Kunanon Burathep

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RESEARCH INTERESTS

- **Algorithms with Predictions**: Learning-Augmented Online Bipartite Matching.
- **Approximation Algorithms:** Graph Connectivity, Network design.

EDUCATION

Durham University, Durham, United Kingdom 2024 – Present
Ph.D. in Computer Science and a member of the NESTiD and ACiD seminar groups.
Supervisors: Prof. Thomas Erlebach and Asst. Prof. William K. Moses Jr.

Kasetsart University, Bangkok, Thailand 2020 – 2022
M.Eng. in Computer Engineering (GPA: 3.88/4.00)
Thesis: *Approximation Algorithms for Graph Connectivity Problems*
Advisor: Assoc. Prof. Jittat Fakcharoenphol

Kasetsart University, Bangkok, Thailand 2016 – 2020
B.Eng. in Computer Engineering (GPA: 3.23/4.00)

PUBLICATIONS

K. Burathep, T. Erlebach, and W. K. Moses Jr. 2026
Learning-Augmented Online Bipartite Matching in the Random Arrival Order Model
Proc. 51st Intl. Conference on Current Trends in Theory and Practice of Computer Science (SOFSEM 2026).
LNCS, vol. 16448. Springer. DOI: 10.1007/978-3-032-17801-5_27. (Preprint: arXiv:2511.23388)

K. Burathep and J. Fakcharoenphol 2022
An Approximation Algorithm for the Vertex Multicut on Trees with an Application to the Tracking Paths Problem
Proc. 19th Intl. Joint Conference on Computer Science and Software Engineering (JCSSE 2022).
IEEE. DOI: 10.1109/JCSSE54890.2022.9836254.

K. Burathep, J. Fakcharoenphol, and N. Wongwattanakij 2020
Approximating k-Connected m-Dominating Sets in Disk Graphs
Proc. 24th Intl. Computer Science and Engineering Conference (ICSEC 2020).
IEEE. DOI: 10.1109/ICSEC51790.2020.9375178.

TALKS AND PRESENTATIONS

51st SOFSEM Conference Feb 2026
Contributed Talk: Learning-Augmented Online Bipartite Matching... Kraków, Poland
Presented peer-reviewed research on online algorithms with predictions at the International Conference on Current Trends in Theory and Practice of Computer Science.

EXPERIENCE

Durham University 2025 – Present
Teaching Assistant (Algorithms and Data Structures) Durham, UK
Responsible for demonstrating algorithmic proofs and marking undergraduate assessments.

Kasetsart University 2018 – 2022
Teaching Assistant Bangkok, Thailand
Courses: Discrete Mathematics, Data Structures and Algorithms, Problem-solving Lab.

Shanghai University of Finance and Economics Summer 2019
Research Intern (Institute for Theoretical Computer Science) Shanghai, China
Supervisor: Assoc. Prof. Bundit Laekhanukit. Focus: Two-Level Rectilinear Steiner Trees.