**List of models we studied in class**

1. Schelling Segregation model – An agent-based model. Agents are slightly "sיapist".
2. Brian's Arthur El Farol model – An agent-based model. Agents determine policy based on their previous experience.
3. Axelrod's social norms model – An agent-based model. Social norms as outcomes of Boldness and Vengefuness. The importance of metanorms.
4. Dynamic Optimization – An Analytical model. Optimizing allocation of resources over time. (The guest lecture by Prof Eitan Muller).
5. Epstein's model on the formation of social classes – An agent-based model. Based on pairwise Nash demand game for resources, belief updating based on history. One vs two types of agents.
6. Epstein and Axtell – Sugarscape model, the story of the Anasazi. Using resources.
7. Models for generating spikes:
   1. Barabasi's individual prioritization – A conceptual model
   2. Granovetter's variation in action threshold – A conceptual model.
   3. Epstein Hardship and Legitimacy of a central authority – the context of rebellions. An agent-based model.
   4. Gelper, Peres, and Eliashberg models for feedback and recency in online word-of-mouth. A theoretical framework + empirics.
8. Bass diffusion model – An analytical model + empirics.
9. Goldenberg Libai and Muller 2002 – Saddle. Bass model with the full connectivity relaxed to describe a dual market.
10. The Dover, Goldenberg and Shapira (2012) model – Reconstructing network structure. Full connectivity further relaxed.

**Guest lectures:**

1. Dr. Yaniv Dover – Online communities
2. Dr. Lev Muchnik – Social influence on online content

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| Model | Purpose | Description | Assumptions | Variables and parameters | Main insights | Contribution | Extensions |
| Schelling Segregation model |  |  |  |  |  |  |  |
| Brian's Arthur El Farol model |  |  |  |  |  |  |  |
| Axelrod's social norms model |  |  |  |  |  |  |  |
| Dynamic optimization |  |  |  |  |  |  |  |
| Epstein's social classes model |  |  |  |  |  |  |  |
| The SugarScape model of Epstein and Axtell 1996 |  |  |  |  |  |  |  |
| Spike models – Barabasi's individual prioritization |  |  |  |  |  |  |  |
| Spike models – Granovetter threshold model |  |  |  |  |  |  |  |
| Spike models –Epstein 2002 hardship and legitimacy |  |  |  |  |  |  |  |
| Spike models –Geper Peres and Eliashberg 2016 |  |  |  |  |  |  |  |
| Bass Diffusion model |  |  |  |  |  |  |  |
| The Saddle model G.L.M 2002 |  |  |  |  |  |  |  |
| The Dover, Goldenberg and Shapira (2012) |  |  |  |  |  |  |  |