

# Wirin Sonsrettee – Résumé

---

<b>Work Address</b>	Faculty of Engineering and Technology, Panyapiwat Institute of Management 85/1 Moo 2 Chaengwattana Road, Bang Talad, Nonthaburi, 1120 Thailand.	<b>Office Phone</b>	+66 2 855 0335
		<b>Mobile Phone</b>	+66 9 0973 3721
		<b>Email</b>	bturbulence@gmail.com

## Education

- 2010–2015** Ph.D. (Physics) (International Program), Mahidol University, Bangkok, Thailand,  
Dissertation: “Field Line Random Walk in Isotropic Magnetic Turbulence”  
Supervisor: Prof. Dr. David Ruffolo
- 2002 - 2006** M.Sc. (Physics), Chulalongkorn University, Bangkok, Thailand,  
Thesis: “Phenomenological Supersymmetry”  
Supervisor: Dr. Rujikorn Dhanawittayapol
- 1997 - 2001** B.Sc. (Physics), Chulalongkorn University, Bangkok, Thailand,  
Senior Project: “Gravitational Wave”  
Supervisor: Dr. Rujikorn Dhanawittayapol

## Employment History

- 2009 – present** **Lecturer**, Faculty of Engineering and Information Technology, Panyapiwat Institute of Management, Thailand.  
Subjects: Engineering Physics 1, Engineering Physics 2, Engineering Physics Laboratory 1, Engineering Physics Laboratory 2, Sciences for Information Technology, Engineering Mathematics 3 and Industrial Engineering Mathematics.
- 2007 – 2008** **Lecturer**, Institute of Innovative Education, Eastern Asia University, Thailand.  
Subjects: General Physics 1 and General Physics 2.
- 2006 – 2007** **Assistant Chief**, QC and R&D Department, Ekarat solar Co.Ltd. (Solar cell manufacturer), Thailand.
- 2001 – 2002** **Lecturer**, Department of General Education, North Bangkok College, Thailand.  
Subjects: General Physics 1, General Physics 2, General Physics Laboratory 1 and General Physics Laboratory 2.

## Research Interests

Plasma and Nuclear Fusion, Astrophysical Plasma, Astronomy and Computational Physics.

## Awards, Honors, and Grants

- 2016 – 2022** **TRF Senior Research Scholar (Team Participant)**. Proposal Title: “Space Plasma Physics and Cosmic Rays.” Principal Investigator: Prof. Dr. David Ruffolo.
- 2015** **Won Gold Award, Process Excellence Award 2015**, CP ALL Public Company Limited, Thailand.

- 2013**      **The National Science Foundation (NSF) Scholarship and Travel Grant**, the 2013 Space Weather Summer School, United States.
- 2013**      **The Center for Space Plasma and Aeronomic Research (CSPAR) Scholarship and Travel Grant**, the 2013 Space Weather Summer School, United States.
- 2013**      **Panyapiwat Institute of Management Full Research and Travel Grant**, Bartol Research Institute, University of Delaware, United States.
- 2011**      **Won Oral Present Awards**, Siam Physics Congress 2011, Thailand.
- 2005**      **Scholarship and Travel Grant**, XI Vietnam School of Physics, Danang, Vietnam.

## Publications in Refereed Journals

- 2019**      **W. Sonsrettee**, Empirical Model of Magnetic Field Line Spreading in Isotropic Turbulence with Zero Mean Field, Journal of Physics: Conference Series. 2019, 1380, 012044.
- 2017**      P. Subedi, **W. Sonsrettee**, P. Blasi, D. Ruffolo, W. H. Matthaeus, D. Montgomery, P. Chuychai, P. Dmitruk, M. Wan, T. N. Parashar, and R. Chhiber, Charged Particle Diffusion in Isotropic Random Magnetic Fields, Astrophys. J. 2017, 837, 140.
- 2016**      **W. Sonsrettee**, P. Subedi, D. Ruffolo, W. H. Matthaeus, A. P. Snodin, P. Wongpan, P. Chuychai, G. Rowlands, S. Vyas, Magnetic Field Line Random Walk in Isotropic Turbulence with Varying Mean Field, Astrophys. J. Suppl. 2016, 225, 20.
- 2015**      **W. Sonsrettee**, P. Subedi, D. Ruffolo, W. H. Matthaeus, A. P. Snodin, P. Wongpan, and P. Chuychai, Magnetic Field Line Random Walk in Isotropic Turbulence with Zero Mean Field, Astrophys. J. 2015, 798, 59.
- 2013**      **W. Sonsrettee**, Solar Storm to the Fate of the World, HCU. Journal 2013, 17, 33.
- 2011**      M.C. Ghilea, D. Ruffolo, P. Chuychai, **W. Sonsrettee**, A. Seripienlert, and W. H. Matthaeus, Magnetic Field Line Random Walk for Disturbed Flux Surfaces: Trapping Effects and Multiple Routes to Bohm Diffusion, Astrophys. J. 2011, 741, 16.

## Invited Seminar/Workshop Talks

- 2020**      **BOOTCAMP 2020**, "Particles Simulation and Applications to Research", Songkhla, Thailand July 30, 2020
- 2016**      **Workshop on Turbulent Plasma**, "Research in Dynamo Theory", Mahidol University, March - May, 2016
- 2015**      **Physics Seminar for Inspiration**, "Research in Space Physics Solar Storm and Their Effect on Earth", Chulalongkorn University, November 10, 2015
- 2013**      **4th Thailand Experimental Particle Physics Novice Workshop 2016**, "What Is the Higgs Boson?", Mahidol University, March 29, 2013

## Contributed Conference Talks

- 2019**      **W. Sonsrettee**, Empirical Model of Magnetic Field Line Spreading in Isotropic Turbulence with Zero Mean Field (Siam Physics Congress 2019. Hat Yai, Songkhla 90110, Thailand., June, 2019).

- 2018**      **W. Sonsrettee**, D. Ruffolo, W. H. Matthaeus, A. P. Snodin, P. Wongpan, P. Chuychai, S. Vyas, P. Tooprakai, J. Thueanmuenwai, and S. Boonnum, Magnetic Field Line Random Walk in Arbitrarily Stretched Isotropic Turbulence (Fall Meeting of the American Geophysical Union 2018. Washington, D.C., USA, December, 2018 ).
- 2015**      **W. Sonsrettee**, P. Subedi, D. Ruffolo, W. H. Matthaeus, A. P. Snodin, P. Wongpan, and P. Chuychai, Magnetic Field Line Random Walk in Isotropic Turbulence at Very High Kubo Number (Siam Physics Congress 2015. Nongtalay, Klong Muang, Krabi, Thailand, May, 2015 ).
- 2013**      **W. Sonsrettee**, P. Wongpan, D. J. Ruffolo, W. H. Matthaeus, P. Chuychai, and G. Rowlands, Field Line Random Walk in Isotropic Magnetic Turbulence up to Infinite Kubo Number (Fall Meeting of the American Geophysical Union 2013, San Francisco, December, 2013).
- 2013**      P. Subedi, **W. Sonsrettee**, W. H. Matthaeus, D. J. Ruffolo, M. Wan, and D. Montgomery, Charged Particle Diffusion in Isotropic Random Static Magnetic Fields (Fall Meeting of the American Geophysical Union, San Francisco, December, 2013).
- 2013**      **W. Sonsrettee**, P. Wongpan, D. Ruffolo, W. H. Matthaeus, P. Chuychai and G. Rowlands, Field Line Random Walk in Isotropic Magnetic Turbulence up to Infinite Kubo Number (1st COSPAR Symposium, Bangkok, November, 2013).
- 2011**      M. C. Ghilea , D. Ruffolo , P. Chuychai , **W. Sonsrettee**, A. Seripienlert , and W. H. Matthaeus, Magnetic Field Line Random Walk for Disturbed Flux Surfaces: Trapping Effects and Two Routes to Bohm Diffusion (Siam Physics Congress 2011. Pattaya, Chonburi, Thailand, March, 2011).
- 2008**      T. Nutaro, S. Sumran, C. Chaiwattana, D. Ruffolo, A. Sáiz, N. Kamyran, **W. Sonsrettee**, M. Rujiwarodom, P. Tooprakai, and C. Changchutoe, Initial Observations of Cosmic Rays by the Princess Sirindhorn Neutron Monitor at a High Cutoff Rigidity in Thailand: Part I & II(Siam Physics Congress and Thai National Astronomy Meeting, Nakorn Ratchasima, March, 2008).

## Research Experience

- 2010 – present**      **Astrophysical Physics and Astronomy Researcher**, Space Physics and Energetic Particle Laboratory, Department of Physics, Faculty of Science, Mahidol University, Thailand.
- Aug 2015 - Jul 2016**      **Senior Project Co-adviser**, Simulation of Magnetic Field Line Random Walk in Arbitrarily Stretched Isotropic Turbulence, Department of Physics, Faculty of Science, Chulalongkorn University, Thailand.
- May 2013 – Oct 2013**      **Visiting Researcher**, Department of Physics and Astronomy, University of Delaware, United States.

## Academic Activities

- 2017 – present**      **Editorial Committee: International Scientific Journal of Engineering and Technology.**
- 2016 – present**      **Committee of Astronomy Dictionary Committee**, Office of the Royal Society.
- 2016**      **Referee: 13th National Astronomy Olympiad**, Khon Kaen University, May 5-10, 2016.
- 2014**      **Referee: 11th National Astronomy Olympiad**, Chiang Mai University, April 24-29, 2014.
- 2012**      **Academic consultant: National Science and Technology Fair 2012**, Bangkok International Trade and Exhibition Centre, August 17-31, 2012.
- 2012**      **Referee: 9th Thailand Astronomy Olympiad**, Mahidol Wittayanusorn School, May 15-20, 2012.

## **Professional Societies**

**2011 – present**      **Member,** Thai Physics Society.

**2012**            **Member,** American Geophysical Union.