



Michigan Tech

mtu.edu/computing



College of Computing

Open Faculty Positions to start in Fall 2020

Assistant or Associate Professor, CMH Division

Assistant Professor, Computer Science

Visiting Assistant Professor, Computer Science

Assistant or Associate Professor, College of Computing and/or College of Engineering

Michigan Technological University
Houghton, Michigan
mtu.edu

Michigan Technological University seeks Assistant and Associate Professors for the College of Computing



Michigan Tech was founded in 1885, with a mission to develop engineering talent to support the mining industry in Upper Michigan's Copper Country. The University has evolved into a leading public research institution, home to more than 7,200 students from 60 countries around the world. Our beautiful campus in Michigan's Upper Peninsula overlooks the Keweenaw Waterway and is just a few miles from Lake Superior.

MTU offers more than 120 undergraduate and graduate degree programs in science and technology, engineering, forestry, business, computing, health professions, humanities, health professions, humanities, mathematics, and social sciences through seven Colleges and Schools. Our multidisciplinary emphasis means low boundaries for students and faculty to engage in educational and research opportunities across disciplines.

More than \$78 million in total research expenditures and 19 research centers and institutes help us foster a world-class and diverse faculty, staff, and student population. Partnering with industry and federal institutions like the National Aeronautics and Space Administration, the National Science Foundation, the Environmental Protection Agency, and research organizations within the Department of Defense, we develop, apply, create, and demonstrate the future in science, technology, engineering,

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and mathematics. We work across disciplines to build nanosatellites, equip vehicles with technologies that improve ecological decisions and energy use, deploy underwater robots, and develop the technologies health providers need to do their jobs—better. Our graduate students are active in one-on-one graduate-to-faculty research projects, and in 2016, our undergraduate students conducted 126,000 hours of paid research.



About the University

Our vision: To lead as a global technological university that inspires students, advances knowledge, and innovates to create a sustainable, just, and prosperous world.

Our mission: To deliver action-based undergraduate and graduate education and discover new knowledge through research and innovation.

- We create solutions for society's challenges through interdisciplinary education, research, and engagement to advance sustainable economic prosperity, health and safety, ethical conduct, and responsible use of resources.
- We attract exceptional students, faculty, and staff who understand, develop, apply, manage, and communicate science, engineering, technology, and business to attain the goal of a sustainable, just, and prosperous world.
- Our success is measured by the accomplishments and reputation of our graduates, national and international impact of our research and scholarly activities, and investment in our University.

Our goals:

1. An exceptional and diverse community of students, faculty, and staff.
2. A distinctive and rigorous action-based learning experience grounded in science, engineering, technology, sustainability, business, and an understanding of the social and cultural contexts of our contemporary world.
3. Research, scholarship, entrepreneurship, innovation, and creative work that promotes a sustainable, just, and prosperous world.

What we value.

- Community
- Scholarship
- Possibilities
- Accountability
- Tenacity

Leadership at Michigan Tech



Richard Koubek became Michigan Technological University's 10th president in July 2018, bringing 30 years of higher education experience to the role. In 2015, he was named executive vice president and provost of Louisiana State University (LSU) after serving as dean of the LSU College of Engineering since 2009. Koubek received his master's degree and PhD in industrial engineering from Purdue University.



Jacqueline Huntoon is provost and vice president for academic affairs at Michigan Tech. Huntoon served as dean of Michigan Tech's Graduate School from 2005 to 2015. She is also a professor in the Department of Geological and Mining Engineering and Sciences. Huntoon has been recognized nationally for her leadership in higher education and in her field of geology. Huntoon earned her PhD in Geology at the Pennsylvania State University.

College of Computing Overview

The College of Computing administers degree programs and supports teaching and research in fields including computer engineering, cybersecurity, robotics and mechatronics, human factors, data science, computational science and engineering, and interdisciplinary convergence programs.

The College consists of the Department of Computer Science and the CMH Division (Computer Network and System Administration/Mechatronics, Electrical, and Robotics Engineering Technology/Health Informatics).

The College has 32 faculty members, 650 undergraduate students in five degree programs (Computer Science, Software Engineering, Computer Network and System Administration, Cybersecurity, and Electrical Engineering Technology), and 90 graduate students in four MS degree programs (Computer Science, Cybersecurity, Health Informatics, and Mechatronics) plus the PhD in Computer Science.

The College of Computing also leads a campus-wide initiative to incorporate computational thinking and basic coding skills in all Michigan Tech degree programs.



Michigan Tech
College of Computing

Our goals:

- Offer a strong academic foundation in core areas in computer science and computer systems, while reaching out and supporting computing activity and research campus-wide.
- Introduce new academic programs in areas such as artificial intelligence, cybersecurity, and games and interactive media, based on student and marketplace demand.
- Participate in a set of academic programs that are termed convergence programs: new or existing academic programs offered by two or more units at Michigan Tech.
- Propel the university forward as an internationally-recognized campus for graduate studies in computing.
- Meet market demand for education in computer science and related fields, preparing students for lifelong careers in a rapidly changing environment.
- Meet industry demand in Michigan and the region for talent in software engineering, artificial intelligence, data science, and cybersecurity.
- Elevate the visibility of Michigan Tech as a vital contributor to the educational needs and economic prosperity of the state and the region.

To learn more, visit mtu.edu/computing/about.

Research Areas

- Artificial Intelligence and Machine Learning
- Architecture
- Cyber-Physical Systems
- Cybersecurity
- Data Sciences
- Education, Society, and Profession
- Human-Centered Computing
- Programming Languages and Software Engineering
- Scalable Architectures and Systems
- Security and Privacy
- Systems and Networking



Major
Research Centers

19



Leadership College of Computing



Adrienne R. Minerick is dean of the College of Computing and a Professor of Chemical Engineering. She earned her B.S. from Michigan Tech and her M.S. and Ph.D. from the University of Notre Dame. Minerick is a fellow of ASEE and the American Association

for the Advancement of Science (AAAS). She has served in administrative roles at Michigan Tech spanning multiple disciplines: Associate Dean for Research and Innovation in the College of Engineering, Assistant to the Provost for Faculty Development, Dean of the School of Technology and now founding Dean of the College of Computing. In each role she engaged faculty, staff, and student talents in creative ways to achieve goals.



Linda M. Ott is department chair and professor of the Department of Computer Science. Ott received her Ph.D. in computer science from Purdue University in 1978, and shortly after joined Michigan Tech's faculty. Ott

was a founding organizer of the Michigan Celebration of Women in Computing and of the NCWIT Aspirations in Computing Michigan Affiliate Award for high school women. She has also served as the Associate Dean for Special Initiatives in the College of Sciences and Arts.



Daniel R. Fuhrmann is director of the Computer Network and System Administration/Mechatronics, Electrical, and Robotics Engineering Technology/Health Informatics Division (CMH Division) and the Dave House Professor in Computer

Engineering. Fuhrmann earned his M.S., M.A., and Ph.D. from Princeton University. From 1984 to 2008, he was with the Department of Electrical Engineering at Washington University, St. Louis. Fuhrmann's research interests lie in various areas of statistical signal and image processing, including sensor array signal processing, radar systems, and adaptive sensing. He is a fellow of the IEEE.

Job Description: Assistant or Associate Professor

BS in Electrical Engineering Technology program and MS in Mechatronics program

Position Summary:

The Michigan Technological University's College of Computing invites applications for two tenure track faculty positions at the Assistant or Associate Professor level in the BS in Electrical Engineering Technology program and the MS in Mechatronics program.

The successful candidate will teach in the areas of programmable logic controllers, robotics, mechatronics, industrial control and automation, and related topics such as the industrial Internet of Things and cybersecurity, in support of a new MS in Mechatronics, which began accepting students in Fall 2019.

The college places a strong emphasis on balancing effective teaching with cutting-edge research, outreach, and service. Candidates for the position are expected to demonstrate potential for excellence in independent research, excellence in teaching, and the ability to contribute meaningful service to the department, university and the professional community.

Michigan Tech is building a culturally diverse faculty committed to teaching and working in a multicultural environment and strongly encourages applications from all individuals.

Duties and Responsibilities:

- Collaboratively develop and teach undergraduate/graduate classes and laboratories
- Create innovative instructional materials and laboratory experiences
- Develop external funding for fundamental research and applied projects with industry
- Collaborate with other researchers
- Establish and sustain a record of scholarly achievement
- Advise graduate students
- Contribute to program assessment and accreditation activities
- Other departmental service

Knowledge, Skills, and Abilities:

- Strong oral and written communication, computer and presentation skills
- Effective and engaging teaching
- Passion to conduct research with students and develop partnerships with industry and other groups

Minimum Qualifications:

- Earned PhD or equivalent degree in Electrical Engineering, Computer Science, Mechatronics, or a closely related area
- The successful applicants should have a record of scholarship and be able to draw from relevant experiences to teach a variety of courses in the area of controls, robotics, and industrial automation

Desired Qualifications:

- Established collaborations, research or teaching experience in the mechatronics, industrial robotics, or controls areas

View the complete position description:

- jobs.mtu.edu/postings/8530

Job Description: Assistant Professor

Department of Computer Science

Position Summary:

The Michigan Technological University's Department of Computer Science (CS) invites applications for a tenure-track faculty position at the Assistant Professor level.

The successful candidate will teach across the CS curriculum beginning August 2020. CS is part of the newly launched College of Computing.

The college places a strong emphasis on balancing effective teaching with cutting-edge research, outreach, and service. Candidates for the position are expected to demonstrate potential for excellence in independent research, outstanding potential in teaching, and the ability to contribute meaningful service to the department, university and the professional community.

Michigan Tech is building a culturally diverse faculty committed to teaching and working in a multicultural environment and strongly encourages applications from all individuals.

Duties and Responsibilities:

- Collaboratively and independently develop and secure external funding for research
- Develop and teach undergraduate/graduate classes and laboratories
- Create innovative instructional materials and learning experiences
- Establish and sustain a record of scholarly achievement
- Advise graduate students
- Contribute to program assessment and accreditation activities
- Other departmental service

Knowledge, Skills, and Abilities:

- Strong oral and written communication, computer, and presentation skills
- Effective and engaging teaching
- Passion to conduct research with students and develop partnerships with industry and other groups

Minimum Qualifications:

- Earned PhD degree in Computer Science, Computer Engineering, or a closely related area
- The successful applicant should have a record of scholarship and be able to draw from relevant experiences to teach a variety of courses across the computer science curriculum

Desired Qualifications:

- Established collaborations, research or teaching experience in any computer science subfield
- Versatility and technical expertise to teach fundamental courses as well as advanced CS courses to diverse students

View the complete position description:

- jobs.mtu.edu/postings/8535

Job Description: Visiting Assistant Professor

Department of Computer Science

Position Summary:

Michigan Technological University's College of Computing invites applications for the position of Visiting Assistant Professor.

The successful candidate will teach in the areas of cybersecurity, computer networks, cloud computing, Internet of Things, and related topics, in support of a new BS in Cybersecurity which began accepting students in Fall 2019. The position begins January 2020.

Michigan Tech is building a culturally diverse faculty, committed to teaching and working in a multicultural environment and strongly encourages applications from all individuals.

Duties and Responsibilities:

- The expected teaching load is four courses per semester, with reductions for university service and other non-teaching activity
- Demonstrate potential for excellence in teaching and the ability to contribute to the departmental service needs

Knowledge, Skills, and Abilities:

- Strong oral and written communication, computer and presentation skills
- Effective and engaging teaching
- Passion to conduct research with students and develop partnerships with industry and other groups

Minimum Qualifications:

- PhD degree in Computer Science, Computer Engineering, Information Technology, Cybersecurity, or a closely related area
- The successful applicants should have a record of scholarship and be able to draw from relevant experiences to teach a variety of courses in the areas of cybersecurity, computer networks, cloud computing, Internet of Things, and related topics

Desired Qualifications:

- Existing collaborations, research or teaching experience in cybersecurity, computer networks, cloud computing, IoT, and related topics
- Versatility and technical expertise to teach fundamental courses across the computing curriculum

View the complete position description:

- jobs.mtu.edu/postings/8538

Job Description: Assistant or Associate Professor

College of Computing and/or College of Engineering

Position Summary:

Michigan Technological University's College of Computing and College of Engineering invite applications for five (5) Assistant or Associate Professor positions in the broadly defined areas of computing education, computer engineering, computer science and electrical engineering.

Priority areas of consideration include, but are not limited to, cybersecurity, artificial intelligence/machine learning, cloud computing/internet of things, robotics/automation, robotics/healthcare, big data/data science, human interfaces, embedded systems, and education research related to computing fields.

Duties and Responsibilities:

- Develop a strong externally funded research program and sustain a record of scholarly achievement
- Foster collaboration with other faculty
- Participate in undergraduate and graduate instruction and advising
- Commit to creating an inclusive environment for students and colleagues
- Contribute to the University and society through professional service
- Apply safety-related knowledge, skills, and practices to everyday work
- Commit to learning about continuous improvement strategies and applying them to everyday work

Knowledge, Skills, and Abilities:

- Strong oral and written communication, computer, and presentation skills
- Effective and engaging teaching
- Passion to conduct research with students and develop partnerships with industry and other groups

Minimum Qualifications:

- Earned PhD in computer science, electrical engineering, computer engineering, or a closely related area. All but dissertation (ABD) applicants should have an earned PhD by Fall 2020
- Experience in Engineering or Computer Science research resulting in scholarly publications, and demonstrate familiarity with financial/funding resources and opportunities available to faculty utilized by US academic Institutions
- Able to draw from relevant experiences to teach a variety of courses in computing, computer engineering, or other engineering courses, as appropriate

Desired Qualifications:

- Established collaborations in research, teaching experience, interest or experience in working to support a diverse student body (e.g., through outreach efforts, evidence-based instructional practices, etc.)
- Versatility and technical expertise to teach fundamental courses as well as advanced courses within their field
- Expertise to engage a diverse set of students

View the complete position description:

- jobs.mtu.edu/postings/8604



Total Research
Expenditures

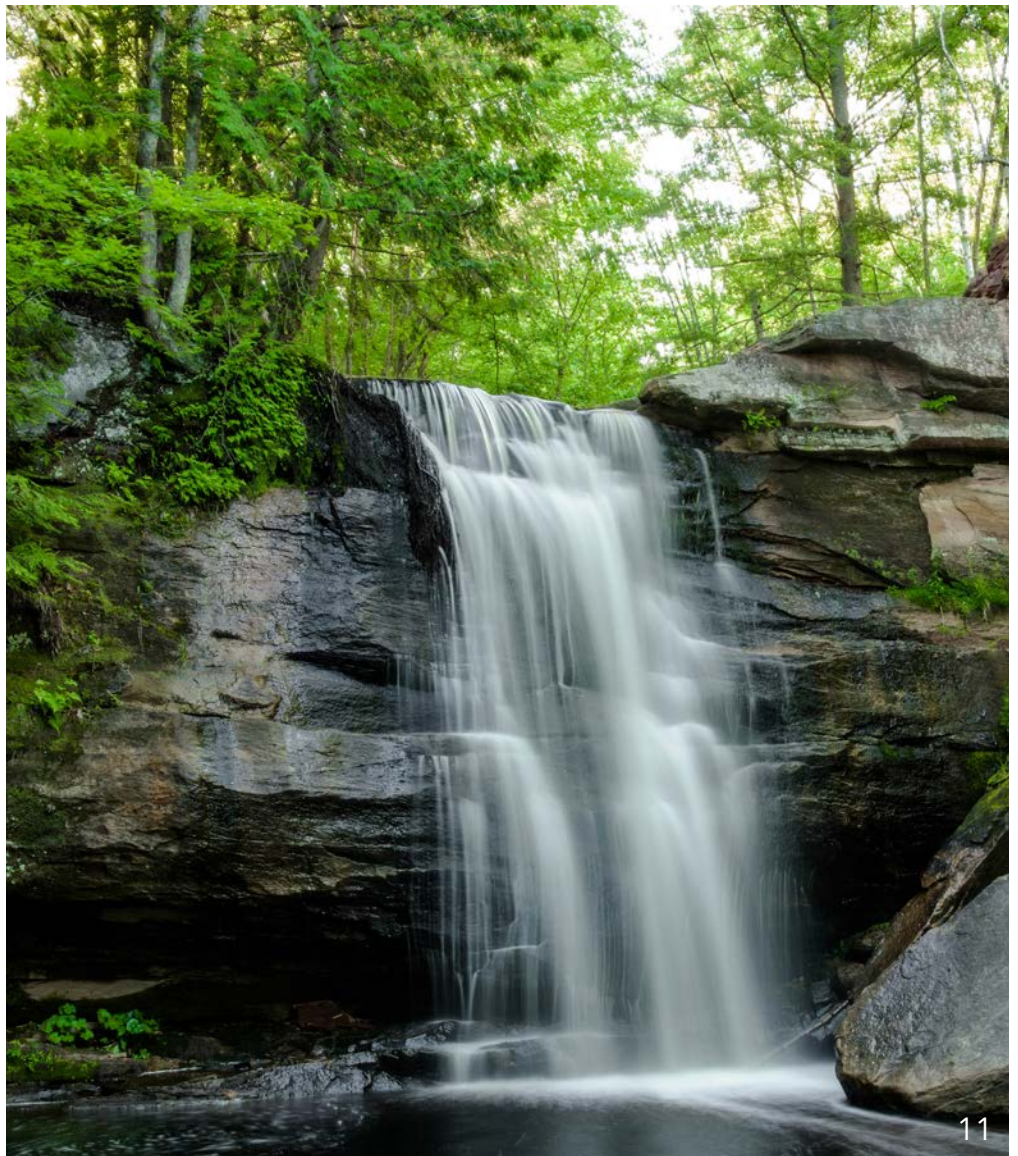
\$78.7 MILLION

Welcome to The Keweenaw

Our setting on Michigan's Keweenaw Peninsula provides a beautiful backdrop to world-class research and education. Michigan Tech is located in Houghton, Michigan, which was included as one of the best rural places to live in the US in The 100 Best Small Towns in America by Norman Crampton.

Houghton, its sister city Hancock, and the surrounding towns have a combined population of approximately 15,000. However, add in the Michigan Tech student population, and it grows to more than 22,000.

- Houghton's historic downtown features locally owned shops, eateries, museums, and brewpubs, while chain restaurants and major shopping outlets are a short car ride away on the business strip. You can also explore locally owned stores across the bridge in Hancock and in historic Main Street Calumet, just 15 miles north of campus.
- Michigan Tech's arts and entertainment scene is vibrant, diverse, and global. The University is home to the area's premier performing arts venue, the Rozsa Center, and the unique black-box McArdle Theatre in the Department of Visual and Performing Arts.
- Safewise ranks Houghton in the top 20 safest college towns in America.
- Houghton-Portage Township schools rate 9 out of 10 on greatschools.org.
- The Keweenaw Peninsula is temperate, averaging in the low-to mid-20s in the winter and mid-to high-70s in the summer. Winter brings more than 200 inches of snow, whereas summers are generally sunny.
- The ruggedly beautiful Keweenaw Peninsula is one of the Midwest's top year-round recreation destinations, thanks to its record snowfalls and comfortable summers.
- The Keweenaw was rated one of the top 10 outdoor adventure spots by National Geographic Adventure Magazine. Outdoor enthusiasts of all ages downhill and cross-country ski, snowboard, bike, hike, paddle, camp, golf, and more.
- Surrounded by Lake Superior, pristine shorelines earned the Keweenaw second place in Lake Superior Magazine's "Top-10 Lake Superior Destinations" list, and National Scenic Byways recognized us as "one of best snowmobiling and winter sport destinations in the US."



University Events and Fast Facts

Graduate
Students:

1,375

Undergraduate
Programs:

120+

Master's
Programs:

40

PhD
programs:

28



Winter Carnival: Started in 1922 and organized by Blue Key National Honor Society, Winter Carnival is one of the largest winter festivals in the nation. Featuring dozens of one- to two-story intricate snow statues on campus and in the community, this event also brings together students to participate in broomball, comedy skits, sleigh rides, a queen coronation, a beard contest, and lots of winter fun.



Parade of Nations: Michigan Tech hosts the region's largest, oldest multicultural festival, flying the flags of more than 60 countries represented on campus and in our community. Thousands join us in mid-September for international food, entertainment, and family activities promoting global peace and unity.

#1 Best value colleges (MI)
Niche.com, 2019

#1 Safest campus in the nation
College Magazine, 2017

#1 Mid-career salaries (MI)
Payscale.com, 2015

#2 Public colleges where grads
make six figures
Money Magazine, 2017

#3 Best colleges for
Computer Science (MI)
Niche.com, 2019

To learn more and to apply, visit mtu.edu/computing.

Michigan Technological University is an equal opportunity educational institution/equal opportunity employer, which includes providing equal opportunity for protected veterans and individuals with disabilities.