


## **CURRICULUM VITAE**

<p>Name Surname: <b>Saran Poshyachinda</b></p> <p>Year of Birth: 1964</p> <p>Nationality: Thai</p> <p>Contact Address: National Astronomical Research Institute of Thailand (NARIT) 260 Moo 4, T. Donkaew, A. Maerim, Chiangmai, 50180, Thailand</p> <p>Email: saran@narit.or.th</p>	
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### **Qualifications**

1986 B.Sc. in Chemistry, Chiang Mai University, Chiang Mai, Thailand

1988 M.Sc. in Polymer Science & Technology, University of Manchester Institute of Science and Technology, United Kingdom

1990 Ph.D. in Polymer Science, University of Bradford, United Kingdom

### **Scholarships**

During 1986-1990, he received the Development and Promotion of Science and Technology Talents Project (DPST) scholarship from the Royal Thai Government

### **Training**

04-05/1994 - Cultivation and Observation in "Polymer Recycling", USA (USAID Scholarship)

03-04/1995 - Planning and Management of Science Parks Training, USA (USAID Scholarship)

### **Past and Current Appointments**

11/1990-04/1999 Staff Scientist (1990-92), Laboratory Manager (1992-99) National Metal and Materials Technology Center (MTEC), the National Science and Technology Development Agency (NSTDA), Ministry of Science Technology and Environment

04/1999-10/2003 Founding Dean, School of Science, Mae Fah Luang University

07/2004-12/2008 Founding Deputy Director, National Astronomical Research Institute (NARI), a statutory government institute under the Ministry of Science and Technology

01/2009-06/2017 Deputy Director, National Astronomical Research Institute of Thailand (NARIT), a Public Organization under the Ministry of Science and Technology

07/2017 to present Executive Director, National Astronomical Research Institute of Thailand (NARIT), a Public Organization under Ministry of Higher Education, Science, Research and Innovation

## Current Fields of Expertise & Interests

### **Research:**

Optical Astronomy; Planetary Science; Atmospheric Science, Archaeological Science

### **Instrumentation R&D:**

Optical Telescope & Instruments; Satellite Payload Development; Utilization of Astronomical Instrumentation

### **Public Outreach:**

Public, Teachers Training, Diversity, Equity and Inclusion in Astronomy

### **Skills:**

Astrophotography, High Resolution Planetary Imaging (Member of Hubble Space Telescope – Jupiter Group (NASA/JPL))

## Field Works

**Total Solar Eclipse Expeditions: 13** between 1995-2023 (Thailand-1995, Romania-1999, Zambia-2001, South Africa-2002, Turkey-2006, Russia-2008, China-2009, Australia-2012, Norway-2015, Indonesia-2016, USA-2017, Chile-2019, Timor Leste-2023)

### National & International Projects

2015 – present	Astronomy Teacher Training and Workshop in Thailand
2007 – present	Founding member and National representative of Southeast Asian Astronomy Network (SEAAN)
2012 – present	Host the IAU Southeast Asian Regional Office of Astronomy for Development (SEAROAD)
2017 – present	Founding member and Chair of Thailand Space Consortium (TSC)
2017 – 2020	NARIT- STFC* Newton Fund Projects: 21 projects were undertaken under the theme "Capacity Building in Software and Hardware Infrastructures and Data Handling through Astronomy" <i>*Science and Technology Facilities Council (STFC), UK</i>
2019 – present	Host the International Training Centre in Astronomy under the auspices of UNESCO (ITCA)
2015 – present	Astronomy Learning Opportunity Distribution Project <i>Distribution of 10" Dobsonian Telescopes to schools in 77 provinces in Thailand</i>
2019 – present	Lao PDR's planetarium and observatory project
2021	Air Quality Awareness Raising under American-Thai Collaboration (AQAAT) <i>Granted by US Embassy Bangkok</i>
2021	American Corner Air Quality Learning Empowerment (ACAQLE) <i>Granted by US Embassy Bangkok</i>
2021 – present	Inclusion Astronomy (for the Blind, the Deaf, the Autism and the elderly)
2021 – present	History and Heritage of Astronomy projects <i>(Wisdom of Astronomy and its Related Kingdom, Astronomy of Lanna, Ethnoastronomical in Thailand and Astronomical Archives and Data Centre)</i>
2022 – present	Amazing Dark Sky in Thailand
2022 – present	DIY Dome planetarium for school
2023	Dobsonian and astronomical media for the National University of East Timor
2024	NARIT Astronomy & Planetarium Application (NAPA) <i>Smartphone star map application free for public</i>

### **International Recognition**

On April 6, 2562 (2019), the International Astronomical Union (IAU) announced the names of the latest 106 minor planets. Among them, Saran Poshyachinda, the director of the National Astronomical Research Institute of Thailand, was accepted as the name for the minor planet 2000 EJ148, discovered by the Catalina Sky Survey, United States.

The International Astronomical Union provided the following reasons for the name:

Saran Poshyachinda (b. 1964) is Executive Director of the National Astronomical Research Institute of Thailand. Encouraging public interest in astronomy, he was crucial in the construction of the Thai National Observatory, regional observatories for the public throughout Thailand and a 40-m radio telescope.

<b><u>Membership of Professional Associations</u></b>	
	IAU Individual Member
2006	IAU National Member
2017	JUNO Funding Committee
2021	East Asian Observatory (EAO) Member and Funding Partner

<b><u>Scientific &amp; Local Organizing Committee</u></b>	
2011	Asia-Pacific Regional IAU Meeting 2011 (APRIM2011) – Chair of Local Organising Committee
2015	present Student Astronomy Conference Exchange Programme
2017	Southeast Asian Astronomy Network Meeting 2017 (SEAN 2017) x You are Galileo Workshop, Introduction to Astronomy Workshop, University of Mandalay, Myanmar
2017	ITCA Astronomy for STEM Education
2017	present Optical Design Summer School
2017	present Thailand-UK Python+Astronomy Summer School
2017	present ITCA Colloquium Series (Astronomy for Inclusion, Workshop on Atmospheric Science, Workshop in Radio Astronomy, Fast Radio Burst Workshop and Professional Capacity Building Workshop)
2018	present Astrophotography Marathon Workshop
2019	Lao PDR Introduction to Astronomy Workshop
2019	Adaptive Optics Workshop

<b><u>Scientific &amp; Local Organizing Committee</u></b>	
2022	Workshop on "Diplomacy and International Partnership on Higher Education, Science, Research and Innovation"
2023	The Workshop on Freeform Optics Applications & Manufacturing for Astronomy & Space Missions
2024	NARIT-IAU LGBTQIA+ in Astronomy Meeting
2024	East Asian Young Astronomers Meeting

### **Publications**

#### **Astronomy / Optics / Atmospheric Science (30, as of February 2024)**

1. Soonthornthum, Boonrucksar; Kramer, Busaba; Poshyachinda, Saran, "Astronomy development in Thailand: the role of NARIT", International Astronomical Union. Proceedings of the International Astronomical Union, 2006.
2. Kramer Hutawarakorn, Busaba; Soonthornthum, Boonraksar; Poshyachinda, Saran, "Astronomical Network for Teachers in Thailand" IAUSS, 2003.
3. Huan Y. A. Meng, Kate Y. L. Su, George H. Rieke, David J. Stevenson, Peter Plavchan, Wiphu Rujopakarn, Carey M. Lisse, Saran Poshyachinda, Daniel E. Reichart, "Large impacts around a solar-analog star in the era of terrestrial planet formation", SCIENCE, Vol. 345 no. 6200 pp. 1032-1035, 2014.
4. V. S. Dhillon, T. R. Marsh, D. C. Atkinson, N. Bezawada, M. C. P. Bours, C. M. Copperwheat, T. Gamble, L. K. Hardy; R. D. H. Hickman; P. Irawati, D. J. Ives; P. Kerry; A. Leckngam, S. P. Littlefair; S. A. McLay, K. O'Brien; P. T. Peacocke, S. Poshyachinda; A. Richichi, B. Soonthornthum, ULTRASPEC: a high-speed imaging photometer on the 2.4-m Thai National Telescope, Monthly Notices of the Royal Astronomical Society 2014 444 (2): 3504-3516.
5. Huan Y. A. Meng, Kate Y. L. Su, George H. Rieke, Wiphu Rujopakarn, Gordon Myers, Michael Cook, Emery Erdelyi, Chris Maloney, James McMath, Gerald Persha, Saran Poshyachinda, and Daniel E. Reichart, "Planetary Collisions Outside The Solar System: Time Domain Characterization Of Extreme Debris Disks", The Astrophysical Journal, Vol.805 No.1, 2015.
6. Shahbaz, T; Linares, M; Nevado, SP; Rodríguez-Gil, P; Casares, J; Dhillon, VS; Marsh, TR; Littlefair, S; Leckngam, A; Poshyachinda, S. " The binary millisecond pulsar PSR J1023+ 0038 during its accretion state–I. Optical variability", Monthly Notices of the Royal Astronomical Society, Vol.453, No.4, pp3461-3473, 2015.
7. C. Buisset, A. Deboos, T. Lepine, S. Poshyachinda, and B. Soonthornthum, "Design and Performance Estimate of a Focal Reducer for the 2.3 m Thai National Telescope", Optics Express, Vol.24 No.2, 2016.
8. S. Awiphan, E. Kerins, S. Pichadee, S. Komonjinda, V. S. Dhillon, W. Rujopakarn, S. Poshyachinda, T. R. Marsh, D. E. Reichart, K. M. Ivarsen, and J. B. Haislip, "Transit Timing Variation and Transmission Spectroscopy Analysis of Hot Uranus GJ3470b", MNRS, 000, 1-10, Preprint May 2016.

9. Awiphan, Supachai; Kerins, E; Pichadee, S; Komonjinda, S; Dhillon, VS; Rujopakarn, W; Poshyachinda, S; Marsh, TR; Reichart, DE; Ivarsen, KM, "Transit timing variation and transmission spectroscopy analyses of the hot Neptune GJ3470b", Monthly Notices of the Royal Astronomical Society, Vol.463, No.3, 2016.
10. Buisset, Christophe; Prasit, Apirat; Lépine, Thierry; Poshyachinda, Saran; Soonthornthum, Boonrucksar; Deboos, Alexis, "Opto-mechanical design and development status of an all spherical five lenses focal reducer for the 2.3 m Thai National Telescope", Ground-based and Airborne Telescopes VI, Vol.9906, 2016.
11. Steele, Iain A; Jermak, Helen; Copperwheat, Chris M; Smith, Robert J; Poshyachinda, Saran; Soonthorntham, Boonrucksar, "Experiments with synchronized sCMOS cameras", High Energy, Optical, and Infrared Detectors for Astronomy VII, Vol.9915, 2016.
12. Buisset, Christophe; Prasit, Apirat; Lépine, Thierry; Poshyachinda, Saran; Leckngam, A, "Thai National Telescope beam simulator testbed development status", Ground-based and Airborne Telescopes VI, Vol.9906, 2016.
13. C. Buisset, Y. Rabbia, T. Lepine, M-A. Alagao, E. Ducrot, S. Poshyachinda, and B. Soonthornthum, "Study of a Coronagraphic Mask using Evanescent Waves", Optics Express, Vol.25 No.7, 2017.
14. Alagao, Mary Angelie; Buisset, Christophe; Rabbia, Yves; Lepine, Thierry; Poshyachinda, Saran; Soonthornthum, Boonrucksar, "Development status and performance of the evanescent wave coronagraph testbed", Techniques and Instrumentation for Detection of Exoplanets VIII, 10400, 2017.
15. Buisset, Christophe; Rabbia, Yves; Lepine, Thierry; Alagao, Mary-Angelie; Ducrot, Elsa; Poshyachinda, Saran; Soonthornthum, Boonrucksar, "Study of a coronagraphic mask using evanescent waves", Optics Express, Vol.25, No.7, 2017.
16. T. Sarotsakulchai, S.-B. Qian, B. Soonthornthum, X. Zhou, J. Zhang, D. E. Reichart, J. B. Haislip, V. V. Kouprianov, and S. Poshyachinda, "TY Pup: A Low-mass-ratio and Deep Contact Binary as a Progenitor Candidate of Luminous Red Novae", The Astronomical Journal, Vol.156, No. 5, 2018.
17. Buisset, Christophe; Lépine, Thierry; Thiébaud, Eric; Langlois, Maud; Tallon, Michel; Alagao, Mary Angelie; Tallon-Bosc, Isabelle; Rabbia, Yves; Poshyachinda, Saran; Soonthornthum, Boonrucksar, "The evanescent wave coronagraph project: setup results and demonstrator preliminary design", Advances in Optical and Mechanical Technologies for Telescopes and Instrumentation III, p.107062, 2018.
18. Han, Z-T; Qian, S-B; Zhu, L-Y; Zhi, Q-J; Dong, A-J; Soonthornthum, B; Poshyachinda, S; Sarotsakulchai, T; Fang, X-H; Wang, Q-S, "DE CVn: an eclipsing post-common envelope binary with a circumbinary disk and a giant planet", Vo.868, No.1, 2018.
19. Alagao, Mary Angelie; Buisset, Christophe; Lépine, Thierry; Thiébaud, Eric; Langlois, Maud; Tallon, Michel; Tallon-Bosc, Isabelle; Rabbia, Yves; Poshyachinda, Saran; Soonthornthum, Boonrucksar, "The evanescent wave coronagraph project: development status and potential for space based observations", International Conference on Space Optics—ICSO 2018, 2018.
20. Zhou, Xiao; Qian, Shengbang; Boonrucksar, Soonthornthum; Poshyachinda, Saran; Zhu, Li-Ying; Liu, Nian-Ping; Sarotsakulchai, Thawicharat; Fang, Xiao-Hui, "Photometric investigation of the contact binary GU Orionis with high metallicity", Publications of the Astronomical Society of Japan, Vol.70, No.5, 2018.

21. Wanajaroen, Weerapot; Buisset, Christophe; Lépine, Thierry; Wannawichian, Suwicha; Poshyachinda, Saran; Soonthornthum, Boonrucksar, "Design and performance estimate of a telescope dedicated to solar system planet imagery", Ground-based and Airborne Telescopes VII, Vol.10700, 2018.
22. Mkrtychian, DE; Gunsriwiwat, K; Poshyachinda, S; Reichart, DE; Haislip, JB; Kouprianov, VV, "Discovery of short-period oscillations in the mass-accreting component of TTvel", Information Bulletin on Variable Stars, Vol.63, 2018.
23. Buisset, Christophe; Poshyachinda, Saran; Soonthornthum, Boonrucksar; Prasit, Apirat; Alagao, Mary Angelie; Choochalerm, Piyamas; Wanajaroen, Weerapot; Lépine, Thierry; Rabbia, Yves; Aukkaravittayapun, Suparerk, "Activity status and future plans for the Optical Laboratory of the National Astronomical Research Institute of Thailand", Third International Conference on Photonics Solutions (ICPS2017), pp10714-10717, 2018.
24. Wanajaroen, Weerapot; Buisset, Christophe; Lépine, Thierry; Wannawichian, Suwicha; Poshyachinda, Saran; Soonthornthum, Boonrucksar, "Preliminary design and performance estimate of a prime focus camera for the 2.3 m Thai National Telescope", Ground-based and Airborne Telescopes VII, Vol.10700, 2018.
25. Sarotsakulchai, Thawicharat; Qian, Sheng-Bang; Soonthornthum, Boonrucksar; Zhou, Xiao; Zhang, Jia; Li, Lin-Jia; Reichart, Daniel E; Haislip, Joshua B; Kouprianov, Vladimir V; Poshyachinda, Saran, "YZ Phoenicis: a very short period K-type contact binary with variation of the O'Connell effect and orbital period change", Publications of the Astronomical Society of Japan, Vo.71, No.4, 2019.
26. S. Pongpiachan, D. Tipmanee, C. Choochuay, M. Hattayanone, W. Deelaman, N. Iadtem, S. Bunsomboonsakul, J. Palakun, S. Poshyachinda, A. Leckngam, P. Somboonpon, T. Panyaphirawat, S. Aukkaravittayapun, Q. Wang, L. Xing, G. Li, Y. Han and J. Cao, "Vertical profile of organic and elemental carbon in sediments of Songkhla Lake, Thailand", Limnology, Vol.20, No.2, 2019.
27. Er-gang, Zhao; Sheng-bang, Qian; Soonthornthum, Boonrucksar; Poshyachinda, Saran; Xiao, Zhou; Sarotsakulchai, Thawicharat; Jia, Zhang; Wen-ping, Liao, "Two Massive Twins in a Deep-contact Binary with a Black Hole Candidate", The Astrophysical Journal Letters, Vol.871, No.1, 2019.
28. Zheltobryukhov, Maxim; Zubko, Evgenij; Chornaya, Ekaterina; Luk'yanyk, Igor; Ivanova, Oleksandra V; Kochergin, Anton; Kornienko, Gennady; Mkrtychian, David; Poshyachinda, Saran; Molotov, Igor E, "Monitoring polarization in comet 46P/Wirtanen", Monthly Notices of the Royal Astronomical Society, Vol.498, No.2, 2020.
29. Mong, Y-L; Ackley, Kendall; Galloway, DK; Killestein, Tom; Steeghs, J; Dhillon, V; O'Brien, PT; Ramsay, G; Poshyachinda, S; Kotak, R, "Machine Learning for Transient Recognition in Difference Imaging With Minimum Sampling Effort", Monthly Notices of the Royal Astronomical Society, In Press, 2020.
30. Ramsay, G; Green, M; Woudt, P; Steeghs, D; Groot, P; Duffy, C; Galloway, DK; Dhillon, V; O'Brien, P; Poshyachinda, S, "Optical outburst detected from the AM CVn binary ASASSN-14mv", The Astronomer's Telegram, 13980, 2020.

## Materials Science (11)

- S. Poshyachinda, H.G.M. Edwards and A.F. Johnson, "Preparation and Characterization of Poly(1,4-butadiene-b-1,2-butadiene)", Polymer, 32, 334 (1991).

2. S.Poshyachinda, H.G.M. Edwards and A.F. Johnson, "Raman Spectroscopic Characterization of High-Vinyl Polybutadienes Produced from Anionic Polymerization ", *Polymer*, **32**, 338 (1991).
3. S.Poshyachinda, H.G.M. Edwards and A.F. Johnson, "A New Method for the Quantitative Analysis of the Ultraviolet/Visible Spectrum of Poly(butadienyllithium) anions when complexed with 1,2-dipiperidinoethane", *Polymer*, **32**, 930 (1991).
4. J.A. Frankland, H.G.M. Edwards, A.F. Johnson, I.R. Lewis and S. Poshyachinda, "Critical Assessment of Vibrational and NMR Spectroscopic Techniques for the Microstructure Determination of Polybutadienes, *Spectrochimica Acta*, **47A**, 1511 (1991).
5. S.Poshyachinda, J.A. Frankland, H.G.M. Edwards and A.F. Johnson, "The High-Vinyl Polybutadienes by Raman Spectroscopy", presented at ICORS XII, Columbia, USA (1990).
6. S. Poshyachinda and V. Kanithanon, "FT Raman Spectroscopic Study of the Diimide Hydrogenation of cis-Polybutadiene: Some evidence of cis-trans Isomerisation", *Spectrochimica Acta*, **50A**, 2011 (1994).
7. S.Poshyachinda, H.G.M. Edwards and A.F. Johnson, "Dynamic Mechanical Thermal Analysis of Homopolymeric and Diblock Polybutadienes and Polybutadiene Blends", *Polymer*, **37**, 5171 (1996).
8. S. Poshyachinda, H.G.M. Edwards and A.F. Johnson, "Measurement of Living Polybutadienyllithium Anion Concentrations in the Presence of Complexing Agents by UV-Visible Spectroscopy", *Polymer*, **38**, 535 (1997).
9. S. Poshyachinda, V. Kanithanon and C. Thanomsilp, "Non-Catalytic Hydrogenation of Diene Polymers", paper presented at the International Conference on Materials Technology : Recent Developments and Future Potential, Chiangmai, January 1997.
10. W. Saiyasombat, R. Molloy, T.M. Nicholson, A.F. Johnson, I.M. Ward and S. Poshyachinda, "Ring Strain and Polymerizability of Cyclic Esters", *Polymer*, **39**, 5581 (1998).
11. W. Chinsirikul, P. Surunchanajirasakul and S. Poshyachinda, "Investigation of Physical Aging in PMMA : Enthalpy Relaxation Measurements and Its Behavior during Service", *TPPM 99 Proceedings*, Singapore 1999.

**Books:**

- Historical Note of the establishment of the Thai National Observatory (TNO)