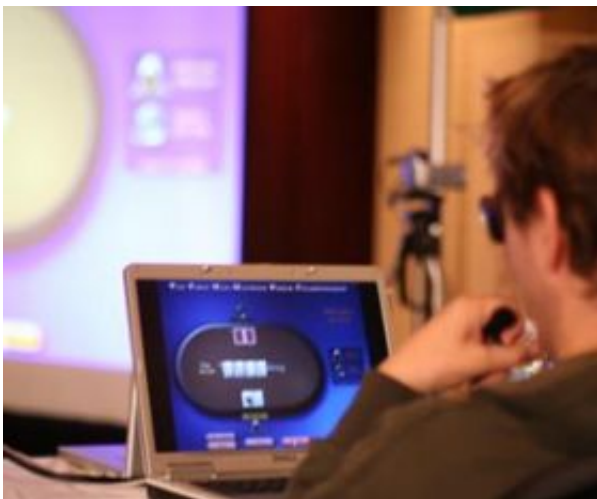# Man versus machine poker re-match

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Poker pro Phil "The Unabomber" Laak faces off against Polaris during last year's challenge.

Polaris, the University of Alberta poker playing computer program, is heading to Las Vegas for a re-match against humans.

From July 3-6, the university's poker team will be pitting Polaris against a number of opponents, including Stoxpoker.com coaches Nick Grudzien and IJay Palansky, as well as contributor Matt Hawrilenko, all of whom can boast well over $1 million USD in lifetime winnings. This year's showdown will be at the Rio All-Suite Hotel & Casino in Las Vegas. This match runs concurrently with the 2008 World Series of Poker as part of the 2008 Gaming Life Expo.

This type of tournament was first held in July of 2007, where Phil "The Unabomber" Laak and Ali Eslami won two matches, drew one match, and lost one match. In the same format as last year, Polaris will play against professional human players in a game of limit Texas Hold'em poker.

Each match will consist of 500 hands with the cards dealt in duplicate, meaning that Polaris will receive the same cards in one room that the professional receives in the other room and vise-versa. The duplicate system will be employed in order to balance out the luck of the cards and emphasize the capabilities of the participants.

"It's possible, given enough computing power, for computers to play 'perfectly,' where over a long enough match, the program cannot lose money," said associate professor Michael Bowling, leader of the university's computer poker research group. "Humans will always make some mistakes, meaning the program will have an advantage.

"We're still quite far from the necessary computing power for perfect play. However, we've been able to take what we learned last year and apply it to improving this year's program."

With the popularity of poker and the entertainment value of a man versus machine battle, it is easy to forget that this competition is an academic pursuit. Games are an excellent domain for artificial intelligence research because games have well defined rules and clear goals. The techniques that are learned from succeeding at games can be applied to real-world problems where the "rules" are not so well defined.

The department of computing science at the University of Alberta is one of the foremost institutions in the world to study artificial intelligence. The university's computer poker research group consists of 15 researchers and graduate and undergraduate students whose primary

focus is artificial intelligence.

The University of Alberta Computer Poker Research Group:
poker.cs.ualberta.ca/

Source: University of Alberta