

# MATHEMATICS OF ADVANCED INDUSTRIAL TECHNOLOGY (MAIT)

Graduate Degree Program  
College: Computer, Mathematical, and Natural Sciences

This program is not accepting new students at this time. Please visit our graduate program listing (<https://academiccatalog.umd.edu/graduate/programs/>) for other related programs.

## Abstract

The Norbert Wiener Center, a research and educational unit in the Department of Mathematics at the University of Maryland, College Park, offers a professional Masters degree focusing on the modern mathematical methods and algorithms that underlie today's cutting-edge engineering: The Mathematics of Advanced Industrial Technology (MAIT).

Our program is designed for individuals working in mathematical engineering who are looking for a fast track to understanding and applying the most up-to-date ideas in their current and future projects. Undergraduate degree holders can advance to the Masters level, and Masters degree holders can advance their applicable skills.

In addition to the professional Masters degree, we also offer two certificate programs. For students wishing to enhance their career skills in specific subject matter, the Center also offers a Graduate Certificate in Mathematics of Advanced Industrial Technology to students completing 4 courses (12 credits) within the program. The Norbert Wiener Center also offers a specific Graduate Certificate concentration in Computational Harmonic Analysis. This 12-credit program is tailored to working engineers and scientists wishing to advance their understanding of the latest Fourier, Wavelet, and Time-Frequency Harmonic Analysis methods and algorithms.

Fields including RF and Optical Communications, Signal and Image Processing, Sensor Networks, RADAR and SONAR, Navigations and Avionics, Medical Imaging and Diagnostics, Control Systems, and Robotics, increasingly rely on fast, embedded mathematical algorithms executing on the latest microprocessors, micro-controllers, and DSP cores. Budding fields such as Bioinformatics, Nanotechnology, Data Mining, and Quantum Computing are likewise being built from the ground up around modern mathematical methods. Engineers and scientists that understand advanced mathematical toolsets will have the edge in creating tomorrow's technologies.

The Norbert Wiener Center's educational mission is to teach the mathematics of modern engineering in an accessible and applicable manner. Our faculty is drawn from both academia and industry in order to balance theoretical and "hands on" approaches in the most constructive way. Our courses offer the latest information while tying modern theory directly to application by incorporating industry standard tools. Graduates of the Norbert Wiener Center will be well equipped to apply the latest mathematical tools to advance both their projects and their careers.

The most up-to-date information about the MAIT program can be found on our website at [www.mait.umd.edu](http://www.mait.umd.edu) (<http://www.mait.umd.edu>)

## Contact

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## ADMISSIONS

This program is not accepting new students at this time. Please visit our graduate program listing (<https://academiccatalog.umd.edu/graduate/programs/>) for information on other programs.

## Application Deadlines

Type of Applicant	Fall Deadline	Spring Deadline
<b>Domestic Applicants</b>		
US Citizens and Permanent Residents	program not currently accepting applications	program not currently accepting applications
<b>International Applicants</b>		
F (student) or J (exchange visitor) visas; A, E, G, H, I and L visas and immigrants	program not currently accepting applications	program not currently accepting applications

**Other Deadlines:** Please visit the program website at <http://www.norbertwiener.umd.edu>

## REQUIREMENTS

- Mathematics of Advanced Industrial Technology, Master of Mathematics of Advanced Industrial Technology (M.M.A.I.T.) (<https://academiccatalog.umd.edu/graduate/programs/mathematics-advanced-industrial-technology-mait/mathematics-advanced-industrial-technology-mmait/>)

## FACILITIES AND SPECIAL RESOURCES

Courses for the MAIT program will be taught in the evening at the College Park Campus and also at sites in northern Virginia. The MAIT program is administered by the Norbert Wiener Center for Harmonic Analysis and Applications which is located within the Mathematics department on the second floor of the Mathematics building on Campus Drive in College Park