Board games have enjoyed a recent renaissance, in part by borrowing techniques from the computer games industry. New titles combine beautiful artwork and deep strategy. Optional rules and expansion packs allow players to customize their games and give companies a stable revenue stream.

Themed games combine topical content with abstract mechanics. The artwork merges bold, iconic figurines and geometric designs with classic oil and watercolor backgrounds. A well-designed game integrates the theme into successful strategies so that, for example, you don’t just move a pirate ship on the board but feel like a pirate when you mutiny and run with the booty. Likewise, the artwork serves not only to engage the players but to make the rules and strategies memorable and intuitive.

Board games create systems where complex interactions arise from simple rules. Mimicking structures from biology and economics, games must balance opposing forces: player vs. player, production and consumption, positive and negative feedback. Successfully playing and designing games requires understanding and predicting outcomes. Tools for this are probability, for predicting the average outcome of random events; and mini-max search (“what’s my best move, given that he’ll then counter with his best move?”) for predicting the choices of other players.

Tonight we’ll examine recent games that are exemplary in their art, their design, or both. Two of these are easy to learn on your first try and set up for us to play.
Settlers of Catan

Imagine *Monopoly* played with five different kinds of currency and several different ways to win. To computer gamers, this feels like *Civilization* or *Age of Empires*. Like those games, the keys to success are early-game resource gathering, a late-game shift to diverse production, and shrewd trading along the way. Expansion sets and rules allow for more players, armies, and boats to sail between different islands.

Hints: The game is won or lost in the setup phase. You can’t expand unless you produce the raw materials for roads and towns. The value of a corner is the sum of the probability numbers on the adjacent hexagons.

Carcassonne

The world starts empty and you expand it by matching tiles along their edges, like dominoes. You can only place a follower on a feature (city, road, or farm) when it is not connected to an owned feature. So, the basic maneuver is to place and claim a new feature around the corner from a developed one, and then later link them. Expansion sets and rules add more ways to earn points and more strategy by explicitly choosing tiles from a shared hand instead of randomly.

Hints: You still get full points if you share a city or road, and collaboration means building that feature twice as fast. Avoid the farms for your first few games; they are tricky to recognize and aren’t worth as many points.

Next Month’s Event: Video Games! Guitar Hero & LAN Party in Schow, Nov. 11; Co-hosted by the Williams Gaming Alliance. [http://graphics.cs.williams.edu/graphicsnight](http://graphics.cs.williams.edu/graphicsnight)