

# MSc thesis defense presentation

## Ανδρέας Μέντης defends his MSc thesis

<b>Date:</b>	Τετάρτη, 22 Νοβ 2017
<b>Ώρα:</b>	15:00
<b>Location:</b>	Σχολή Ηλεκτρολόγων Μηχανικών και Μηχανικών Υπολογιστών, ΕΜΠ (παλαιό κτίριο), 1.1.31
<b>Thesis title:</b>	<a href="#">Change averse equilibria in congestion games</a>
<b>Committee:</b>	<ul style="list-style-type: none"><li>• <a href="#">Δημήτρης Φωτιάκης</a></li><li>• <a href="#">Αριστείδης Παγουρτζής</a></li><li>• <a href="#">Ευσταθιος Ζήχος</a></li></ul>

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### Thesis abstract

We introduce a new model in Congestion Games, where players choose their strategy according to the new cost they incur, as well as the difference between their current state and the new state they are considering. The latter part of the decision-making process is based on the assumption that players who are considering a significant change are less prone to take it, than they do on a similar choice. This model has analogies with  $\epsilon$ -approximate equilibria. We can easily see that this new model provides a richer set of equilibria than approximate equilibria. Christodoulou et al. prove that as far as Linear Congestion Games are concerned, we have good bounds on the Price of Anarchy. We prove that similar results are true in our case. We also prove that players do actually converge on such an equilibrium and relatively quickly.

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