Jung Yun Bae

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Research Interests

- Robotics, Multi-robot systems

- Coordination of Heterogeneous Robot Systems

- Vehicle Routing Problems

- Multi-robot System Control and Optimization

- Autonomous Navigation

- Unmanned Vehicles

- Operational Research for Autonomous Vehicles
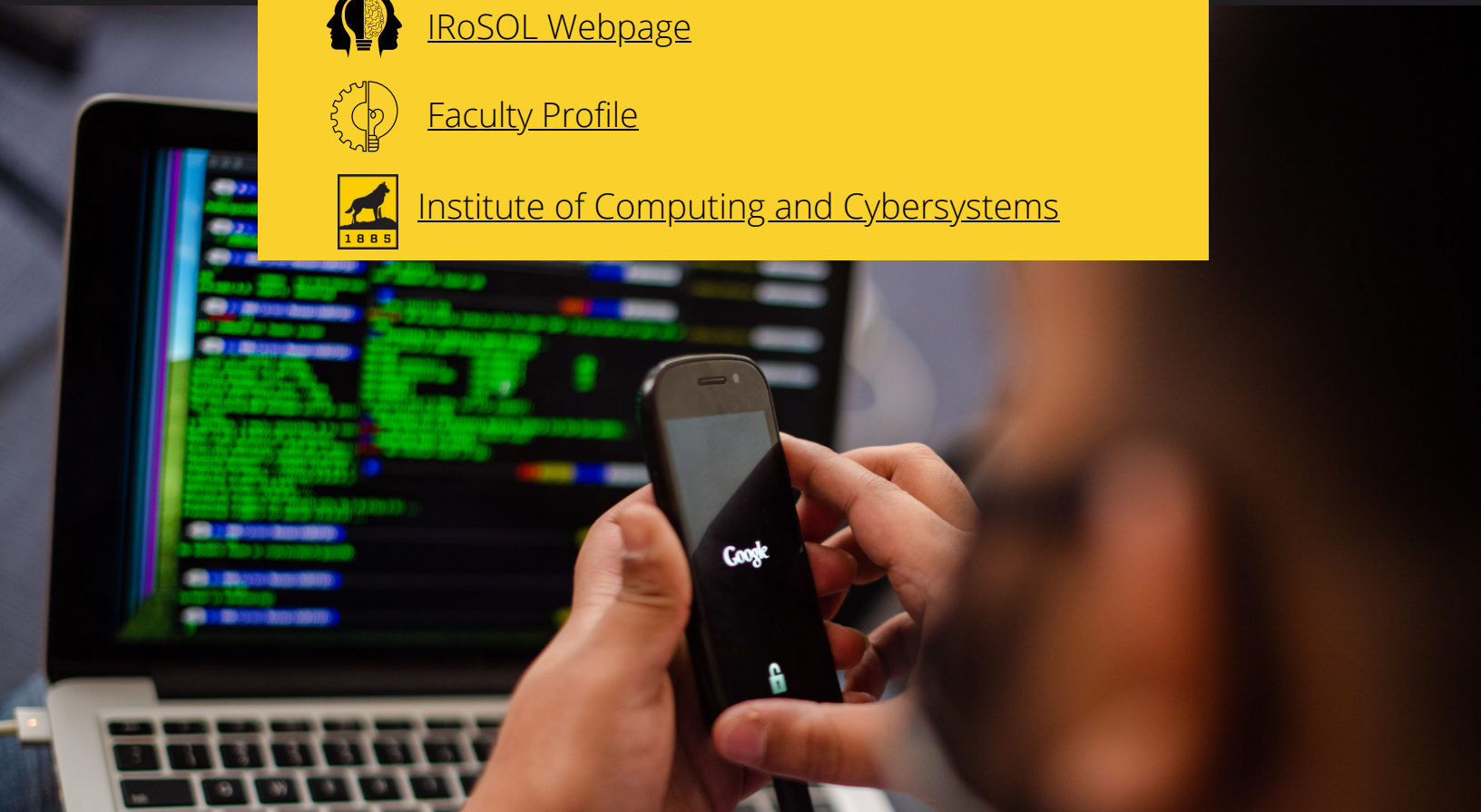
Links of Interest

IRoSOL Webpage

Faculty Profile

Institute of Computing and Cybersystems

A heuristic for a heterogeneous automated guided vehicle routing problem

Addresses a Heterogeneous Automated Guided Vehicle (AGV) Routing Problem that distributes given jobs to one of the AGVs and finds a route for each AGV while minimizing the sum of tour costs.

Approximation algorithms for multiple terminal, Hamiltonian path problems

Presents a new 2-appoximation algorithm for a multiple depot, multiple terminal, Hamiltonian path problem when the costs satisfy the triangle inequality.

Use of coded infrared light for mobile robot localization

Presents a mobile robot localization using coded infrared light as artificial landmark.

Heuristics for Two Depot Heterogeneous Unmanned Vehicle Path Planning to Minimize Maximum Travel Cost

Presents a solution to the multiple depot heterogeneous travelling salesman problem that highly relates to job completion time and has many applications to unmanned vehicles.

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Publications