

Beginning in the Fall of 2005, the Department of Mathematics, at the University of Maryland, College Park, will offer a professional Master's degree focusing on the modern mathematical methods and algorithms that underlie today's cutting-edge engineering: The Mathematics of Advanced Industrial Technology (MAIT). Our accredited program is administered by the Norbert Wiener Center, within the Department of Mathematics, and it is designed for individuals working in mathematical engineering who are looking for a fast track to advancing both their projects and their careers.

Whether creating embedded algorithms on the latest microprocessors and DSP cores, or engineering exotic applications in fields like informatics, nanomaterials, and quantum computing, those engineers and scientists that understand advanced mathematical toolsets will have the edge in creating tomorrow's technologies.

Faculty is drawn from both academia and local industry in order to balance modern theory with "hands on" application in the most constructive way. The University of Maryland, College Park, is the only school in the Maryland-Washington-Virginia area to rank in the country's top 20 graduate schools in Mathematics, Physics, Computer Science, and Engineering*.

We invite you to explore the mathematics behind the technologies that are shaping our world.

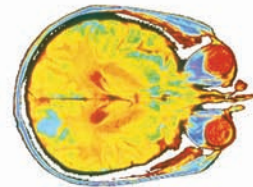
*US News and World Report, 2005

Admission

Students entering the program should hold a regionally accredited baccalaureate degree in Computer Science, Engineering, Mathematics, Physics, or a related technical field. Mathematical background should include Calculus, Differential Equations, and Linear Algebra, as well as some exposure to applied scientific or engineering mathematics. MAIT also offers preadmission classes to help interested students fulfill these requirements.

Masters Degree

The Master of Mathematics of Advanced Industrial Technology (MAIT) degree requires 10 classes (30 credits) to be completed with a GPA of 3.0 or higher. Coursework includes 3 core classes, electives chosen from a host of options, and a guided practical project.

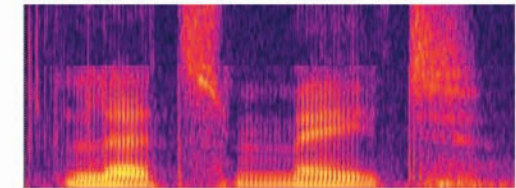


Graduate Certificate in Mathematics of Advanced Industrial Technology

Students wishing to enhance their career skills in specific subject matter may earn a Graduate Certificate in Mathematics of Advanced Industrial Technology by completing 4 courses (12 credits) within the program.

Graduate Certificate in Computational Harmonic Analysis

This specialized 12-credit program is tailored to working engineers and scientists wishing to advance their understanding of the latest Fourier, Wavelet, and Time-Frequency Analysis methods and algorithms.



Tuition and Fees

Tuition for 2005-06 is \$550 per credit hour. Additional standard Graduate School fees apply.

	Fall 2005	Spring 2006
Applications Due	Aug 15th	Jan 10th
Advising Open House	Aug 24th	Jan 18th
Start of Classes	Aug 31st	Jan 25th
Drop/Add Deadline	TBD	TBD
End of Classes	Dec 13th	May 11th

Summer 2006

Applications Due May 15th

For further information on any topic, please contact the Program Coordinator or visit our website:

www.mait.umd.edu

Open Houses

Prior to the start of each semester, the Norbert Wiener Center hosts one or more Open Houses to acquaint new and potential students with the program. We welcome you to attend.

Course Offerings

MAIT offers Core courses each semester, along with a selection of Electives and Special Topics. Classes are offered at the College Park Campus as well as at other convenient locations in the greater Washington DC area. For complete and up-to-date listings, please check our Course Catalog and our website www.mait.umd.edu. Schedules, rooms, and time listings may be found at the University registration website www.testudo.umd.edu.

Core Program

- MAIT 613** Advanced Applied Linear Algebra
MAIT 623 Modern Mathematical Methods of Signal and Image Processing I
MAIT 633 Applied Fourier Analysis
MAIT 669 Masters Project

Electives

- MAIT 615** Quantum Information, Detection and Computation
MAIT 624 Modern Mathematical Methods of Signal and Image Processing II
MAIT 626 Statistical Pattern Recognition and Classification
MAIT 627 Fast Multipole Methods
MAIT 660 Introduction to Scientific Computing

Special Topics Electives

- MAIT 679A** Mathematical Methods in Nanotechnology
MAIT 679B Introduction to Biomathematics and Applications
MAIT 679C Fast Acquisition Techniques in MRI
MAIT 679D Sigma-Delta Methods in Communications and Radar
MAIT 679E Computational Time-Frequency Analysis and Applications

Personnel

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Officer

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Scientific Development
Officer

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Contact Information

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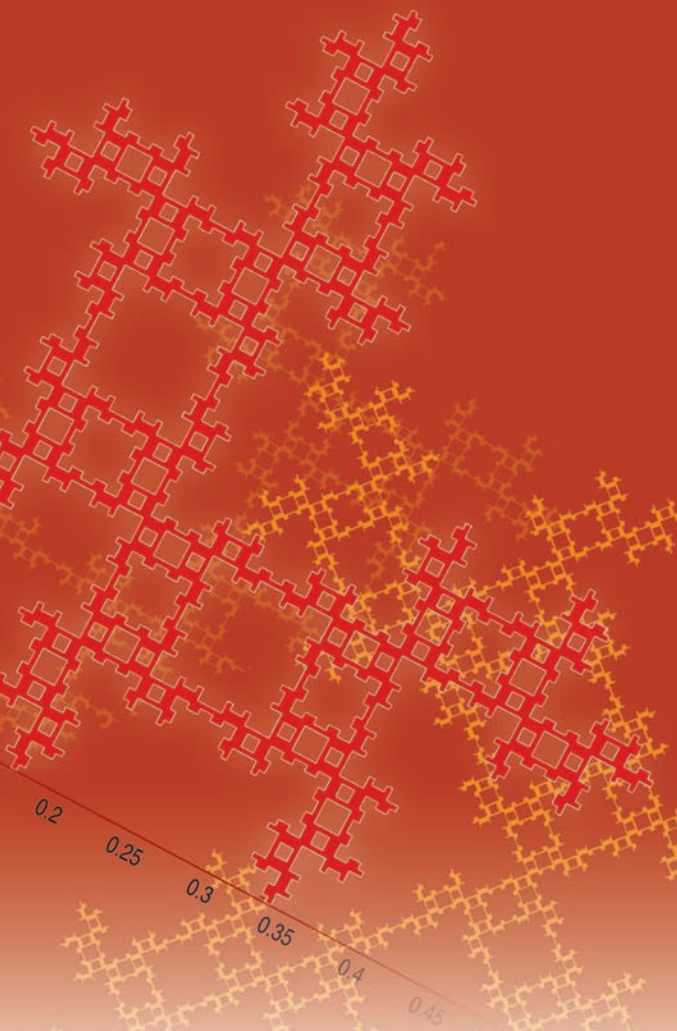
Suite 2211, Department of Mathematics
University of Maryland
College Park, MD 20742

The MAIT Program is subject to approval by the Board of Regents
and the Maryland Higher Education Commission

Norbert Wiener Center



Mathematics of Advanced
Industrial Technology



Masters Degree and Graduate Certificates
2005 - 2006 Program