

**Thongchai Chuachan**  
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## Profile

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Weight: 70 kg.  
High: 175 cm.  
Date of Birth: May 17, 1986.  
Website: <https://comsci.srru.ac.th/thongchai>

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## Education

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- Ph.D. in Computer Science, Faculty of Informatics, Mahasarakham University, 2019
    - GPAX = 4.00 (on 4.00 scale)
    - PhD Thesis: "Solving MTU Mismatch and Broadcast Overhead of NDN over Link-Layer Networks"
  - M.Sc. in Information Technology, Faculty of Informatics, Mahasarakham University 2009-2011
    - GPAX = 4.00 (on 4.00 scale)
    - Thesis : "Peer-to-peer Traffic Detection and Intra-protocol Fairness Improvement for Bandwidth Shaper"
  - B.Sc. in Computer Science, Faculty of Informatics, Mahasarakham University 2004-2008
    - GPAX = 3.21 (on 4.00 scale)
    - Senior Project: "ARP Spoof Vaccination and Surveillance System" JAVA programming using JPCAP API for network management
  - Secondary school: Taelsirivittaya School
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## Career Summary

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- October 2013 – Present: Fulltime Lecturer, Department of Computer Science, Faculty of Science and Technology, Surindra Rajabhat University
  - Special Lecturer, Kalasin Rajabhat University, 2013
  - 2010 - 2012: Research Assistant, Information Security and Advanced Network Laboratory, Mahasarakham University
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## Research Projects

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- SRRU BigData, โครงการยุทธศาสตร์ราชภัฏเพื่อการพัฒนาท้องถิ่น, 2562-2563.
- แพลตฟอร์มตลาดนัดเมืองช้าง, จังหวัดสุรินทร์, 2563.
- Analysis and Performance Enhancement of Software Defined Network and Named Data Network, Newton Mobility Grants - 2016/R1, researched at School of Computing, University of Leeds, United Kingdom. (as NDN co-investigator)
- A Design and Development of an Interest Packet and A Forwarding Plane Mechanism for NDN networks, NRMS, 2018.
- An Architectural Design of Named Data Networking for Internet of Things, , Faculty of Science and Technology, SRRU, 2017.

- A Design and Development of the Web Interface for Network Emulators, Faculty of Science and Technology, SRRU, 2017.
- Flexible ARP Spoof Solutions for Organization, Faculty of Informatics, Mahasarakham Univerisy, 2015
- An Enhancement of Peer-to-peer Detections with Separation Protocol Hierarchies, Faculty of Informatics, Mahasarakham Univerisy, 2014

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## Publications

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- Thongchai Chuachan, Somnuk Puangpronpitag, and Karim Djemame. "Solving MTU Mismatch and Broadcast Overhead of NDN over Link-Layer Networks" to be published in International Journal of Networked and Distributed Computing 8[2], 2020.
- Thongchai Chuachan, Somnuk Puangpronpitag, Nopparat Posing, Suwat Gluaythong, Apichart Somrat. "A Design and Development of Path-convergence Mechanisms for Named Data Networking". Mahasarakham Journal of Science and Technology 37:2 pp.296-303, 2018.
- Thongchai Chuachan, Nopparat Posing, Ekrawee Kamplae, Somsawut Nindam. "A Design and Development of the Web Interface for Network Emulators". Mahasarakham Journal of Science and Technology 2017:1 pp.68-76, 2018.
- Thongchai Chuachan, Pattarapat Waidee, Sirimongkon Meesiri. "An IoT Hub System for Named Data Networking". Proceedings of the 13th National Conference on Computing and Information Technology, Bangkok, Thailand: pp.1-10, 2017.
- Thongchai Chuachan, Ekkapol Nantapan, and Pichit Anurit, "A-NAC: An Automated Authentication System for Network Access Controls", to appear in The 19th International Computer Science and Engineering Conference (ICSEC), Chiang Mai, Thailand , 23 – 26 November 2015 (Thai Track)
- Somnuk Puangpronpitag and Thongchai Chuachan, "A Flexible ARP Spoof Detection & Prevention System for Organizations", Mahasarakham Journal of Science and Technology, issue 5, September-October 2015. ISSN 1686-9664, pp. 485-495 (In Thai, Database: TCI-G2)
- Thongchai Chuachan and Somnuk Puangpronpitag, "An Investigation of Selfishness Attacks and Selective Forwarding Attacks in Mobile Ad Hoc Networks", Koch Cha Sarn Journal of Science, Jan-June 2014. ISSN 1686-4522 (In Thai, Database: TCI-G2)
- Somnuk Puangpronpitag, Thongchai Chuachan and Porntiwa Pawara, "Classifying Peer-to-peer Traffic using Protocol Hierarchy", in proceedings of the International Conference on Computer and Information Sciences, Kuala Lumpur, Malaysia, June 2014. 978-1-4799-0059-6/13 (Database: IEEEExplore)
- Thongchai Chuachan and Somnuk Puangpronpitag, "A Novel Challenge & Response Scheme Against Selective Forwarding Attacks in MANETs", to appear in proceedings of The Fifth International Conference on Ubiquitous and Future Networks (ICUFN), Da Nang, Vietnam, 2–5 July 2013. (Indexed by IEEE Explore, SCOPUS, EI Compendex)
- Somnuk Puangpronpitag and Thongchai Chuachan, "Two-State Peer-to-peer Flow Detection Algorithm", In proceedings of The 9th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTICON), Hua Hin, Thailand, 16-18 May 2012; pp. 1-4. (Indexed by IEEE Explore, SCOPUS)
- Somnuk Puangpronpitag and Thongchai Chuachan, "A New Design of Bandwidth Shaper with an Intra-protocol Fairness", In proceedings of The 9th International Conference on Electrical Engineering/Electronics, Computer, Telecommunications and Information Technology (ECTICON), Khonkaen, Thailand, May 2011; pp. 304-307. (Indexed by IEEE Explore, SCOPUS)

- Thongchai Chuachan and Somnuk Puangpronpitag, “Bandwidth Shaper with Intra-protocol Fairness” in proceedings of The 14th National Computer Science and Engineering Conference (NCSEC 2010), Chiang Mai, Thailand, 17-19 November 2010; pp. 25-30. (in Thai)
- Thongchai Chuachan and Somnuk Puangpronpitag “Bandwidth Shaper with Encrypted P2P Detection”, Journal of Information Science and Technology, December 2010; 1[2]: 32-38. (in Thai)
- Thongchai Chuachan and Somnuk Puangpronpitag, “P2P Traffic Shaping by Checking Regular Expression and Learning Traffic Flow” in proceedings of The 13th National Computer Science and Engineering Conference (NCSEC 2009), Bangkok, Thailand, 4-6 November 2009; pp. 109-114. (in Thai)
- Piyawad Kasabai, Thongchai Chuachan and Somnuk Puangpronpitag, “ARP Spoof Vaccination and Surveillance System”, in proceedings of the 12th National Computer Science and Engineering Conference (NCSEC), Pattaya, Choburi, Thailand, November 2008; ISBN: 978-974-19-3306-8 pp. 217-224. (in Thai)

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## Skills

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- Computer Skills and Competencies
  - Programming languages: Python, Java, C, C#, C++, PHP, JavaScript, Assembly
  - Web Frameworks
    - Laravel
    - Angular
  - Mobile Application Frameworks
    - Ionic
  - Network Configuration Skills
    - Cisco Devices
    - Linux Routers
  - Operating Systems
    - All Linux distros: Ubuntu, Fedora, ClearOS, Redhat, etc.,
    - MacOS
    - MS Windows
    - Cisco iOS
  - 3D Framework
    - THREE.js
- Communication & Network Skills
  - Named Data Networking
  - Encrypted Peer-to-Peer (P2P)
  - Network Management
  - Network Programming
  - Protocol Design & Implementation
- Internet of Things
  - IoT Devices
    - ESP32, ESP8266
    - Raspberry PI
  - IoT Networks
    - LPWAN: LoRa, Nb-IoT
    - WiFi Managements for IoT Networks
- Computer Security Skills
  - Symmetric and Asymmetric Encryption Algorithms
  - Firewall Design
  - Network Access Control

- Linux Distro's Development
  - ISAN ClearOS and Isandbox core development
  - Linux Live CD development
- Database Engine
  - MySQL
  - MongoDB
  - MS-Sql
  - Oracle
- Certifications
  - CCNA 1
  - CCNA 2

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## Awards

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- February 2010: National Software Contest Award
  - Win 15,000 bath award for the program “Encrypted P2P Traffic Shaping” (a traffic control developed C) and getting into the final round of the 8th National Software Contest (organized by NECTEC)
- February 2009 : National Software Contest Award
  - The third rank for the program “Arpspoof Vaccination and Surveillance system” in the 11th National Software Contest (organized by NECTEC).
- July 2008 : The second rank computer science student scholarship
  - The second highest GPAX award (3.20) among 60 the 4th year students in Computer Science, Faculty of Informatics, Mahasarakham University November
  - The third of Mobile Game and Application with J2ME award, organized by Thailand Software Industry Promotion Agency (SIPA)
- November 2007: Computer & Mobile Application Award
  - Win the 3rd place award for the program “The warlord” (a mobile game program developed by J2ME from the 3D Game Computer and Mobile Application Contest organized by Software Industry Promotion Agency (SIPA)
- January 2006: National Software Contest Award
  - Win 15,000 bath award for the program “The legend” (a 2D Graphic game developed JAVA) and getting into the final round of the 8th National Software Contest (organized by NECTEC)

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## PhD Advisor

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- Dr. Somnuk Puangpronpitag  
The director of Information Security and Advanced Network (ISAN) Research Lab  
Faculty of Informatics  
Mahasarakham University  
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