

Curriculum Vitae

1. General Information

First Name: Wannapong

Last Name: Triampo

Sex: Male

Nationality: Thai

Address: 7/459 Soi Taweewattana 24 Moo Bann Chaiyapreuk Taweewattana,
Salatamsob Taweewattana, Bangkok 10170, Thailand

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2. EDUCATION

- 1989-1993 B.Sc. with 1st class honoured (Physics), Mahidol University, Thailand
Senior project: Superconductivity: theories and experiments
Advisors: Prof. I-Ming Tang and Assoc. Prof. Rassmeedar Hoon-Sawat
- 1993-1995 M.Sc. (Applied Mathematics), Mahidol University, Thailand
Thesis: Spin Singlet Bipolaron at Finite Temperature
Advisor: Prof. Julian Poulter, Ph.D
- 1995-1996 M.Sc. (Physics) Virginia Polytechnic Institute & State University, USA
Thesis: Non-thesis
- 1996-2001 Ph.D. (Physics) Virginia Polytechnic Institute & State University, USA
Thesis: Non-Equilibrium Disorder Processes in Binary Systems due
to an Active Agent
Advisor: Prof. Beate Schmittmann, Ph.D

3. EMPLOYMENT

- 2011- Present Director of Institute for Innovative Learning at Mahidol University
- 2007- Present Mahidol University, Dept. of Physics, Faculty of Science
Associate Professor
- 2003- 2007 Mahidol University, Dept. of Physics, Faculty of Science
Assistant Professor
- 2001-2003 Mahidol University, Dept. of Physics, Faculty of Science
Lecturer
- 2001-2001 University of Virginia, Departments of Physics
Research Associate (Post-doctoral fellow)
- 1994-2001 Mahidol University, Dept. of Physics, Faculty of Science
Lecturer

4. RESEARCH INTERESTS

Biophysical, computational and theoretical modeling of biological and environmental systems using physics and mathematics based integrated approach. Using methods from the theory of stochastic processes and non-equilibrium systems to better understand open problems in life-science. Nanoscience and Nano-toxicity. Mathematics and science education focusing on individualized or personalized learning especially on development of a diagnostic and remedial learning system based on an enhanced concept Effect Models.

5. TEACHING INTERESTS

Undergraduate and graduate courses in physics, mathematics and biophysics. Laboratory Course in biophysics focusing on protein dynamics. Mentoring students at all stages of their professional development, and inspiring students to engage in a broad understanding of the natural sciences.

6. COURSES TAUGHT /BSC/MSC/PHD

- Physics laboratory I
- Classical mechanics
- Elementary physics
- Thermodynamics
- Statistical mechanics
- Numerical analysis
- Elementary physics
- Quantum mechanics
- Theory of many-particle system
- Nonlinear Phenomena
- Special topic in applied physics I (Advance statistical mechanics)
- Special topic in applied physics II (Advance Biophysics)
- Computational physics
- Computational nonlinear physics
- Fundamental Biophysics
- Biophysical modeling and simulations
- Seminar I and II
- Seminar I and II

7. STUDENT MENTORING (Major Advisor or Co-Advisor)

7.1 Graduate Students

1. Suchittra Sa-nguansin, PhD (received December 2005)

Thesis title: *Stochastic Modelling of Nano-Bit Data Corruption*

2. Ankana Boondirek PhD (received May 2006)

Thesis title: *Stochastic Modelling and Simulation of Tumor Growth*

3. Pisan Kangtang, MSC (received December 2005)

Thesis title: *The Dynamics of The Partitioning of The Bacteria : With and Without an External Field*

4. Harit Pitakjakpipob, MSC (received December 2006)

Thesis title: *Effect of Nanoparticles on Biological Systems*

5. Sudarat Chartsuthi, MSC (received March 2006)

Thesis title: *The Effect of Nanoparticles with and without UVA Radiation on : Leptospira Borgpetersenii Serovar Sejroe*

6. Udom Chanthorn MSC (received March 2008)

Thesis title: *The single particle tracking for MinE Protein oscillations in Escheria Coli: Dynamics and localization*

7. Somrit Unai, MSC (received March 2008)

Thesis title: *Study of the dynamics and localization of MinD protein through single particle tracking*

8. Busayamas Pimpunchat (received April 2008)

Thesis title: *A mathematical model for pollution in a river and its remediation by aeration*

9. Somchai Sriyab (received April 2009)

Thesis title: *A Lattice Boltzmann Method for Modeling the Dynamic Oscillation of Min Protein*

10. Krisda Sudpraserd (Received July 2009)

Thesis title: *Stochastic studies of a non-equilibrium lattice gas model: analytic approach and simulations*

11. Charin Modchang (received September 2009)

Thesis title: *Biophysical Modeling and Monte Carlo Simulations of Receptor Dynamics in Signal Transduction*

12. Yaowapa saengpayap MSC (received September 2009)

Thesis title: *Effects of Temperature on Min-E Oscillation Periods in Escherichia Coli*

13. Kan Sornbundit MSC (received April 2010)

Thesis title: *A Biophysical Model for Monolayer- Monolayer Coupling in Lipid Bilayers Statistical Mechanical Analysis and Monte Carlo Simulation*

14. Patcharin Panjaburee (received March 2010)

Thesis title: *Using A Multi-Expert Approach for Developing A Testing and Diagnostic System Based on A Concept Effect Model: A Case study of A Mathematics Course for Thai Junior High School Students*

15. Waipot Ngamsaad (received March 2010)

Thesis title: *Lattice Boltzmann Method for Biophysical System: Binary Fluid and Protein Flows*

16. Jiraporn Yojina (received March 2010)

Thesis title: *A Lattice Boltzmann Method for The Fluid Flow in Microchannel and Applications*

17. Supan Yodyingyong (received November 2010)

Thesis title: An Interdisciplinary Learning Unit for First Year Undergraduate Students:
Dye-Sensitized Solar Cell from Sunlight to Electricity

7.2 Undergraduate students

1. Jirasak Wong-ekkabut ; BSC (received July 2004)

Project title: *Explicit Calculations on Small Non-equilibrium Driven Lattice Gas Models*

2. Charin Modchang ; BSC (received July 2005)

Project title: *Modeling of the dynamic pole-to-pole oscillations of the min proteins in bacterial cell division: The effect of an external field*

3. Titiwat Sungkaworn, (received July 2006)

Project title: *Effect of TiO₂ Nanoparticle on Tumor Cell Colonies*

4. Jeerapond Leelawattanachai; BSC (received July 2007)

Project title: *Modeling of signal transduction via dynamics of G-protein-coupled receptor*

5. Apiwat Wisitsorasak, BSC (received July 2008)

Project title: *Modeling of the dynamics of G-protein mediated signal transduction process through a statistical physics*

6. Raywadee Amornmaneekul, BSC (received July 2008)

Project title: *Spatio-temporal patterns and mechanisms in motion of pathogenic spirochetes: Implications toward virulence and treatment of leptospirosis*

7. Sitta Aroonnuan, BSC (Received July 2009)

Project title: Spatial Distributions and Energy Landscape of MinE Protein Dynamics
via the Biophysical Spot Tracking Technique

7.3 High school students

1. Sangsan Warakkagun, Grade 11, Samsen Wittayalai School, Bangkok (2008)

Project title: *Application of Genetic Algorithm and modeling for oil price prediction*

2. Jirawat Tangpanitanon, Grade 12, Mahidol Wittauanusorn School (2007-2008)

Project title: *Biophysical research in Protein dynamics using tracking technique and signal processing*

7.4 Visiting students

1. Stefan Schreier, MS, one year visiting student from Department of Bioengineering, Faculty of engineering physics, University of Applied Science Munich, Germany. (2007)

Project Title: *Leptospirosis research: fast, easy and reliable enumeration of mobile leptospire*

2. Tattaneewan Laksanasopin, BSC 4th year student from Prince of Songkla University for summer research training

Project Title: *How to Track Min proteins*

3. Jeongmin Shin, MUIC and KEI (Knowledge Exchange Institute, USA) Summer Science Research Program, California, USA, 2008

Project Title: *Biophysical studies of cytotoxic Effects of TiO₂ Nanoparticles on Human Cervical Carcinoma In Vitro: experimental and computational comparative studies*

8. Academic Services

1. ผู้เชี่ยวชาญตรวจสอบโครงการวิจัย ประจำปีงบประมาณ 2553 ของวิทยาลัยเทคโนโลยีอุตสาหกรรม มหาวิทยาลัยเทคโนโลยีพระจอมเกล้าพระนครเหนือ จำนวน 2 โครงการ ได้แก่
“การพัฒนาการทดลองด้วยเทคนิคไมโครสเกล เรื่อง การไทเทรต”
“การพัฒนาบทเรียนคอมพิวเตอร์ช่วยสอนวิชาฟิสิกส์ 5”

9. Honors and scholarships

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|------|---|
| 1988 | Outstanding Student of the Year 1988 Award from Tepleela School, Thailand |
| 1989 | Outstanding Student of the Year 1989 Award from Tepleela School, Thailand |
| 1992 | Outstanding Physics Student with the highest GPA among the 2nd and 3rd Year Students 1992 Award from Faculty of Science, Mahidol University, Thailand |
| 1993 | Outstanding Physics Student with the Highest GPA throughout Academic Year 1993 Award, from Faculty of Science, Mahidol University |
| 1994 | Outstanding Physics Student with the Highest GPA Award year 1993 from Professor Taeb Nilanithi Foundation |
| 1996 | Applied Mathematics Graduate Student with the Highest GPA Award year 1996 from Professor Taeb Nilanithi Foundation |

10. Grants and research fundings

- 1989-1993 B.Sc. (Physics) Scholarship from Office of the Development and Promotion of Science and Technology Talents (DPST)
- 1993-1995 M.Sc. (Mathematics) Scholarship from Office of the Development and Promotion of Science and Technology Talents (DPST)
- 1995-2001 Scholarship under the Project of the Development of Faculty from Faculty of Science, Mahidol University
- 2001-2001 Stochastic Modeling in Cancer Research, Researcher Career Starting Grants, Mahidol University (Head)
- 2002-2004 The studies of Morphogenesis by using statistical Physics, Mathematical Modeling and Computer Simulations, the Thailand Research Fund (Head)
- 2002-2005 Modeling of Nonlinear Systems in Biology and Medicine: Theory and Applications, the Thailand Research Fund (Member)
- 2005-2006 The studies of the Effects of Titanium dioxide Nanoparticles on Biological Systems and Applications: *Leptospira interrogans*, Mid-career Researcher Development Grants, Mahidol University (Head)
- 2005-2007 The Integrated Studies of *Leptospira interrogans* using Statistical Physics, Mathematical Modeling, Computer Simulations and Medical-Nanoscience: Theory and applications, the Thailand Research Fund (Head)
- 2005-2010 Biotechnological Study for the Development of personnels and Research in Signal Transduction Process among Living Cells by Mathematical Modelling and Computational Techniques, National Center for Engineering and Biotechnology, Thailand (BIOTEC) (Member)
- 2006-2007 The effects of TiO₂ nanoparticles on biological systems: *Leptospira Interrogans*, Research Grant in Basic Science, Third World Academy of Sciences(TWAS) (Head)
- 2006-2007 The research for development of learning and teaching processes of mathematics via the integrated approach of mathematics, physics, biology and computer driven by applications and model based strategies, Institute of Innovation and Development of Learning Process, Mahidol University (Head)

- 2006-2007 The research and development of preparation technique of Titanium dioxide ceramics films by hydrolysis method for biological research, Institute of Science and Technology for Research and Development, Mahidol University (Member)
- 2007-2008 Integrated research for the research and development of titanium dioxide nanoparticles and the studies of the effects of nanoparticles on biological systems, Institute of Science and Technology for Research and Development, Mahidol University. งานวิจัยเชิงบูรณาการเพื่อการวิจัยและพัฒนาอนุภาคนาโนไทเทเนียมไดออกไซด์และศึกษาถึงผลกระทบต่อระบบเชิงชีวภาพ (Member)
- 2007-2008 โครงการพัฒนาแบบจำลองระบบ Microfluidics ด้วยเทคนิค Lattice Boltzmann Methods โดยการคำนวณแบบขนานระบบกริดและการประยุกต์ใช้ , SiPA สำนักงานส่งเสริมอุตสาหกรรมซอฟต์แวร์แห่งชาติ (องค์การเอกชน) (Head)
- 2008-2011 การศึกษาเชิงชีวฟิสิกส์และการจำลองแบบพลศาสตร์ของอันตรกิริยาระหว่างระบบภูมิคุ้มกันกับเชื้อเอชไอวี: กรณีศึกษาของการบำบัดโรคเอดส์ด้วยวิธีเอชไอวีโอเฟเรซิส (Biophysical studies and modeling of dynamics of interactions between HIV and immune system: case studies of AIDS treatment with HIV Apheresis) ทุนเพิ่มขีดความสามารถด้านการวิจัยของอาจารย์รุ่นกลางในสถาบันอุดมศึกษา (Head)
- 2004, 2007 3 scholarships from IRPUS (Industrial and research projects for undergraduate students)
1. Deterministic and Stochastic Modeling of Mechanism for Compartmentalization Involved in Bacteria Division Processes: *E. Coli* & *L. interrogans* (2004)
 2. Modeling of the dynamics of G-protein mediated signal transduction process through a statistical physics (2007)
 3. Spatio-temporal patterns and mechanisms in motion of pathogenic spirochetes: Implications toward virulence and treatment of Leptospirosis (2007)
- 2007-2008 Development of biophysical and modeling techniques for the studies of *Leptospira interrogans* (Mutual funding from Mahidol University and Institute de Recherche pour le Development: IRD) (Head)

- 2009-2009 การทำแบบจำลองทางคณิตศาสตร์เพื่อศึกษาการระบาดของโรคไข้หวัดใหญ่สายพันธุ์ใหม่ 2009: กรณีศึกษาการระบาดในโรงเรียนและมาตรการปิดโรงเรียน (Head)
- 2009-2010 การพัฒนาเทคนิควิจัยเชิงชีวฟิสิกส์เพื่อการ ศึกษาสมบัติพลวัตของโปรตีน : Developing biophysical techniques for investigating protein dynamics , ศูนย์ความเป็นเลิศด้านฟิสิกส์ (Head)
- 2010-2011 การศึกษาพลวัตของการดำเนินไปของโรคในผู้ป่วยโรคเอดส์ โดยใช้วิธีทางชีวฟิสิกส์และกลศาสตร์สถิติ : Studies of AIDS dynamics using biophysical and statistical mechanical approach , ศูนย์ความเป็นเลิศด้านฟิสิกส์ (Head)

To Update

11. Experiences

- 1993-1994 Physics Tutor at RAC company, Thailand
- 1994-1995 Tutor and instructor at Mahidol University, Thailand
- 1997-2001 Teaching Assistance at Virginia Tech. University, USA
- 2001-2001 Research associate (Post-doc) at University of Virginia, USA
- 1995- 2003 Lecturer at Mahidol University, Thailand
- 2003- 2007 Assistant Professor of Physics at Mahidol university
- 2007- Present Associate Professor of Physics at Mahidol university
- 2002- Present Chairman of Physics M.Sc. Program
- 2009- Present Chairman of Physics PhD. Program
- 2011- Present Director of Institute for Innovative Learning at Mahidol University

12. List of International Publications

1. **Triampo W**, and Newman TJ. Binary data corruption due to a Brownian agent II. Two dimensions, competing agents, generalized couplings. Phys. Rev. E. 1999;**60**:1450. (No impact factor at 1999)
2. Newman TJ, and **Triampo W**. Binary data corruption due to a Brownian agent. Phys. Rev. E. 1999;**59**:5172-86. (No impact factor at 1999)
3. Schmittmann B, Zia RKP, and **Triampo W**. Dynamics scaling in vacancy-mediate disordering. Braz. J. Phys. 2000;**30**:139 -151. (Impact Factor 0.671 at 2000)

4. **Triampo W**, Aspelmeier T, and Schmittmann B. Universal aspects of vacancy-mediated disordering dynamics: The effects of external fields. *Phys. Rev. E*. 2000;**61(3)**:2386. (Impact Factor 2.142 at 2000)
5. **Triampo W**. Non-equilibrium Disordering in a Binary System due to a Brownian Agent: Exact Lattice Calculation. *East-West Journal of Mathematics*. 2002; **special volume**: 309-317. (No Impact Factor at 2002)
6. **Triampo W**, Triampo D, Tang IM, and Lenbury Y. Random Walk on a Plane-Rotator System: Continuum Theory and Monte Carlo Simulations. *ScienceAsia* 2003;**29**:279-289. (No impact factor at 2003)
7. **Triampo W**, Tang IM, Wong-ekkabut J. Explicit Calculations on Small Non-equilibrium Driven Lattice Gas Models. *Journal of the Korean Physical Society* 2003;**43(2)**:207-214. (Impact Factor 1.293 at 2003)
8. Wong-ekkabut J, **Triampo W**, Triampo D, Tang IM, and Lenbury Y. Vacancy-mediated Disordering Process in Binary Alloys at Finite Temperatures: Monte Carlo Simulation. *J. Korean Phys. Soc.* 2004;**45**:310. (Impact Factor 1.383 at 2004)
9. **Triampo W**, Doungchawee G, Triampo D, Wong-ekkabut J, Tang IM. Effects of static magnetic fields on the growth of leptospire, *Leptospira interrogans* serovar canicola: Immunological reactivity and cell division. *J. Biosci. Bioeng.* 2004;**98(3)**: 182. (Impact Factor 0.802 at 2004)
10. Ngamsaad W, **Triampo W**, Kanthang P, Modchang C, Nuttavut N, Tang IM, and Lenbury Y. A Lattice Boltzmann method for modeling the dynamic pole-to-pole oscillations of min proteins for determining the position of the mid-cell division plane. *J. Korean Phys. Soc.* 2005;**46(4)**:1025-1030. (Impact Factor 0.828 at 2005)
11. Modchang C, Kanthang P, **Triampo W**, Ngamsaad W, Nuttavut N, Tang IM, and Lenbury Y. Modeling of the dynamic pole-to-pole oscillations of the min proteins in bacterial cell division: The effect of an external field. *J. Korean Phys. Soc.* 2005;**46(4)**:1031-1036. (Impact Factor 0.828 at 2005)
12. Kaewpradit C, **Triampo W**, Tang IM. Limit Cycle in a Herbivore-Plant-Bee Model Containing a Time Delay. *ScienceAsia*. 2005;**31**:193-199. Accepted 23 March 2005 (No Impact Factor at 2005)

13. **Triampo W**, Pongkitiwanichkul P, Triampo D, and Shobsngob S. Modified Self-Avoiding Walk in a Polymerization Process. *Journal of the Korean Physical Society*. 2005;**46(6)**:1429-1432. (Impact Factor 0.828 at 2005)
14. Sa-Nguansin S, **Triampo W**, and Nattavut N. Simple Modeling of Stochastic Classical Nano-Bit Data Corruption: Probability Distribution Consideration. *Journal of the Korean Physical Society*. 2005;**47(5)**:764-776. (Impact Factor 0.828 at 2005)
15. Rattanakul C, Lenbury Y, Bell J, Chatsudthipong V, **Triampo W**, Crooke PS. Spatial Turing-type Pattern Formation in a Model of Signal Transduction Involving Membrane-based Receptors Coupled by G Proteins. *Cancer Informatics*. 2006;**2**:329-343. (No Impact Factor at 2006)
16. Boondirek A, Wong-ekkabut J, **Triampo W**, Tang IM, Picha P, and Lenbury Y. A Stochastic Model of Cancer Growth with Immune Response. *J. Korean Phys. Soc.* 2006; **45(2)**: 310-317. (Impact Factor 1.328 at 2006)
17. Wong-ekkabut J, Xu Z, **Triampo W**, Tang IM, Tieleman P, and Monticelli L. Effect of Lipid Peroxidation on the Properties of Lipid Bilayers: a Molecular Dynamics Study. *Biophysical Journal*. 2007;**93(12)**:4225-4236. (Impact Factor 4.627 at 2007)
18. Triampo D, **Triampo W**, Tang IM, and Lenbury Y. The Stochastic Model of Non-equilibrium Mutagen-induced Alterations of DNA: Implication to Genetic Instability in Cancer. *BioSystems*. 2007;**90**:870-880. (Impact Factor 1.646 at 2007)
19. Sungkaworn T, **Triampo W**, Nalakarn P, Triampo D, Tang IM, Lenbury Y, and Picha P. Effect of TiO₂ Nanoparticle Aggregates on Tumor Cell Colonies: Fractal Dimension and Morphological Properties. *International Journal of Biomedical Sciences*. 2007;**2(1)**:67-74. (No Impact Factor at 2007)
20. **Triampo W**, Baowan D, Tang IM, Nuttavut N, Wong-Ekkabut J, Dounghawee G. A Simple Deterministic Model for the Spread of Leptospirosis in Thailand. *International Journal of Biomedical Sciences*. 2007;**2(1)**:22-26. (No Impact Factor at 2007)
21. Wuttisela K, Panijpan B, **Triampo W**, Triampo D. Optimization of the water absorption by crosslinked agar-g-Polyacrylic acid. *Polymer (Korea)*. 2008;**32(6)**: 537-543. (Impact Factor 0.61 at 2008)
22. Modchang C, **Triampo W**, Kanthang P, Junthorn U, Unai S, Ngamsaad W, Nuttavut N, Triampo D, Lenbury Y. Stochastic Modeling of External Electric Field

- Effect on Escherichia coli Min protein dynamics. Journal of the Korean Physical Society. 2008;**53(2)**:851-862. (Impact Factor 1.204 at 2007)
23. Wuttisela K, Shobsngob S, **Triampo W**, Triampo D. Amylose/amylopectin simple determination in acid hydrolyzed tapioca starch. Journal of The Chilean Chemical Society. 2008;**53(3)**:1565-1567. (Impact Factor 0.562 at 2008)
24. Wong-ekkabut J, Baoukina S, **Triampo W**, Tang IM, Tieleman DP, Monticelli L, Computer simulation study of fullerene translocation through lipid membranes. Nature Nanotechnology. 2008;**3**:363-368. (Impact Factor 20.571 at 2008)
25. Sroiraya S, **Triampo W**, Moralese NP, and Triampo D. Kinetics and Mechanism of the hydroxyl radical of photocatalytic TiO₂ nanoparticles using ESR spectroscopy: Effect of particle sizes, particle concentrations, and aggregations. Journal of Ceramic Processing Research. 2008;**9(2)**:146-154. (Impact Factor 0.288 at 2008)
26. Modchang C, **Triampo W**, and Lenbury Y. Mathematical Modeling and Application of Genetic Algorithm to Parameter Estimation in Signal Transduction: Trafficking and Promiscuous Coupling of G-protein coupled Receptors. Computers in Biology and Medicine. 2008;**38**:574-582. (Impact factor 1.272 at 2008)
27. Nalakarn P, Tang IM, and **Triampo W**. Fractal Studies on the Spatial Patterns of Tree: a Case Study of KHAO-YAI NATIONAL PARK, THAILAND. ScienceAsia. 2008;**34**:409-415. (No Impact Factor at 2008)
28. Junthorn U, Unai S, Kanthang P, Ngamsaad W, Modchang C, **Triampo W***, Krittanai C, Lenbury Y, Triampo D. Single Particle Tracking Method for Quantitative Tracking the Distribution and Dynamics of the MinE Protein. J. Korean Phys. Soc. 2008 Mar;**52(3)**:639-648. (Impact Factor 1.204 at 2008)
29. Ngamsaad W, Yojina J, Kanthang P, Modchang C, Krittanai C, Triampo D, Nuttawut N, **Triampo W**. Quantitative approach of Min protein researches and applications: Experiments, mathematical modeling and computer simulations. African Journal of Biotechnology. 2009;**8(25)**:7350-7362. (Impact Factor 0.565 at 2009)
30. Triampo D ,and **Triampo W**. The Working of the Atomic Force Microscope for Chemical Mapping. The Open Materials Science Journal. 2009;**3**:50-55. (No impact factor at 2009)

31. Baowan D, **Triampo W**, Triampo D. Encapsulation of TiO₂ nanoparticles into single-walled carbon nanotubes. *New Journal of Physics*. 2009;**11**:1-13. (Impact Factor 3.312 at 2009)
32. Sriyab S, Yojina J, Ngamsaad W, Kanthang P, Modchang C, Nuttavut N, Lenbury Y, Krittanai C, **Triampo W**. Mesoscale modeling technique for studying the dynamics oscillation of Min protein: Pattern formation analysis with lattice Boltzmann method. *Computer in biology and medicine*. 2009;**39**(5):412-424. (Impact Factor 1.269 at 2009)
33. Schreier S, **Triampo W***, Dounghawee G, Triampo D, Chadsuthi S. Leptospirosis research: fast, easy and reliable enumeration of mobile leptospores. *Biological Research*. 2009;**42**(1):5-12. (Impact Factor 0.849 at 2009)
34. Unai S, Kanthang P, Junthon U, Ngamsaad W, **Triampo W**, Modchang C, and Krittanai C. Quantitative analysis of time-series fluorescence microscopy using a spot tracking method: application to Min protein dynamics. *Biologia*. 2009;**64**(1):27-42. (Impact Factor 0.617 at 2009)
35. Leelawattanachai J, **Triampo W**, Modchang C, Triampo D, Lenbury Y. Modeling and genetic algorithm optimization of early events in signal transduction via dynamics of G-protein-coupled receptors: internalization consideration. *Applied Mathematics and Computation*. 2009;**207**:528-544. (Impact Factor 1.124 at 2009)
36. Termnak S, **Triampo W**, Triampo D*. Effect of acid during synthesis on the agglomerated strength of TiO₂ nanoparticles. *Journal of Ceramic Processing Research*. 2009; **10**(4): 491-496. (Impact Factor 0.402 at 2009)
37. Wuttisela K, **Triampo W**, Triampo D*. Chemical Force Mapping of Phosphate and Carbon on Acid-Modified Tapioca Starch Surface. *International Journal of Biological Macromolecules*. 2009; **44**: 86-91. (Impact Factor 2.366 at 2009)
38. Pimpunchat B, Sweatman WL, Wake GC, **Triampo W**, Parshotam A. A mathematical model for pollution in a river and its remediation by aeration. *Applied Mathematics Letters*. 2009;**22**:304-308. (Impact Factor 0.978 at 2009)
39. Wong-ekkabut J, Chadsuthi S, **Triampo W**, Dounghawee G, Triampo D, and Krittanai C. Leptospirosis research: Response of pathogenic spirochete to ultraviolet-A irradiation. *African Journal of Biotechnology*. 2009;**8**(14):3341-3352. (Impact Factor 0.565 at 2009)
40. Rattanakul C, Sungkaworn T, Lenbury Y, Chudoung M, Chatsudthipong V, **Triampo W**, Novaprateep B. Nonlinear spatiotemporal analysis and modeling of

- signal transduction pathways involving G protein coupled receptors. *International Journal of Mathematical Models and Methods in Applied Sciences*. 2009;**3(3)**:219-229. (No Impact Factor at 2009)
41. Yodyingyong S, Panijpan B, **Triampo W**, Triampo D*. An Inexpensive Furnace for Calcination: Simple TiO₂ Synthesis. *Journal of Chemical Education*. 2009;**86(8)**:950-952. (Impact Factor 0.586 at 2009)
42. Wisitorsasak A^a, **Triampo W**^{a,b}, Triampo D^c, Modchang C^d, Lenbury Y^{e,f}. Investigating the heterodimerization process among receptors by Monte Carlo cellular automaton simulation. *International Journal of Mathematical Models and Methods in Applied Sciences*. 2009;**3(4)**:335-345. (No Impact Factor at 2009)
43. Yojina J, Ngamsaad W, Nuttavut N, Triampo D, Lenbury Y, Kanthang P, Sriyab S, **Triampo W**. Investigating flow patterns in a channel with complex obstacles using the lattice Boltzmann method. *Journal of Mechanical Science and Technology*. 2010;**24(10)**:10 pp. (Impact Factor 0.374 at 2009)
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45. Baowan D, Triampo D and **Triampo W**. Modeling of Titania Nanoparticle Accumulation at the Open End of Single-Walled Carbon Nanotubes Prior to TiO₂ Encapsulation. *Journal of Computational and Theoretical Nanoscience*. 2010;**7**:1-5. (Impact Factor 0.899 at 2009)
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14. Present research areas

- I. Biological and medical physics (computational and experimental approach)
- II. Biological and environmental nanoscience
- III. Stochastic processes and modeling
- IV. Modeling and computer simulations
- V. Math. and science education (Personalized learning and developing diagnostic tool for learning and teaching improvement)

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