

Matching and Market Design

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Cómo asignar personas u objetos a otras personas o empresas es un importante problema de la teoría de la elección social. Podemos citar varios ejemplos relevantes como la asignación de estudiantes a las escuelas, las admisiones a las universidades universidad y la donación de órganos.

La teoría del matching que tiene una importante tradición y un conjunto bien definido de herramientas.

El objetivo de este curso es acercar los estudiantes a la teoría y las aplicaciones de esta teoría y ponerlos en contacto con la investigación de frontera sobre tales argumentos. Vamos a utilizar la mayor parte de nuestro tiempo a discutir problemas reales y relevantes en la teoría de la asignación (por ejemplo: asignación de estudiantes a escuela, de trabajadores a empresas, de órganos de donantes vivos a enfermos, etc.), artículos que buscan solucionar estos problemas y posibles nuevas preguntas. Haremos énfasis en los desarrollos más recientes de la disciplina. Por lo tanto, algunas secciones de este programa pueden estar sujetas a cambios.

Semanas 1 y 2. Mercados bilaterales.

Semana 3 Diseño de mercados laborales: National Resident Matching Program (NRMP).

Semana 4 y 5. Elección de escuelas: resultados básicos y desarrollos recientes.

Semanas 6 y 7. Matching con preferencias complejas.

Semanas 8. Depende de los intereses de los estudiantes: house assignment, donación de órganos, random matchings

Las primeras cuatro semanas tendrán una clase auxiliar.

Evaluación

A lo largo del curso se asignarán tareas (dos o tres).

Cada estudiante presentará un artículo académico de teoría de la asignación.

Al final del curso, cada estudiante entregará un trabajo final donde se traten algunos desarrollos recientes de la teoría o bien un proyecto de trabajo de investigación original.

La formula para calcular la nota final $(NT + NP + 2NTF)/4$

Donde

NT = promedio nota tareas;

NP = Nota presentación;

NTF = Nota trabajo final.

Referencias

Libros:

Gusfield, D. and Irving, R.W. *The Stable Matching Problem: Structure and Algorithms*. Cambridge, MA: MIT Press, 1989.

Roth, Alvin, and Marilda Sotomayor. *Two-sided Matching: A Study in Game-Theoretic Modeling and Analysis*. Cambridge, United Kingdom: Cambridge University Press, 1992. ISBN: 9780521437882.

Manlove, D. *Algorithmics Of Matching Under Preferences*. Series: Theoretical computer science . World Scientific Publishing, 2013.

Roth, Alvin, “*Who Gets What — and Why: The New Economics of Matchmaking and Market Design*”, Houghton Mifflin Harcourt, 2015

Surveys:

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- Kojima, Fuhito “Recent Developments in Matching Theory and its Practical Applications”, Mimeo, 2015.

- Sönmez, Tayfun, and M. Utku Ünver. Matching, Allocation, and Exchange of Discrete Resources. *Handbook of Social Economics*, Volume 1A, 2011 Elsevier B.V. ISSN 0169-7218, DOI: 10.1016/S0169-7218(11)01017-3.

Web

Al Roth's website <http://kuznets.fas.harvard.edu/~aroth/alroth.html>

Referencias

En rojo se indican las referencias básicas.

Conceptos fundamentales

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- Alvin E. Roth (1982) “Incentive compatibility in a market with indivisibilities” *Economics Letters* 9, 127-132.

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School Choice

- Atila Abdulkadiroğlu and Tayfun Sönmez "School Choice: A Mechanism Design Approach" *American Economic Review* 93-3: 729-747, June 2003
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- Umut Dur, Scott Duke Kominers, Parag A. Pathak, Tayfun Sönmez: *The Demise of Walk Zones in Boston: Priorities vs. Precedence in School Choice*, 2014, Mimeo.
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Matching con Contratos

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