Alumni Notes
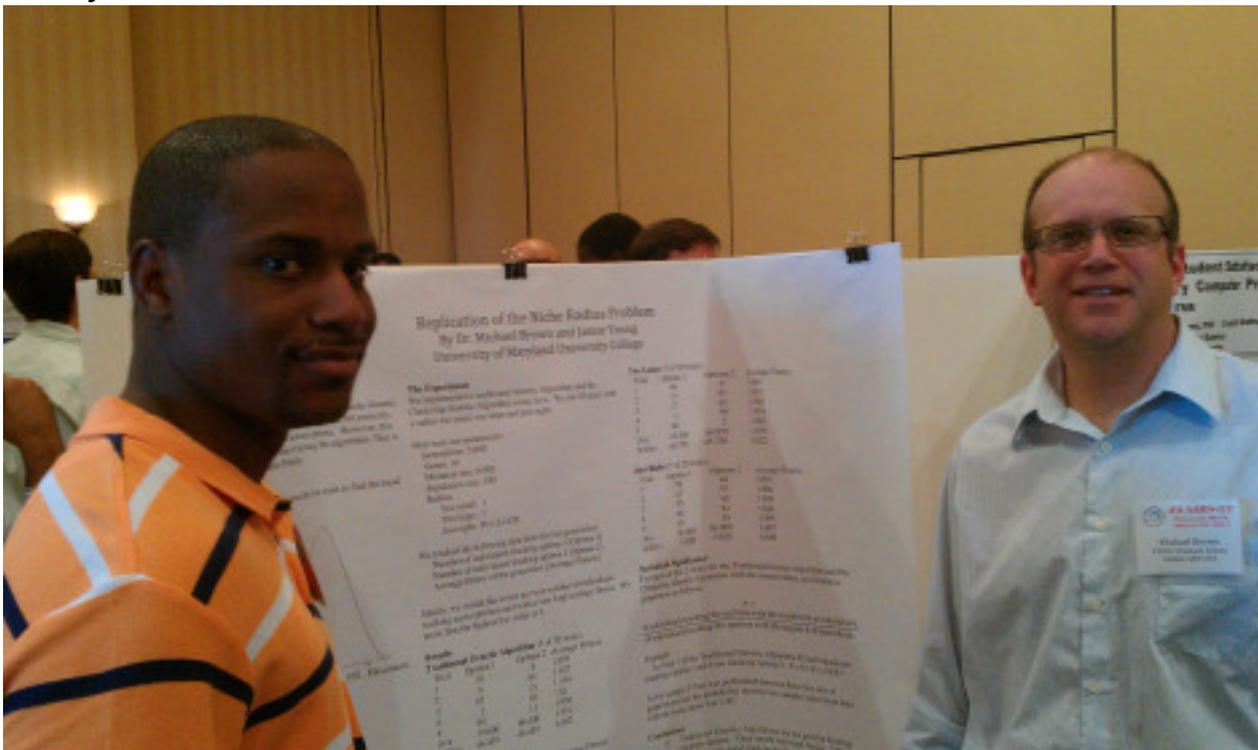
Keeping up with UMUC alumni all over the world.

Alum & Professor present at prestigious FLAIRS

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(https://umucalumni.files.wordpress.com/2014/09/imag0306.jpg)
UMUC Alum, Jamar Young ('14) with Dr. Michael Brown, UMUC program chair for the graduate school's Software Engineering Program presenting at FLAIRS.

Dr. Michael Brown, program chair for the graduate school's Software Engineering Program, and Jamar Young '14 were selected to present at the 27th annual International Florida Artificial Intelligence Research Society Conference (FLAIRS). (http://www.aaai.org/Library/FLAIRS/flairs-library.php) FLAIRS is one of the oldest continual conferences in the field of artificial intelligence. More than 150 researchers, professors and students from around the world attended this year's conference which was held May 21-23, 2014.

The duo presented on a common algorithm in Artificial Intelligence known as a Genetic Algorithm. A Genetic Algorithm is a search technique that models biological selection that was initially developed in the early days of computers. It solves problems through creating a random

set of possible answers called the first generation. Next it goes through a process of combining the best possible solutions in the previous generation to form a new set of possible solutions called the next generation. Ideally, this next generation is better at solving the problem than the previous one. Iteratively over many generations the correct answer is discovered.

A field within Genetic Algorithms is called Niche Genetic Algorithms. These algorithms are special types of Genetic Algorithms that try to solve problems that have more than one correct answer. A large number of Niche Genetic Algorithms have a radius parameter that needs to be set before the algorithm runs. There are problems in applied sciences when they attempt to use Niche Genetic Algorithms. The radius should be set to half of the distance between two of the correct answers. But the purpose of running the algorithm is to find the correct answers, so they are not known ahead of time. This is referred to as the Niche Radius Problem.

Until now the Niche Radius Problem has been an "observation" in a number of research papers, but has never been formally demonstrated and published. Dr. Michael Brown and Jamar Young of UMUC replicated the Niche Radius Problem and showed that Niche Genetic Algorithms do not function well if the radius is set too high or too low than this optimal value of half of the distance between two correct answers.

Congratulations to Dr. Brown and Mr. Young! Have you been selected to present at a conference? Email alumnirelations@umuc.edu so your accomplishments can be shared.