editing*

"Stars," ***Fernini, I.,*** *300 pages, under preparation.*