# MCMASTER ACM CHAPTER '16-'17

macacm.org  - 1001 Main St W Apt 620 L8S1A9 Hamilton, ON, Canada - 9059627303 - contact@macacm.org

Chair, Ezzeldin Tahoun, chair@macacm.org
Vice Chair, Chamu Rajasekera, rajasecn@mcmaster.ca
Treasurer, Jacoby Joukema, jacoby.joukema@gmail.com
Membership Chair, Lina Kabbani, kabbanl@mcmaster.ca
Faculty Sponsor, Christopher Anand, anandc@mcmaster.ca

McMaster University ACM Student Chapter is a registered Association for Computing Machinery ( commonly referred to as ACM ) Chapter operating at McMaster University and run by students. The Chapter is serving the whole hamilton area and is operated exclusively for educational and scientific purposes promoting an increased knowledge of and greater interest in the science, design, development, applications, construction, languages, management and applications of modern computing. It also serves as a means of communication between persons having an interest in computing.

Our lab is @ ITB (Information Technology Building) 134.
Our lab is fitted with 3 electrical engineering stations (Multi-meter + Power Supplier + Oscilloscope), 4 white boards, markers, and erasers, 60+ wheelchairs and 20 tables, security cameras, and EE & CE reference manuals and books for your reading/learning interests. No food or drinks in the lab!

Youtube (200+ Subscribers)  https://www.youtube.com/mcmasteracm
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510 Chapter Members - 20 ACM Members
Members:
153 Software Eng
102 Comp Eng
98 Engineering 1
72 Comp Sci
53 Elec Eng
21 Mechatronics
11 Biomedical

Chapter Officers:
2 Software Eng
2 Life Sci
1 Comp Eng
1 Biomedical
1 Electrical Eng

OutReach Officers:
19 Comp Sci
4 Software Eng

ICPC Coaches:
3 Software Eng
1 Comp Eng
1 Elec Eng

Essay:

We have established a Computer Science Outreach program, where volunteers from the Computer Science and Software Engineering programs at McMaster University visit public schools in Hamilton and Mississauga to run computer science workshops. We run these workshops because we hope to share our passion for computer science and inspire children to develop a passion for the field as well. Moreover, we would like to help students practice math and literacy in a fun way so that they can learn and understand the material better, improve their skills and perform better in their current and later years of education.

 The workshops consist of many different activities that teach students about binary numbers, how CAT Scans work and how to create games and animations using the functional programming language, Elm. When creating animations in Elm especially, the younger elementary school students are exposed to the cartesian coordinate system before they have even learned it in class, while the older elementary school students are provided with the opportunity to apply their knowledge as they write code to position shapes on the screen. They also learn about sin and cosine as they write code to move a shape in a circle over time; and they practice their geometry skills by combining basic shapes, such as squares and circles, together to create a picture. Aside from computer science related activities, we also run a workshop that helps students practice their writing and literacy skills as they create their own adventure game. This activity is run using the iPad app, MacVenture, and is maintained by one of our volunteers.

This year, 21 university students volunteered their time and taught over 5200 students. These volunteers spent their entire reading week breaks in October and February to visit schools. They also volunteered their time to attend meetings to plan for the school visits, learn how to deliver the different workshops, and create new templates and activities for the children in Elm. The children's outstanding work can be found in the hall of fame on our Computer Science Outreach website: http://outreach.mcmaster.ca/menu/fame.html

Through these workshops, we've discovered that children are very quick learners. Most of the animations in the hall of fame were created within an hour by children who have never programmed before. Inspired by the workshops' success, we hosted a Hackathon this past summer for middle school students at the Hamilton public library. We were supported by Indellient, and by McMaster University's Faculty of Engineering as they provided us with two scholarships to Leap, the university's summer camp for high school students, to award to the winners. The results of the hackathon can be found here: http://outreach.mcmaster.ca/menu/hackathon.html

Our Outreach program aims to empower children by not only exposing them to the field of computerscience, but also by helping them to develop and apply their math and literacy skills. We hope these kids will someday join our campus and study a technology related field and excell in it. When they come to campus they will find the same chapter still giving them more learning and networking opportunities to help them with their professional careers.