

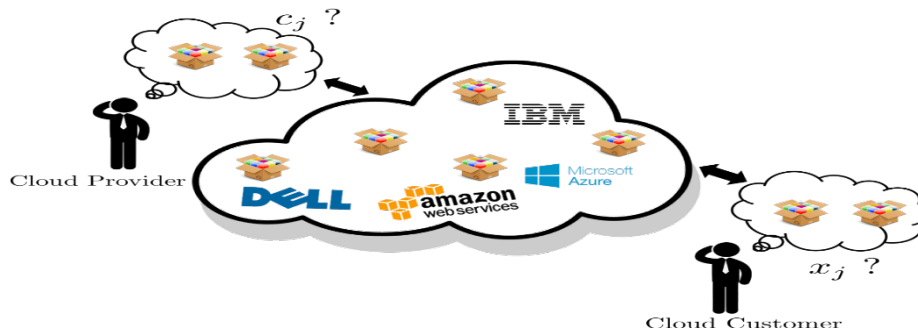
Optimal pricing for Cloud Adoption Framework

PCOG Yearly Meeting

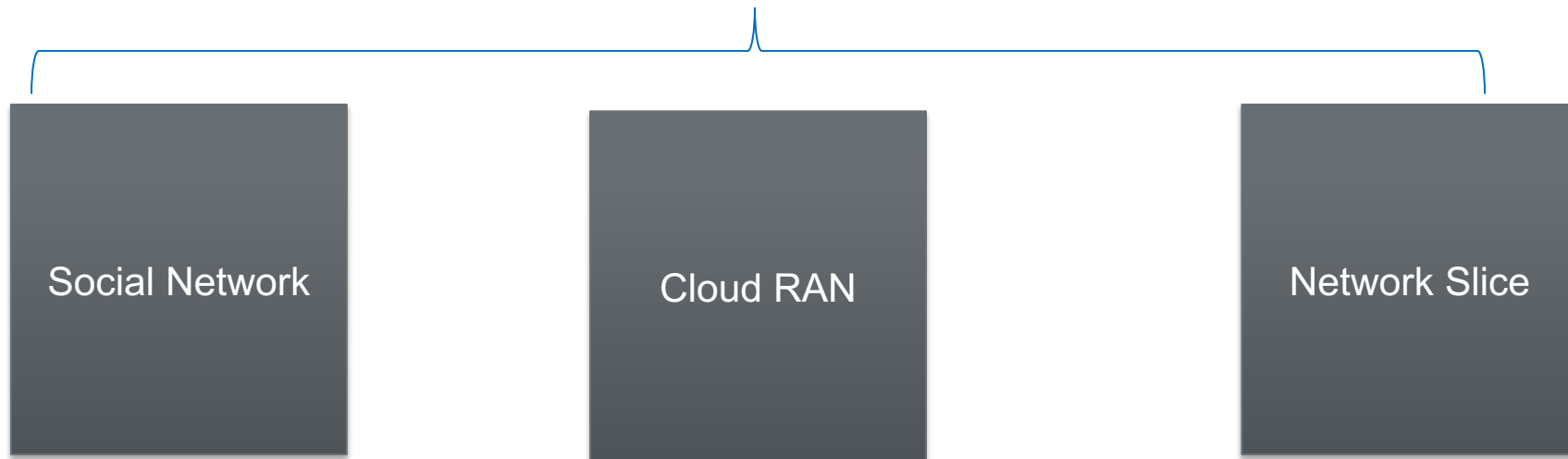
14th Dec. 2020

Chao LIU

Research Overview

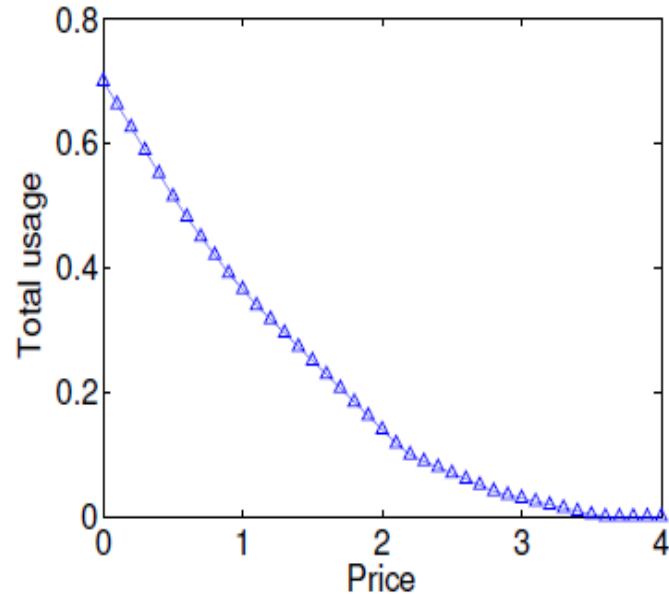


- Provide pricing models for B2B and B2C market in different cloud scenarios
- Build new pricing models based on theory and practice for cloud application

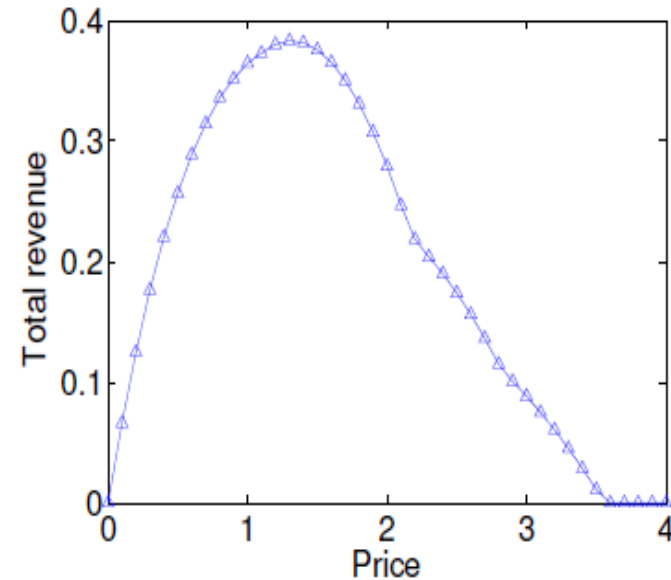


Research Scenario – Social Network

Total usage at the UDE is a linear function of price.



Total revenue at the UDE is a quadratic function of price.



Research Scenario – Fairness Optimization – Cloud RAN

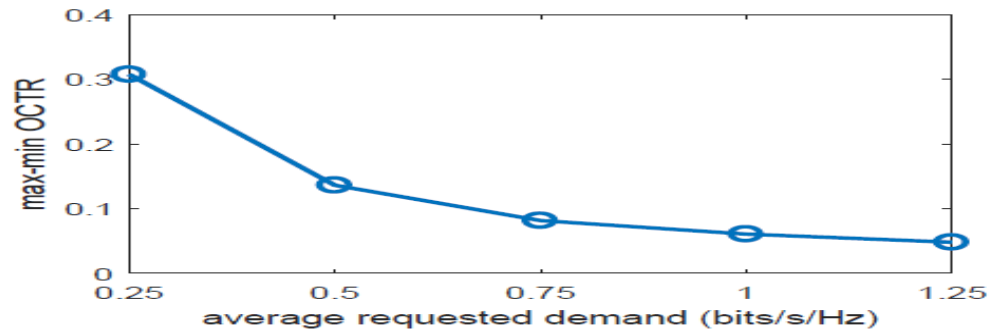
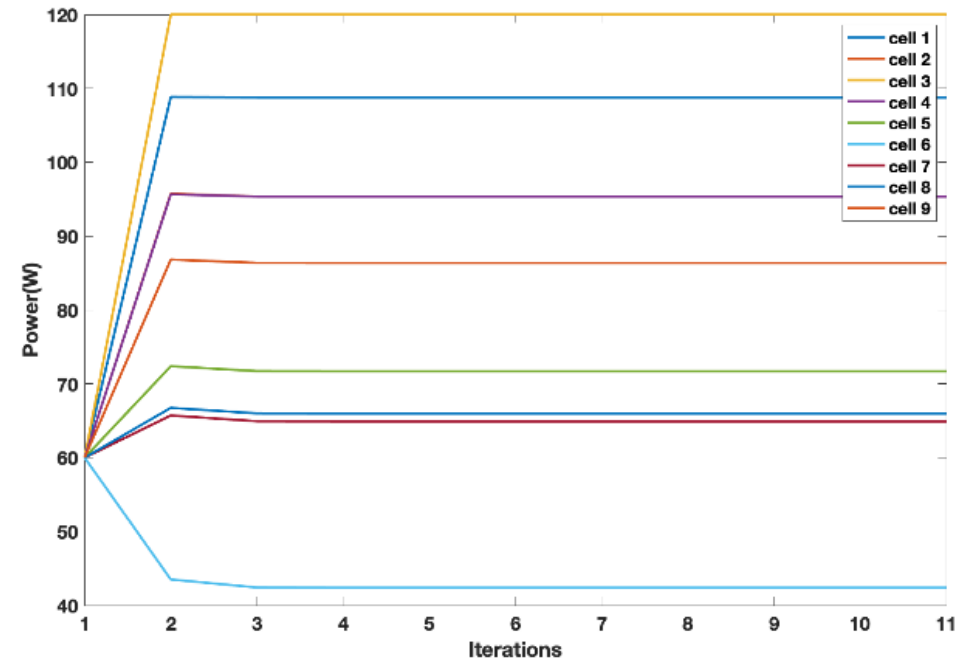
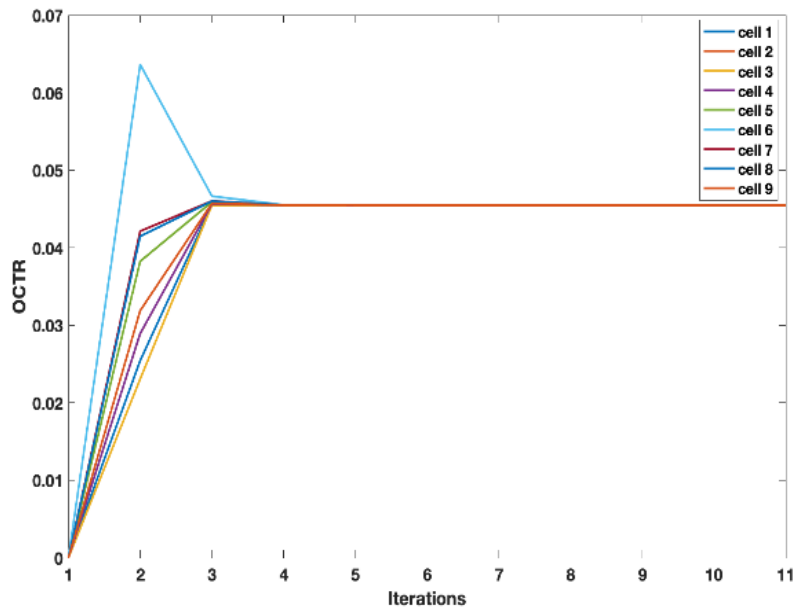
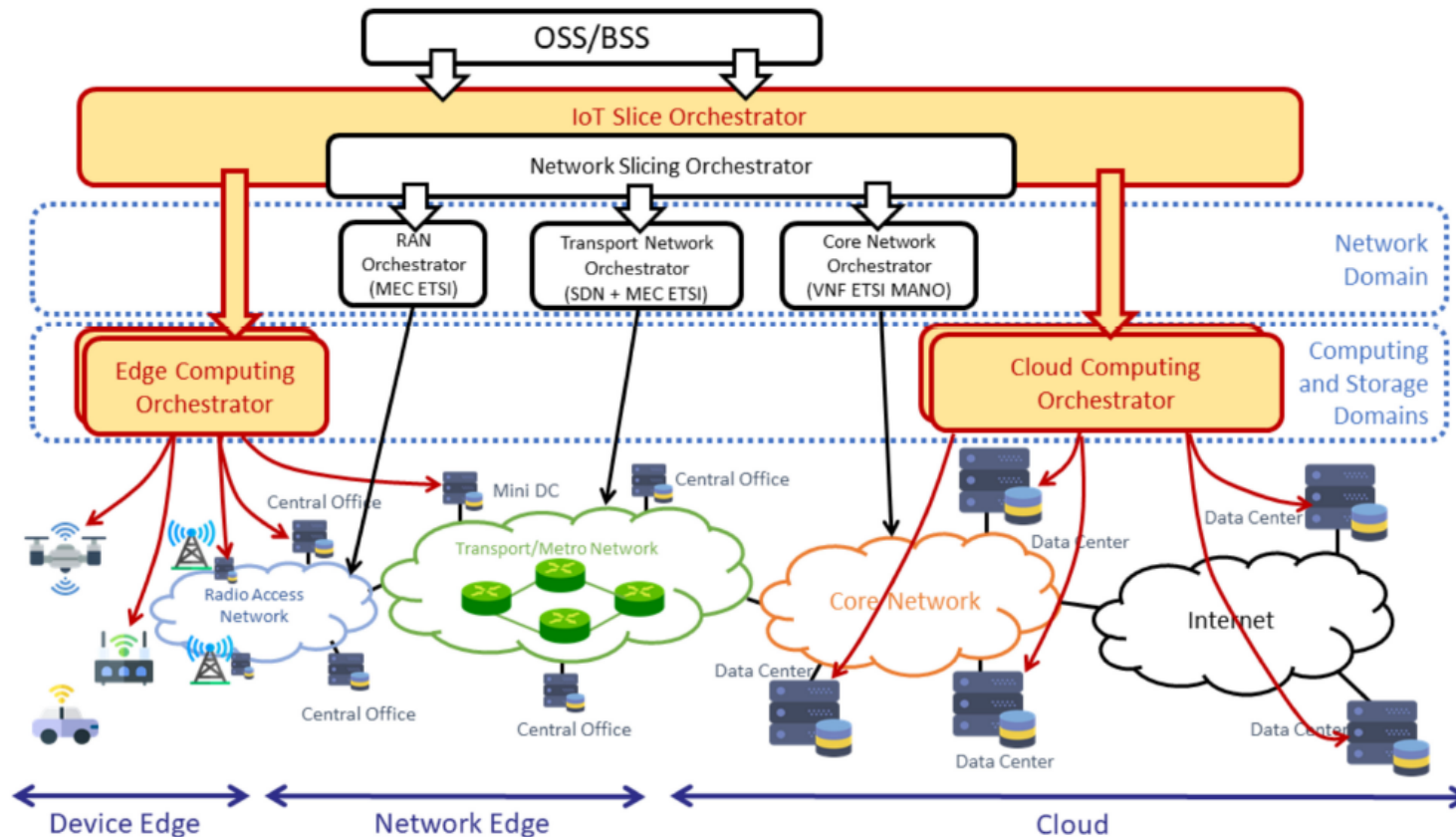


Fig. 4. Max-min OCTR with respect to traffic demand.

Research Scenario – Network Slice-Survey



Overall IoT solution orchestration

Value-Based Cloud Pricing

$$BA_p = \beta_{0p} + \sum_{i \in I} \beta_{ip} x_i + \varepsilon_p, [p \in P]$$

BA_p ← Price plan on the market

x_i ← Cloud Characteristics

Symbol	Definition	Symb ol	Definition	Symb ol	Definition	Symb ol	Definition
BA_p	Price plan or billing amount	β_{0p}	the constant coefficient of linear regression	x_i	Hedonic Characteristics	ε_p	Error term of the regression equation
p	Number of CSP	β_{ip}	Parameters of hedonic characteristics	i	Number of hedonic characteristics	I P	Total # of Characteristics Total # of CSP


Intrinsic Cloud Characteristics x_i
 Extrinsic Cloud Characteristics z_j
 Time Dummy Variable d_t

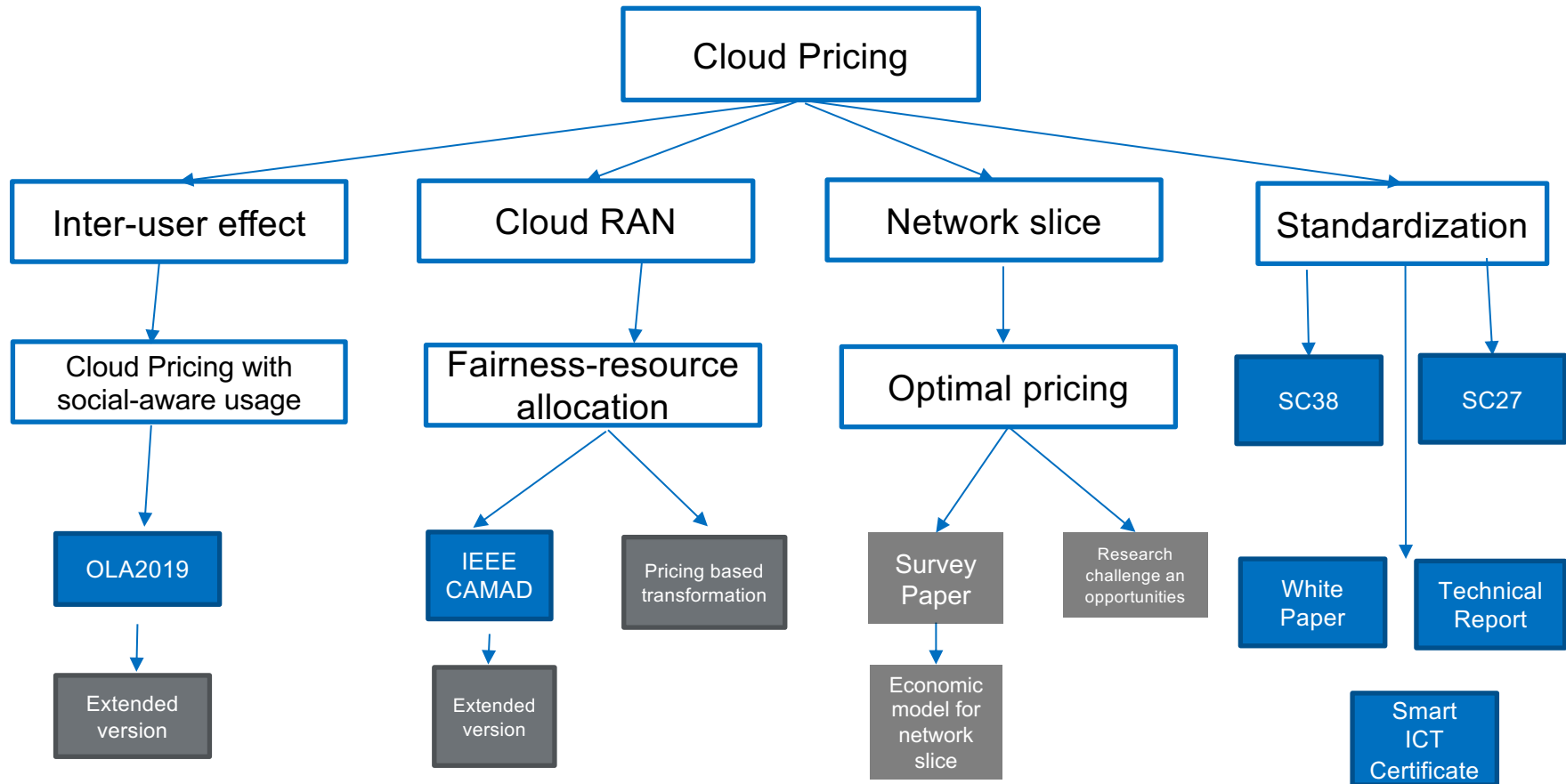
Take Semi-log of Hedonic Function Equation

$$\ln[p(X)] = \beta_0 + \sum_{i=1}^k \beta_i x_i + \sum_{j=1}^l \xi_j z_j + \sum_{t=1}^T \delta_t d_t + \varepsilon$$

Roadmap



 Completed
In progress



THANK YOU



ILNAS



ANEC