MathWorks Info Veranstaltung für Professoren und Forscher : FAU 18 05 2021

Ann-Venette Christodoulou

Dr. Kathi Kugler

Manfred Noethen

Ihr MathWorks Campus Team

- Customer Success Engineer – **Dr. Kathi Kugler**, +49-89-45235-6832, kkugler@mathworks.com

- Customer Success Specialist - **Ann-Venette Christodoulou,** achristo@mathworks.com

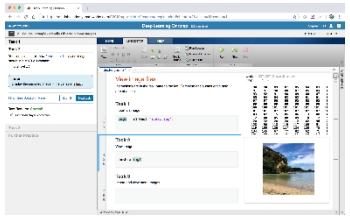
- Account Manager - **Manfred Nöthen**, +49-89-45235-6791, mnoethen@mathworks.com

- Installation Support - **Hergen Reising**, emea-install@mathworks.com / Support page

Jeder der zum Campus gehört hat Zugriff auf alle MathWorks - Tools!

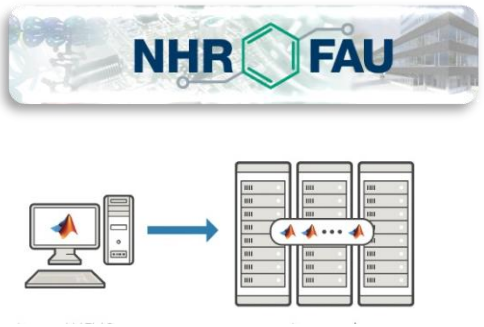
Anytime, Anywhere & Any Device

Network Licenses for Multiple Locations



Online Training

MATLAB Online



MATLAB Parallel Server

MATLAB Grader

- ✓ Zugang über das MathWorks Portal
- ✓ Zugang für alle Angehörigen der Universität
- ✓ Auf universitätseigenen und privaten Rechnern
- ✓ Zugang zu fast allen* MathWorks Tools

Einstiegshilfe zur Campuslizenz, Individual Lizenz, Portal: Videos

Access › **Training** › **Collaboration**

Unsere Kunden arbeiten in unterschiedlichen Industrien

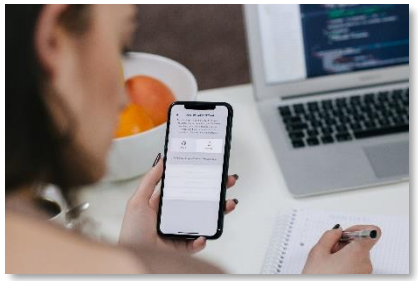
Aerospace and Defense


Automotive


Biological Sciences


Biotech and Pharmaceutical


Communications


Electronics


Energy Production


Financial Services

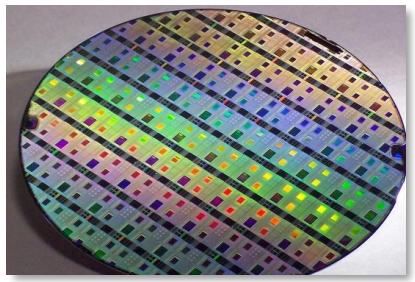

Industrial Machinery


Medical Devices


Metals, Materials, and Mining


Neuroscience


Railway Systems


Semiconductors

Software and Internet

Produkte in der Campus Lizenz :

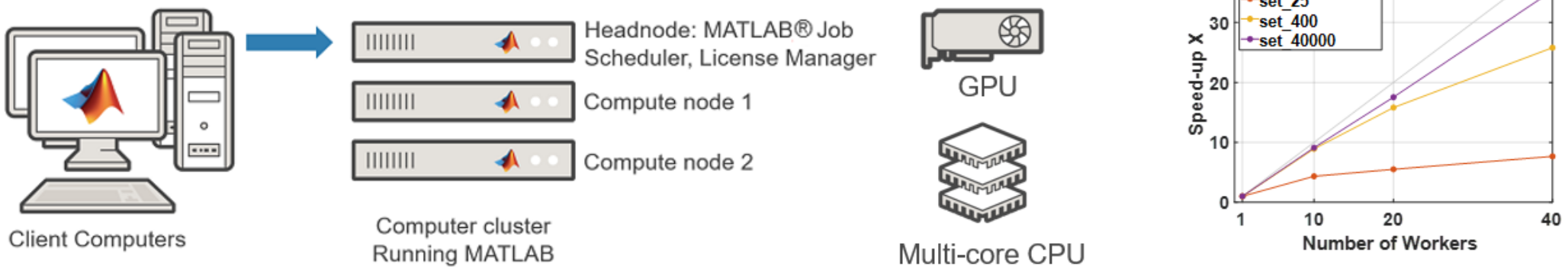
5G Toolbox
Aerospace Blockset
Aerospace Toolbox
Antenna Toolbox
Audio Toolbox
Automated Driving Toolbox
AUTOSAR Blockset
Bioinformatics Toolbox
Communications Toolbox
Computer Vision Toolbox
Control System Toolbox
Curve Fitting Toolbox
Data Acquisition Toolbox
Database Toolbox
Datafeed Toolbox
DDS Blockset
Deep Learning HDL Toolbox
Deep Learning Toolbox
DSP System Toolbox
Econometrics Toolbox
Embedded Coder
Filter Design HDL Coder
Financial Instruments Toolbox
Financial Toolbox
Fixed-Point Designer
Fuzzy Logic Toolbox
Global Optimization Toolbox
GPU Coder
HDL Coder
HDL Verifier
Image Acquisition Toolbox
Image Processing Toolbox
Instrument Control Toolbox
Lidar Toolbox
LTE Toolbox
Mapping Toolbox
MATLAB
MATLAB Coder
MATLAB Compiler
MATLAB Compiler SDK
MATLAB Grader
MATLAB Parallel Server
MATLAB Production Server
MATLAB Report Generator
MATLAB Web App Server
Mixed-Signal Blockset
Model Predictive Control Toolbox
Model-Based Calibration Toolbox
Motor Control Blockset
Navigation Toolbox
Online Training Suite
OPC Toolbox
Optimization Toolbox
Parallel Computing Toolbox
Partial Differential Equation Toolbox
Phased Array System Toolbox
Polyspace Bug Finder
Polyspace Code Prover
Powertrain Blockset
Predictive Maintenance Toolbox
Radar Toolbox
Reinforcement Learning Toolbox
RF Blockset
RF Toolbox
Risk Management Toolbox
Roadrunner
Roadrunner Asset Library
Robotics System Toolbox
Robust Control Toolbox
ROS Toolbox
Satellite Communications Toolbox
Sensor Fusion and Tracking Toolbox
SerDes Toolbox
Signal Processing Toolbox
SimBiology
SimEvents
Simscape
Simscape Driveline
Simscape Electrical
Simscape Fluids
Simscape Multibody
Simulink
Simulink 3D Animation
Simulink Check
Simulink Code Inspector
Simulink Coder
Simulink Compiler
Simulink Control Design
Simulink Coverage
Simulink Design Optimization
Simulink Design Verifier
Simulink Desktop Real-Time
Simulink PLC Coder
Simulink Real-Time
Simulink Report Generator
Simulink Requirements
Simulink Test
SoC Blockset
Spreadsheet Link
Stateflow
Statistics and Machine Learning Toolbox
Symbolic Math Toolbox
System Composer
System Identification Toolbox
Text Analytics Toolbox
UAV Toolbox
Vehicle Dynamics Blockset
Vehicle Network Toolbox
Vision HDL Toolbox
Wavelet Toolbox
Wireless HDL Toolbox
WLAN Toolbox

R2021a

MATLAB Parallel Server

- Rechenintensive MATLAB®-Programme und Simulink®-Modelle in einem Cluster ausführen.
- Remote-Ausführung von Batch-Jobs, damit Sie Ihren Computer für andere Zwecke verwenden können.
- Kann auf lokaler Hardware oder in der Cloud installiert werden.
- Integration mit bestehenden Schedulern möglich.

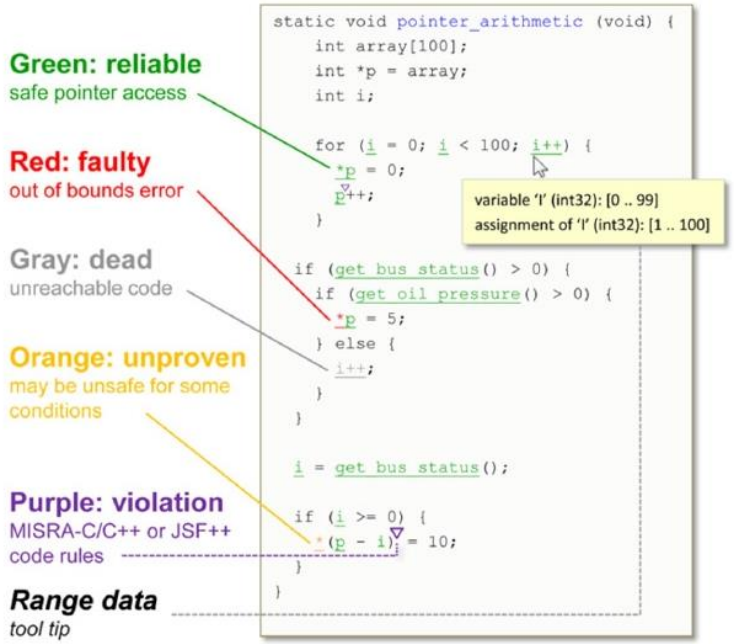
Hinweis: Administratoren können Nutzer auf diese Lizenz-Option eintragen, um diese Produkte zu verwenden.



Zusätzliche Produkte

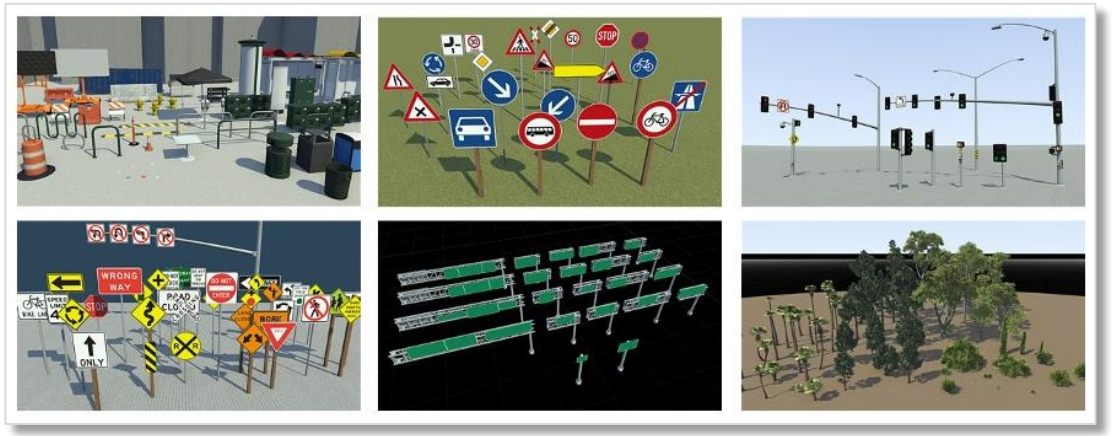
Polyspace

- Überprüft Ihren Code anhand von formalen Methoden für C/C++ und hebt dessen Fehler hervor
- Ausführliche Tests, die sicherstellen, dass keine Laufzeitfehler, Probleme bei der Nebenläufigkeit oder Sicherheitslücken auftreten



Roadrunner

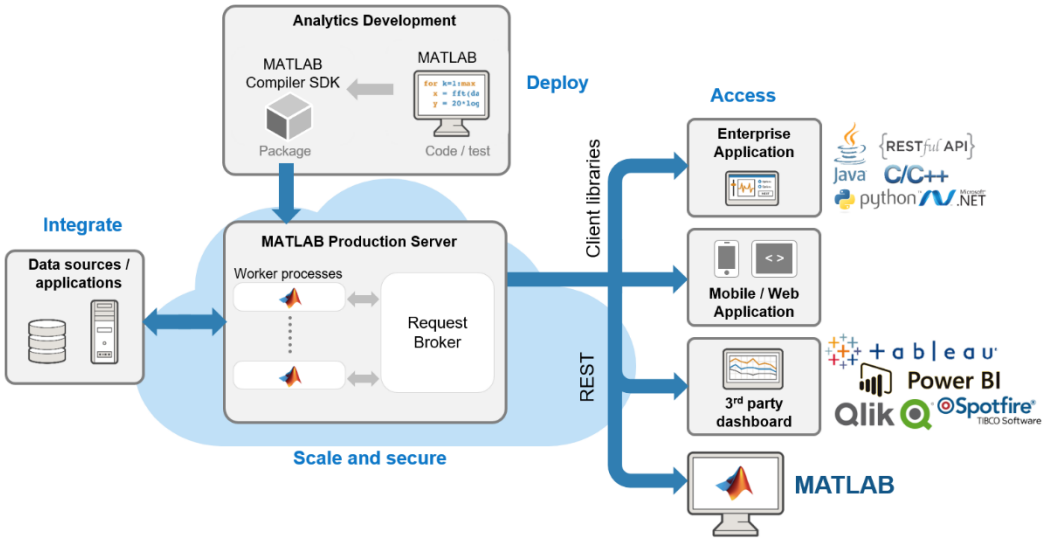
- Ein interaktiver Editor, mit dem Sie 3D-Szenen erstellen können, um Systeme für das Autonome Fahren zu simulieren und zu testen.
- Gestalten Sie individuelle Straßen-Szenen, indem Sie regionenspezifische Verkehrszeichen und -Markierungen erstellen.
- Ermöglicht das Einfügen von Schildern, Ampeln, Schutzplanken und Straßenschäden, sowie Laubwerk, Gebäuden und weiteren 3D-Modellen.



Zusätzliche Produkte

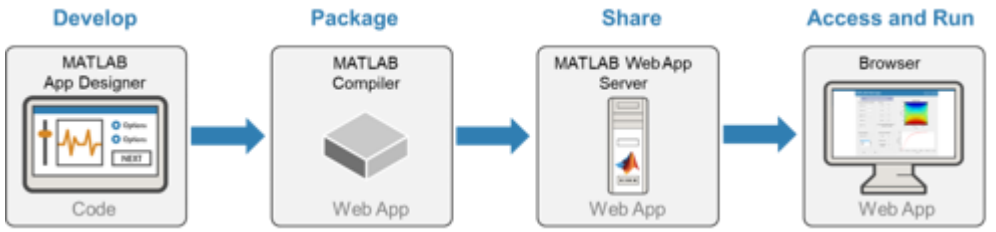
MATLAB Production Server

- Integrieren Sie benutzerdefinierte Analysen in Unternehmensanwendungen im Bereich Web, Datenbanken und Produktion, die auf dedizierten Servern oder in der Cloud ausgeführt werden
- Sie können Algorithmen in MATLAB erstellen, sie mit dem MATLAB Compiler SDK paketieren und dann auf MATLAB Production Server bereitstellen, ohne erneut zu programmieren oder eine spezielle Infrastruktur erstellen zu müssen
- Skalierbar auf hunderte bis tausende gleichzeitige Anfragen



MATLAB Web App Server

- Erstellen Sie MATLAB-Apps mit App Designer und Simulink-Simulationen und teilen Sie sie als interaktive Web-Apps
- Endbenutzer können dann mit einem Browser auf die Web-Apps zugreifen und sie ausführen, ohne zusätzliche Software installieren zu müssen



Übergang von der Universität zur selbsständigen Firma

Campus Lizenz

Accelerator

FAU FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG

Startup → Industrie

FAU FRIEDRICH-ALEXANDER UNIVERSITÄT ERLANGEN-NÜRNBERG

HOCHSCHULE LANDSHUT

Technische Hochschule Ingolstadt

FH·W·S Hochschule für angewandte Wissenschaften Würzburg-Schweinfurt

OTH OSTBAYERISCHE TECHNISCHE HOCHSCHULE REGENSBURG

hochschule aschaffenburg university of applied sciences

Hochschule Augsburg University of Applied Sciences

ZOLLHOF – Tech Incubator

jumpstart foundry

NORTH SHORE INNOVENTURES BIOTECH & CLEANTECH INCUBATORS

MaRS

alphalab

techstars

accelerator centre

GREENTOWNLABS

ZeroTo510 Medical Device Accelerator

Y Combinator

EvoNexus A CommNexus Incubator

IoT TRIBE

Highway 1

Volta

District 3

N100

Applications

- Explore alternatives
- Develop prototypes
- Bring products to market

Industries

- Medical Devices
- Robotics
- Autonomous Vehicles

MathWorks Portal

HARD- & SOFTWARE | INTERNET & E-MAIL | SERVERDIENSTE | MEDIEN & ENTWICKLUNG | FORSCHUNG

Sie sind hier: Startseite » Hard- & Software » Software » Dienstliche Nutzung » Produkte » M
der UK

- Hard- & Software
- Hardware
- **Software**
  - **Dienstliche Nutzung**
    - **Produkte**
      - Autodesk
      - COMSOL Multiphysics
      - IBM SPSS
      - LabVIEW
      - **MATLAB Campusvertrag für Studierende und Forschende der FAU und der UK**
      - Microsoft
      - PTC
  - Private Nutzung
  - Software Asset Management
- Betriebssysteme
- Investitionsprogramme

MATLAB Campusvertrag für Studierende u
Forschende der FAU und der UK

Die FAU und das UK haben einen MATLAB-Campus-Vertrag abgeschlossen. Damit k
Universitätsklinikums Erlangen MATLAB und die dazugehörigen Toolboxen unbegre

Die Installation ist auf dienstlichen und privaten Rechnern erlaubt.

MATLAB (Individual)

- Matlab Individual ist ein **persönliches Abo** und **kann nur von einer (1) Person**
- Die Aktivierung **muss jährlich erneuert** werden!
- Für ortsfeste Rechner auf dem FAU-Campus, die von mehreren Anwendern genu
  MATLAB (Concurrent).

Persönliches Abo für Matlab (Individual) beantragen

Registrieren Sie sich mit ihrer **@fau.de** oder **@uk-erlangen.de** E-Mail-Adresse am M
portal/fau-31563700.html

Einstiegshilfe

https://de.mathworks.com/academia/campus/resources/quick-start.html

Online-Training-Material

https://matlabacademy.mathworks.com

Universität Erlangen-Nürnberg

Get Software | Learn MATLAB | Teach with MATLAB | What's New

MATLAB Access and Support for Everyone at

Universität Erlangen-Nürnberg

MATLAB & SIMULINK

MATLAB and Simulink are

- used in 100,000+ companies from market leaders to startups
- referenced in 4 million+ research citations

Where will MATLAB and Simulink take you?

Get MATLAB and Simulink

See list of available products

Desktop. Online. Mobile.

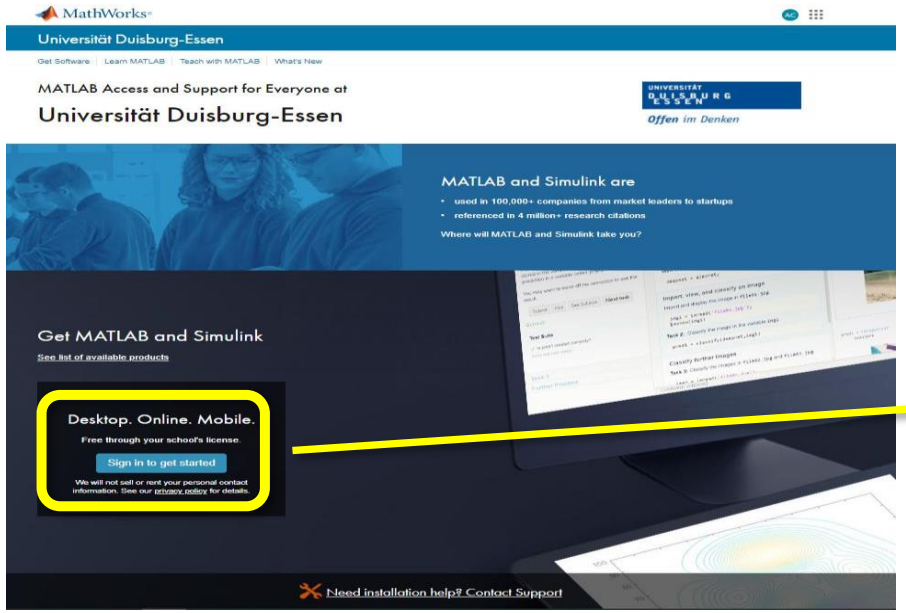
Free through your school's license.

Sign in to get started

We will not sell or rent your personal contact information. See our privacy policy for details.

Need installation help? Contact Support

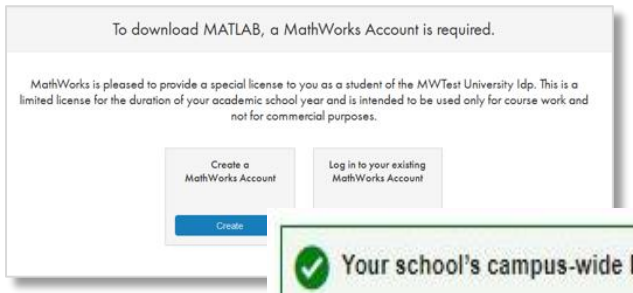
Wie komme ich zu meiner Lizenz



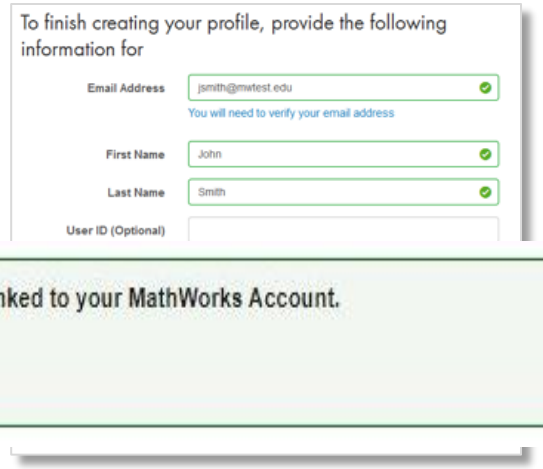
Endnutzer-Workflow

Endnutzer beginnen mit
Registrieren Sie sich jetzt
im Campusweiten Lizenz-Portal

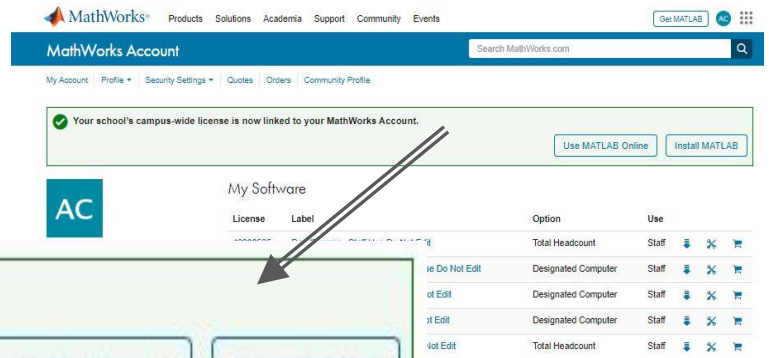
Erstellen/Login MathWorks-Konto



Profil-Felder ausfüllen



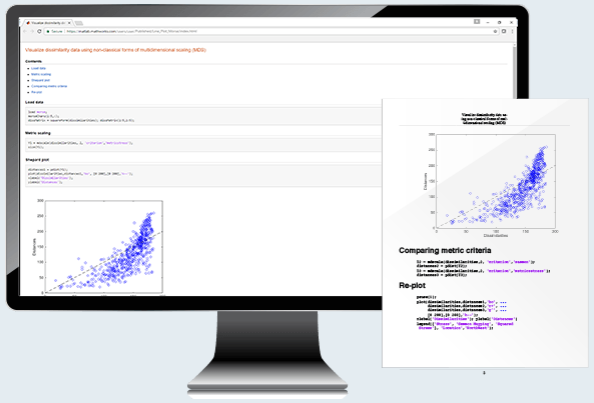
Download



ACCELERATING LEARNING AND RESEARCH

MATLAB&SIMULINK

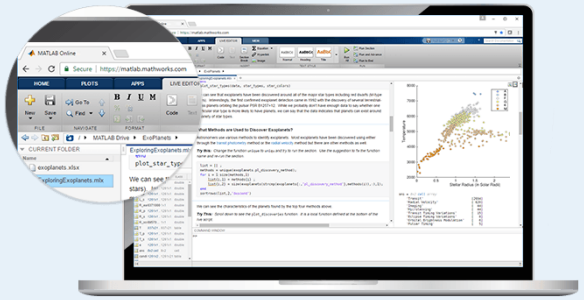
Zugriffsoptionen für Individual Lizenz Nutzer



MATLAB for Desktops

Zugriff auf MATLAB auf universitären und persönlichen Rechnern und Laptops

[MATLAB portal]



MATLAB & Simulink Online

Zugriff auf MATLAB über den Web-Browser

[matlab.mathworks.com]

MATLAB Mobile

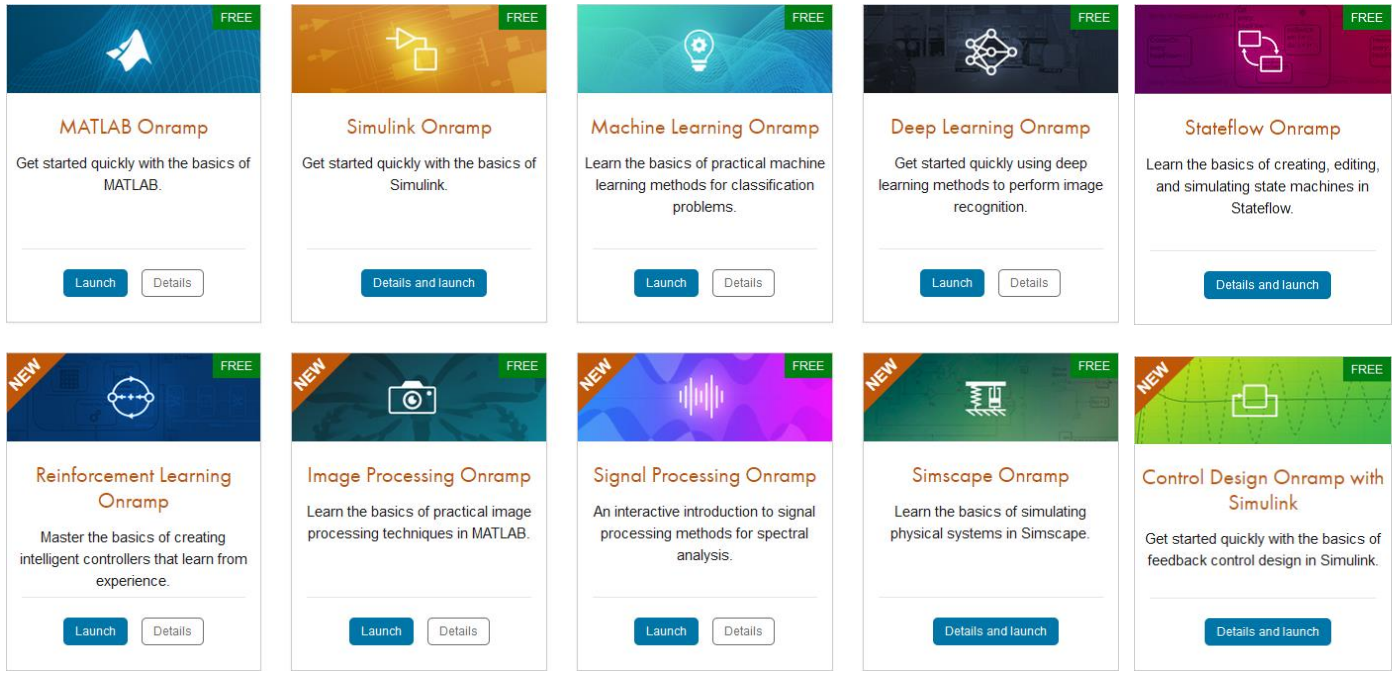
Zugriff auf MATLAB vom iOS/Android-Gerät aus

GET IT ON Google Play

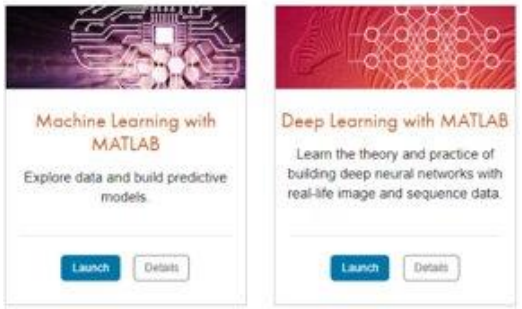
Download on the App Store

Campusweiter Zugriff auf Online Training

Getting Started



Data Science



Core MATLAB

Über 80 Stunden
Aufbaumaterial zu MATLAB

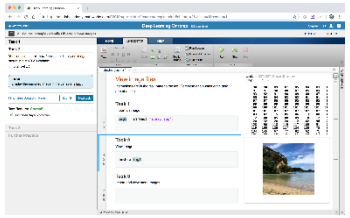
matlabacademy.mathworks.com

Zugriff über ihr MathWorks Portal

Jeder auf dem Campus hat Zugriff auf alle MATLAB-Tools!

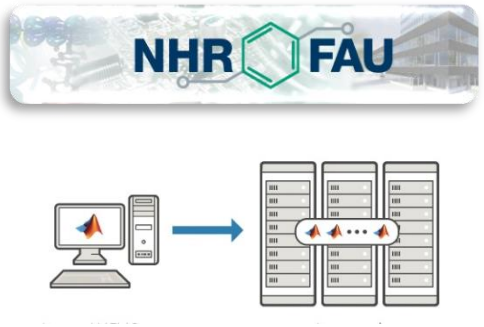
Anytime, Anywhere & Any Device

Network Licenses for Multiple Locations



Online Training

MATLAB Online



MATLAB Parallel Server

MATLAB Grader

- ✓ Zugang über das MathWorks Portal
- ✓ Zugang für alle Angehörigen der Universität
- ✓ Zugang zu allen* MathWorks Tools

Einstiegshilfe zur Campuslizenz, Individual Lizenz, Portal: Videos

Access › **Training** › **Collaboration**

MathWorks PORTAL

Interdisziplinäres Arbeiten über diverse Anwendungsgebiete

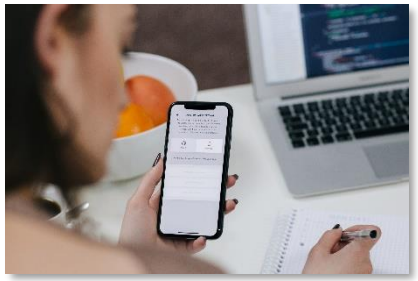
Aerospace and Defense


Automotive


Biological Sciences


Biotech and Pharmaceutical


Communications


Electronics


Energy Production


Financial Services

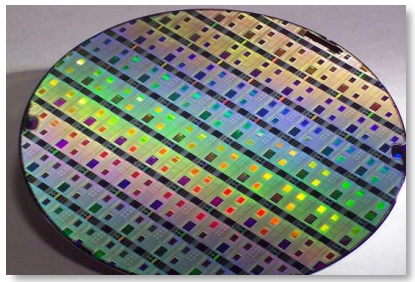

Industrial Machinery


Medical Devices


Metals, Materials, and Mining


Neuroscience


Railway Systems


Semiconductors

Software and Internet

Battelle Neural Bypass Technology Restores Movement to a Paralyzed Man's Arm and Hand

Challenge

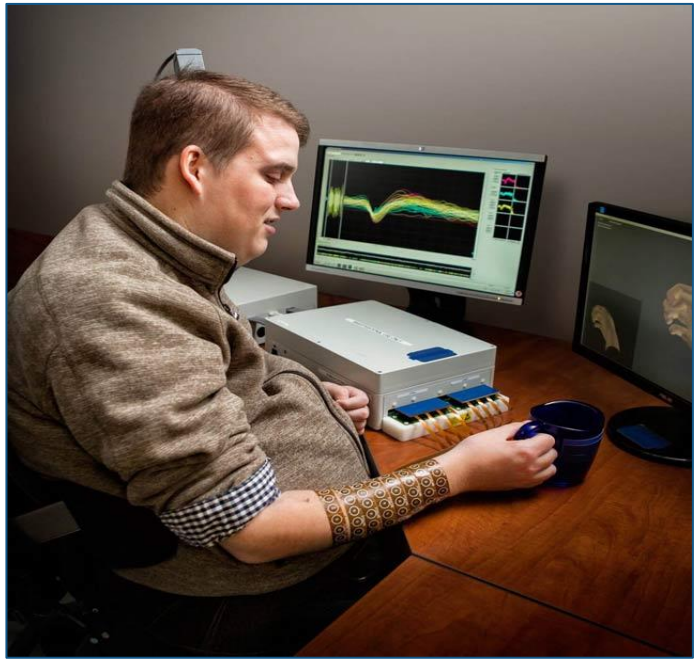
Restore arm and hand control to a quadriplegic man by processing signals from an electrode array implanted in his brain

Solution

Use MATLAB to analyze signal samples, apply machine learning to classify patterns mapped to movements, and generate actuation signals for a neuromuscular electrical stimulator

Results

- Control over paralyzed hand and arm restored
- Real-time processing performance achieved
- Interdisciplinary collaboration enabled



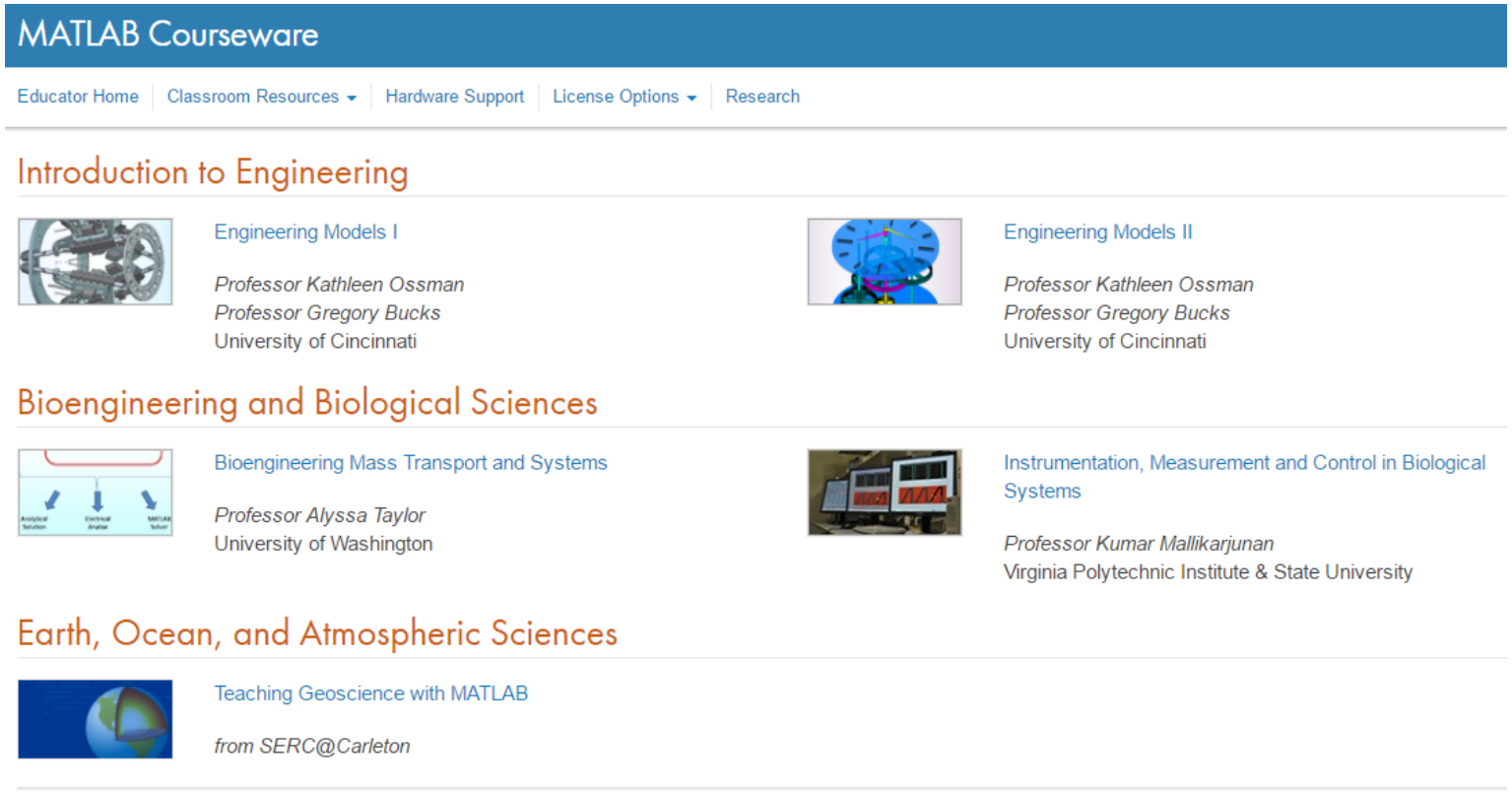
Patient using the Battelle NeuroLife system.

"The algorithms we developed using MATLAB gave the participant back basic control of his arm and hand. By the end of the study, he could grip a bottle, pour out its contents, and set it down, as well as pick up a stir stick and execute a stirring motion."

- David Friedenberg, Battelle

Link to user story

MATLAB Courseware



Download:

Lecture Notes

Project Ideas

Accompanying Code

Getting Help: Online Teaching and Community Resources

MathWorks® Products Solutions Academia Support Community Events Get MATLAB

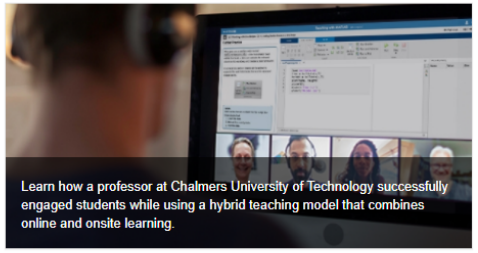
Educators

Search MathWorks.com

Teach with MATLAB and Simulink | Curriculum Resources | Online Teaching | Campus-Wide License

Online Teaching with MATLAB and Simulink

Whether you are transitioning a classroom course to a hybrid model, developing virtual labs, or launching a fully online program, MathWorks can help you foster active learning no matter where it takes place. Here you will find resources and ideas for providing hands-on experiences with MATLAB and Simulink, plus tools for delivering instruction, engaging students, and assessing outcomes.



Instructional Resources

Virtual Labs and Projects

Online Assessments

Create Engaging, Interactive Course Materials

Make your courses more interactive, promote self-directed learning, and increase student engagement through Live Editor and MATLAB apps.

Use MATLAB on the desktop or MATLAB Online to create live scripts. Share live scripts with students through your university's learning management system or using MATLAB Drive. Learn more about creating and sharing live scripts for applications such as flipped classrooms on the Instructional Resources page.

In addition, you can host and run a collection of MATLAB apps on your own MATLAB Web App Server at your university.

mathworks.com/academia/online-teaching.html

MathWorks® Products Solutions Academia Support Community Events

Distance Learning Community

Search Dis

MATLAB Central | Home | Explore | Contribute | My Activity

Keep Teaching through Distance Learning

Posted by Loren Shure, March 23, 2020

As many universities are moving quickly to distance learning, it is vital for educators to think carefully about how to adapt their approach to still deliver key learning outcomes for students in an online setting.

» Read more...

Discussions

Start a discussion

Welcome to the Distance Learning Community
Latest activity by jiro on 30 Mar 2020 at 13:17
Tags: distance_learning
0 replies

Tell us your story
Latest activity by jiro on 30 Mar 2020 at 13:05
Tags: distance_learning
0 replies

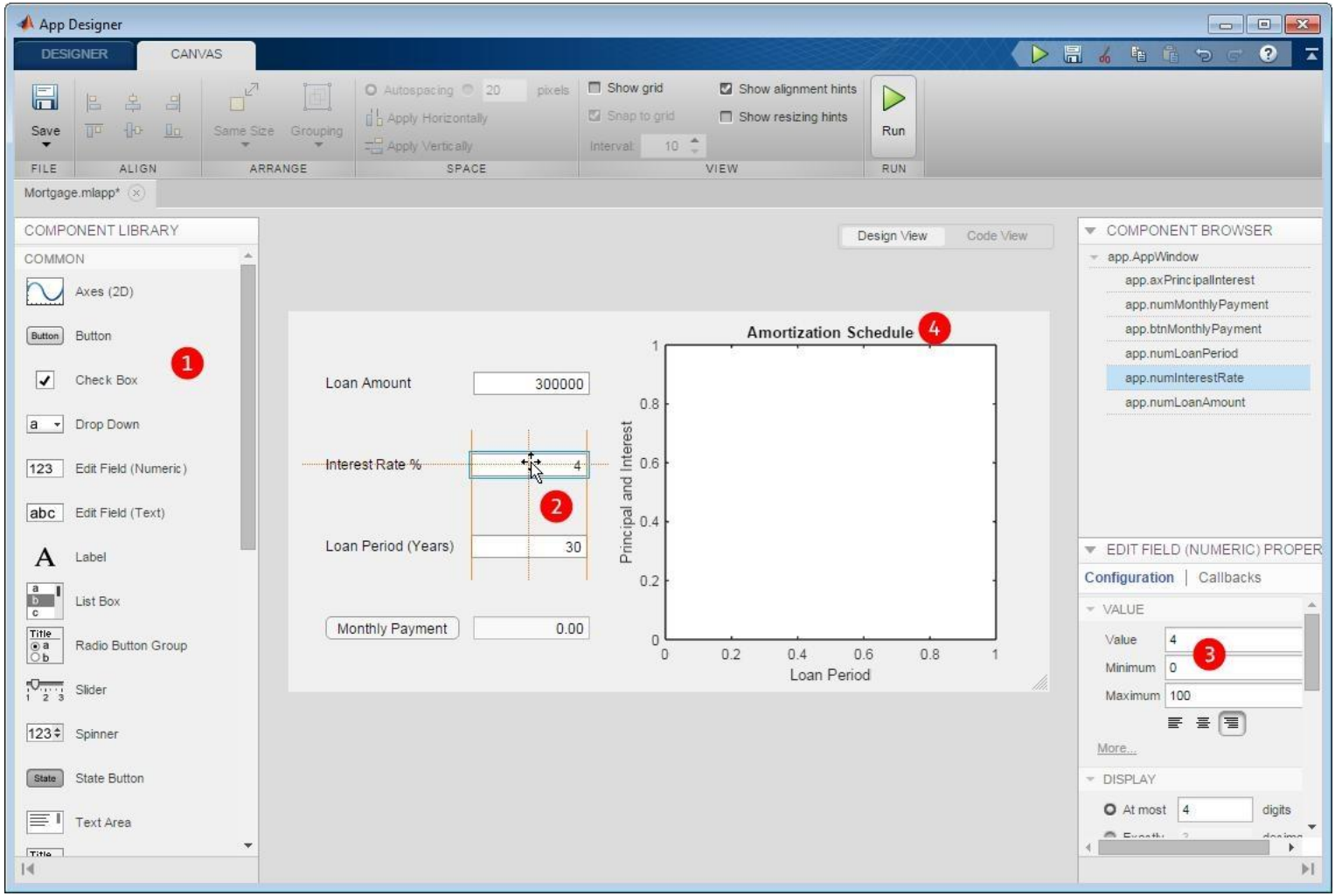
» View all discussions

mathworks.com/matlabcentral/topics/distance-learning.html

MATLAB Mobile

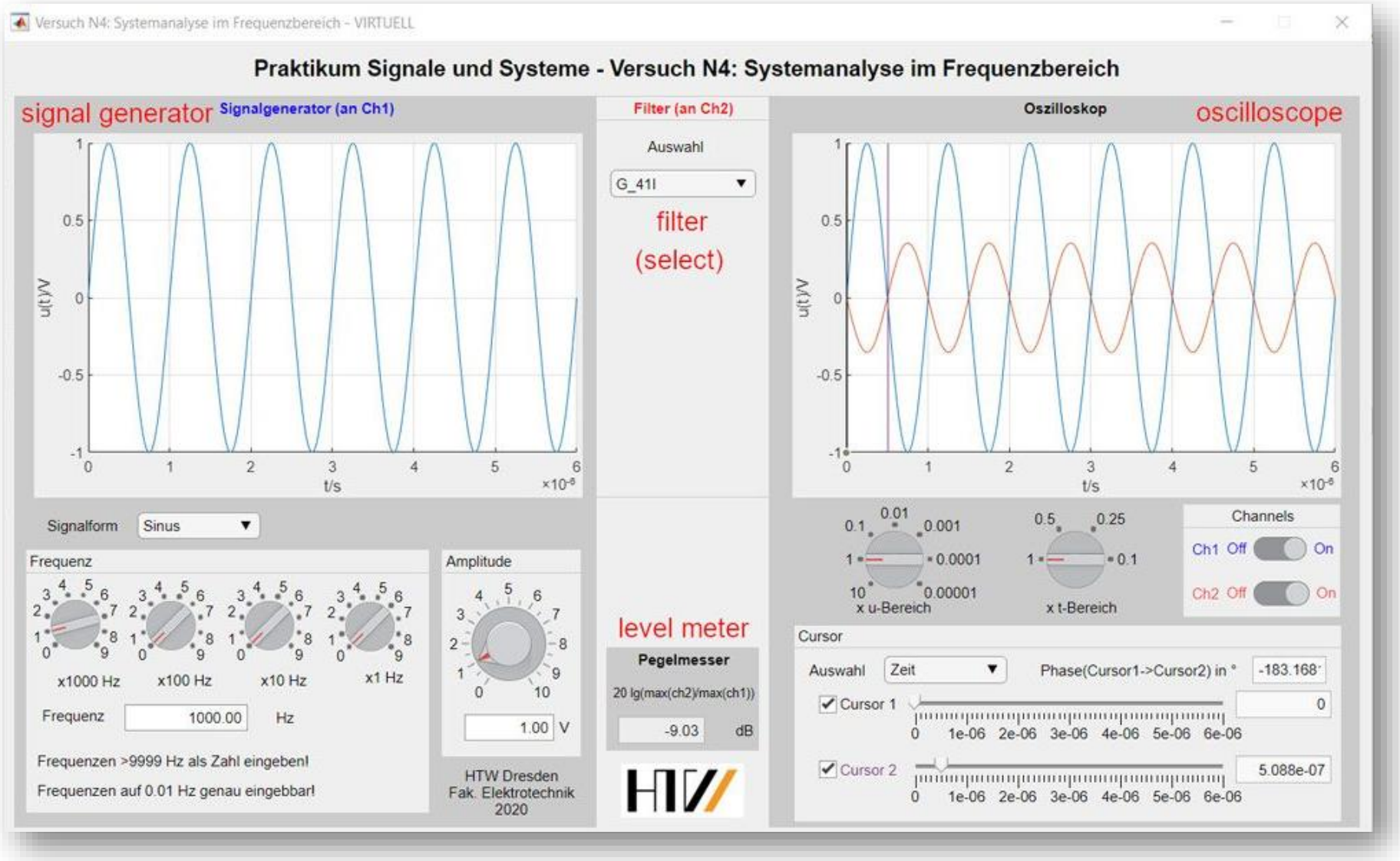
Hardware

MATLAB Apps



www.mathworks.com/products/matlab/app-designer.html

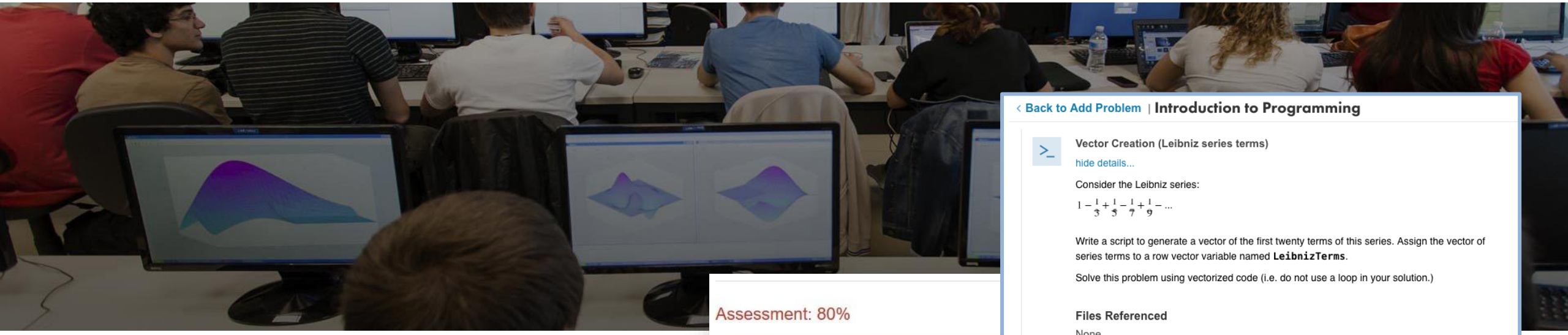
Example: Virtualizing Electrical Engineering Teaching Apps



Prof. Dr. Matthias Henker
Prof. Dr. Kristina Kelber

HTW Dresden

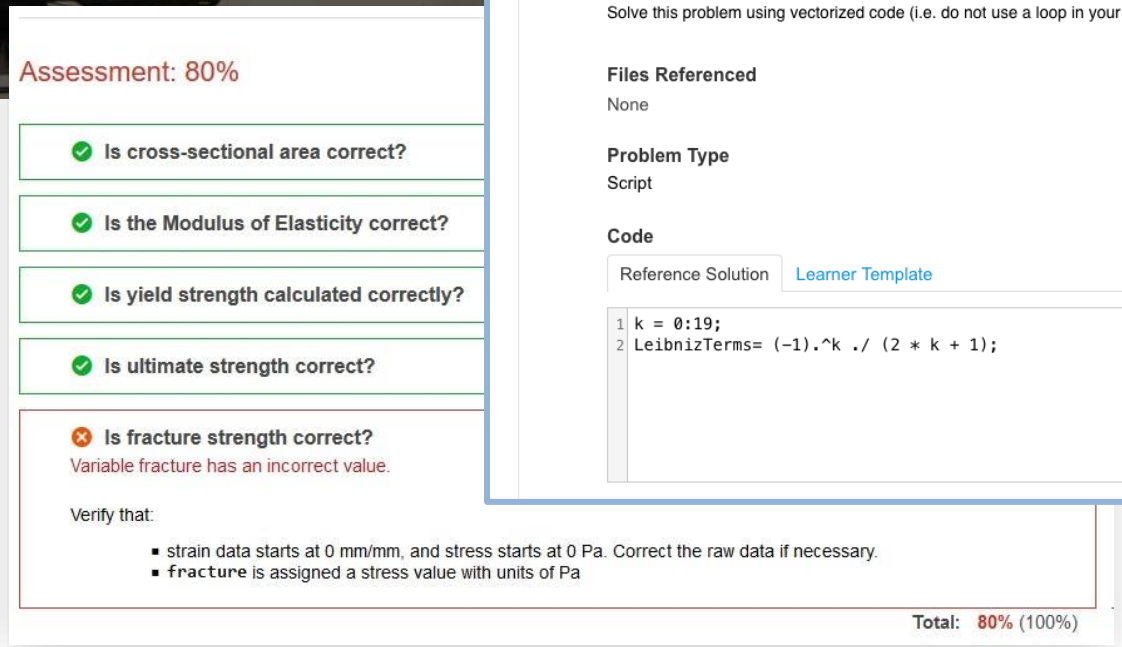
Autograding MATLAB code with MATLAB Grader

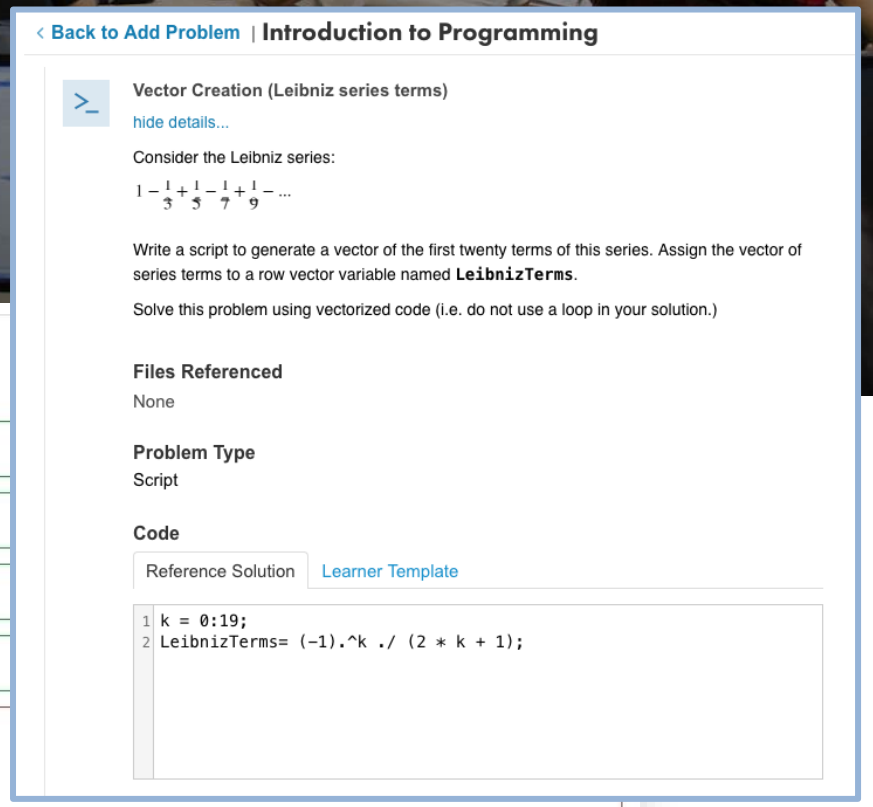


Create interactive course assignments

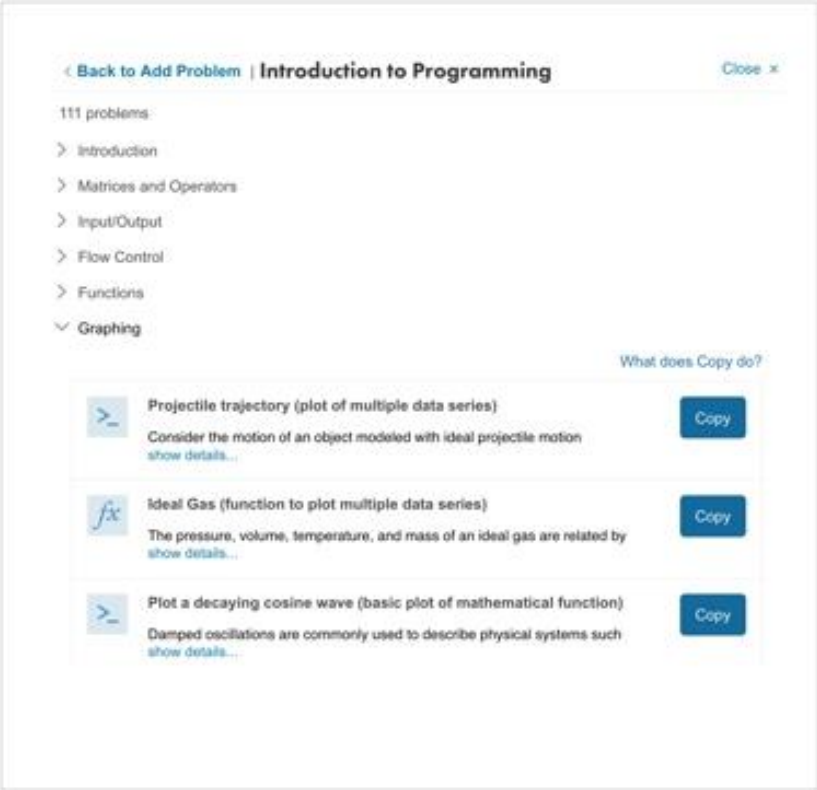
Automatically grade student work and provide feedback

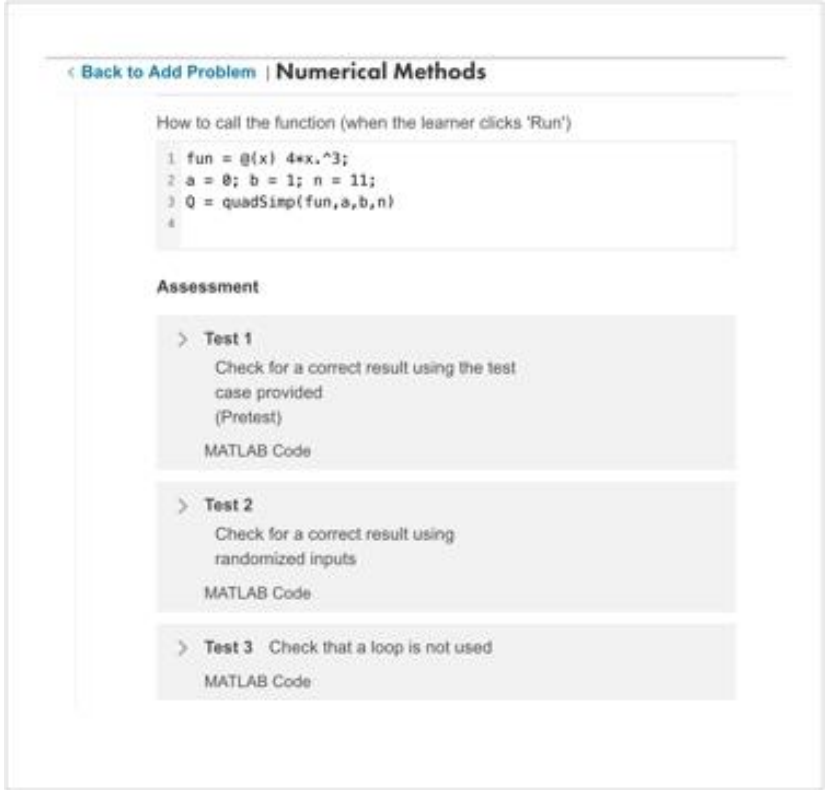
Run your assignments in any learning environment

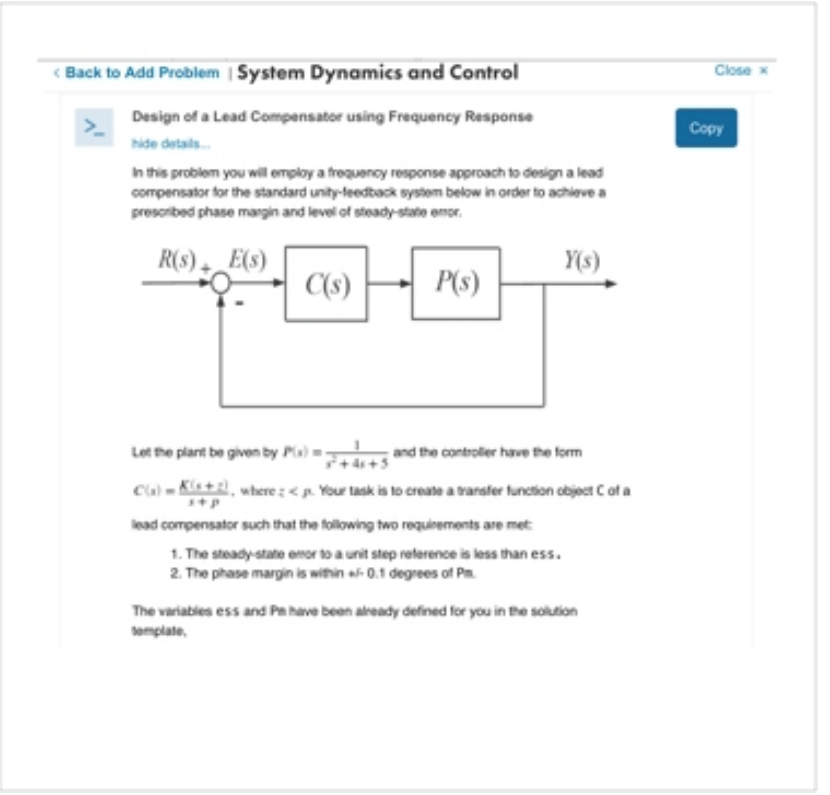




Assessment Content

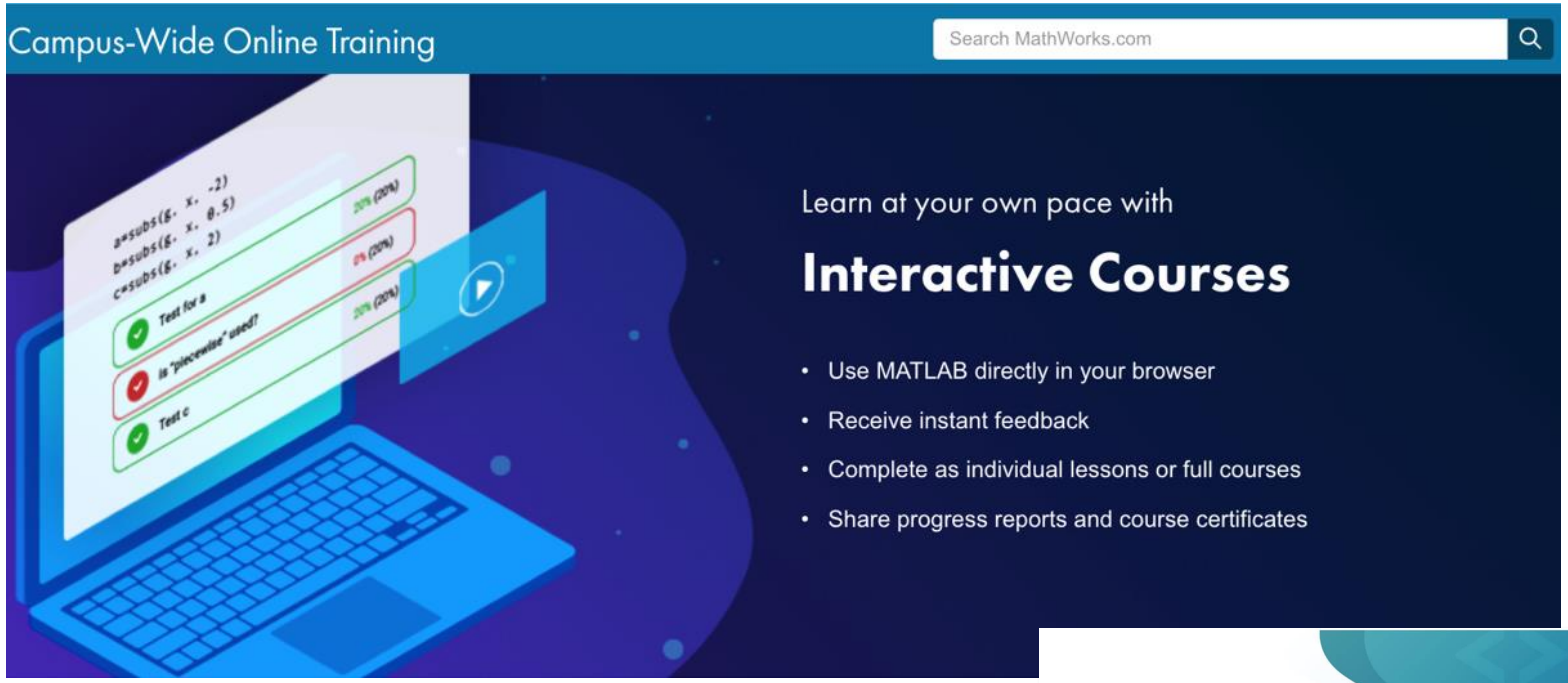






Example problems in common academic topics show how automated MATLAB assessment can work in your curriculum

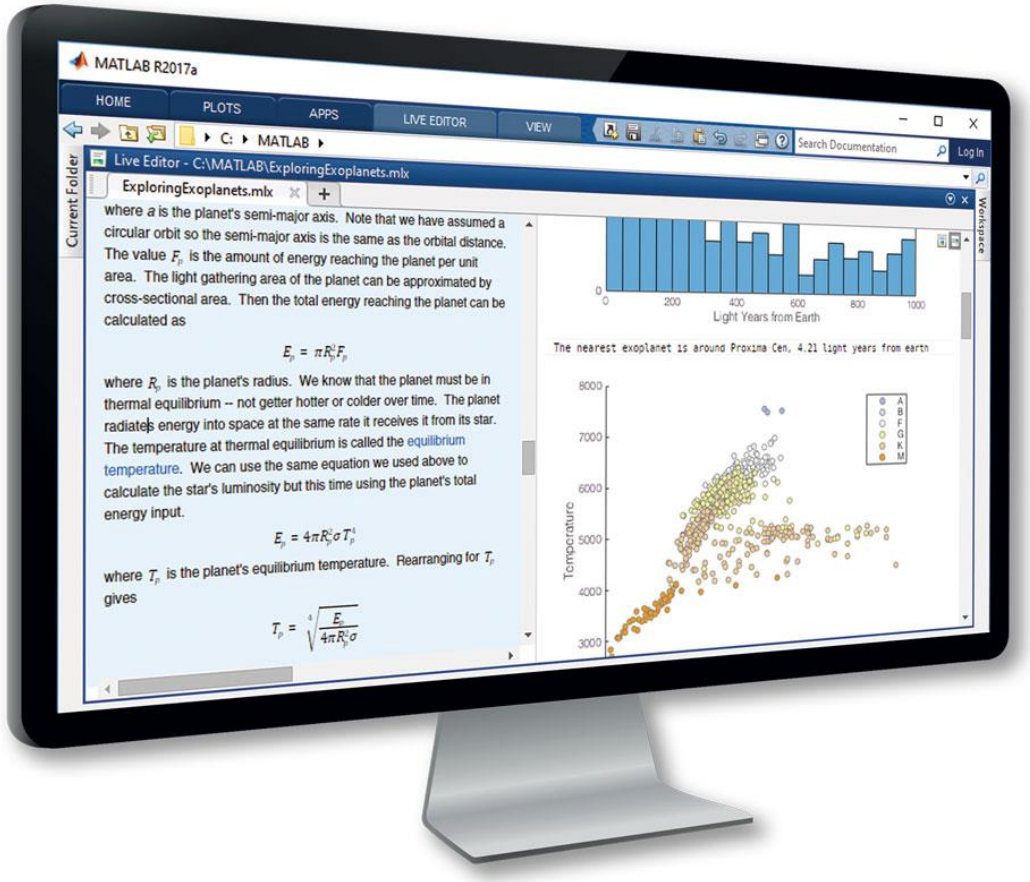
Online Courses for MATLAB and Simulink



“The interactive MATLAB tutorials were perfect for engaging students and getting them up to speed quickly.”

- Dr. Yu-li Wang, Carnegie Mellon University

Teach with MATLAB Live Editor



MATLAB in an Executable Notebook

Use live scripts to create engaging lectures that combine explanatory text, mathematical equations, code, and results

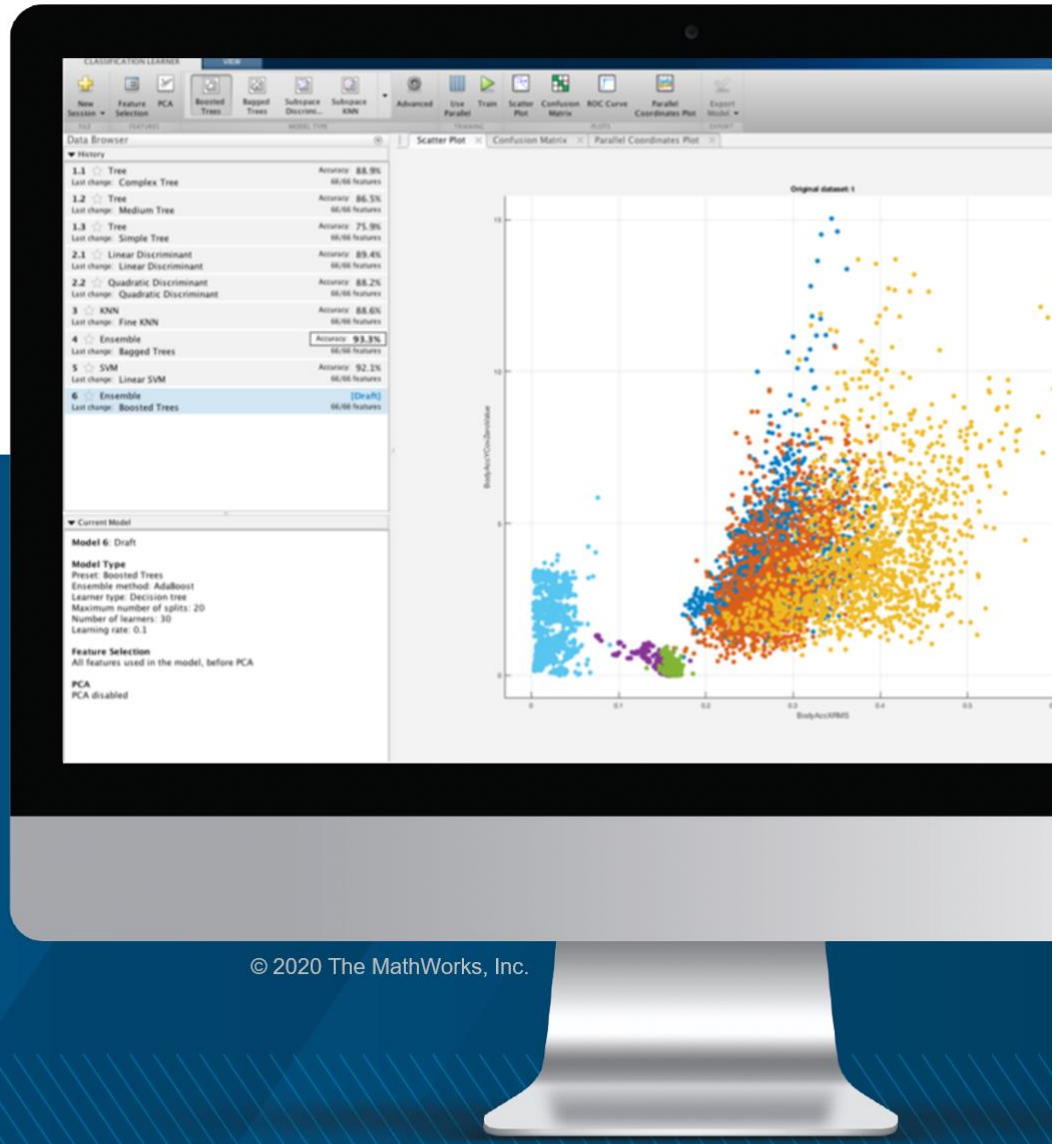
Share live scripts directly with colleagues or students

Work in a single environment to eliminate context switching

MATLAB Technical Education Series

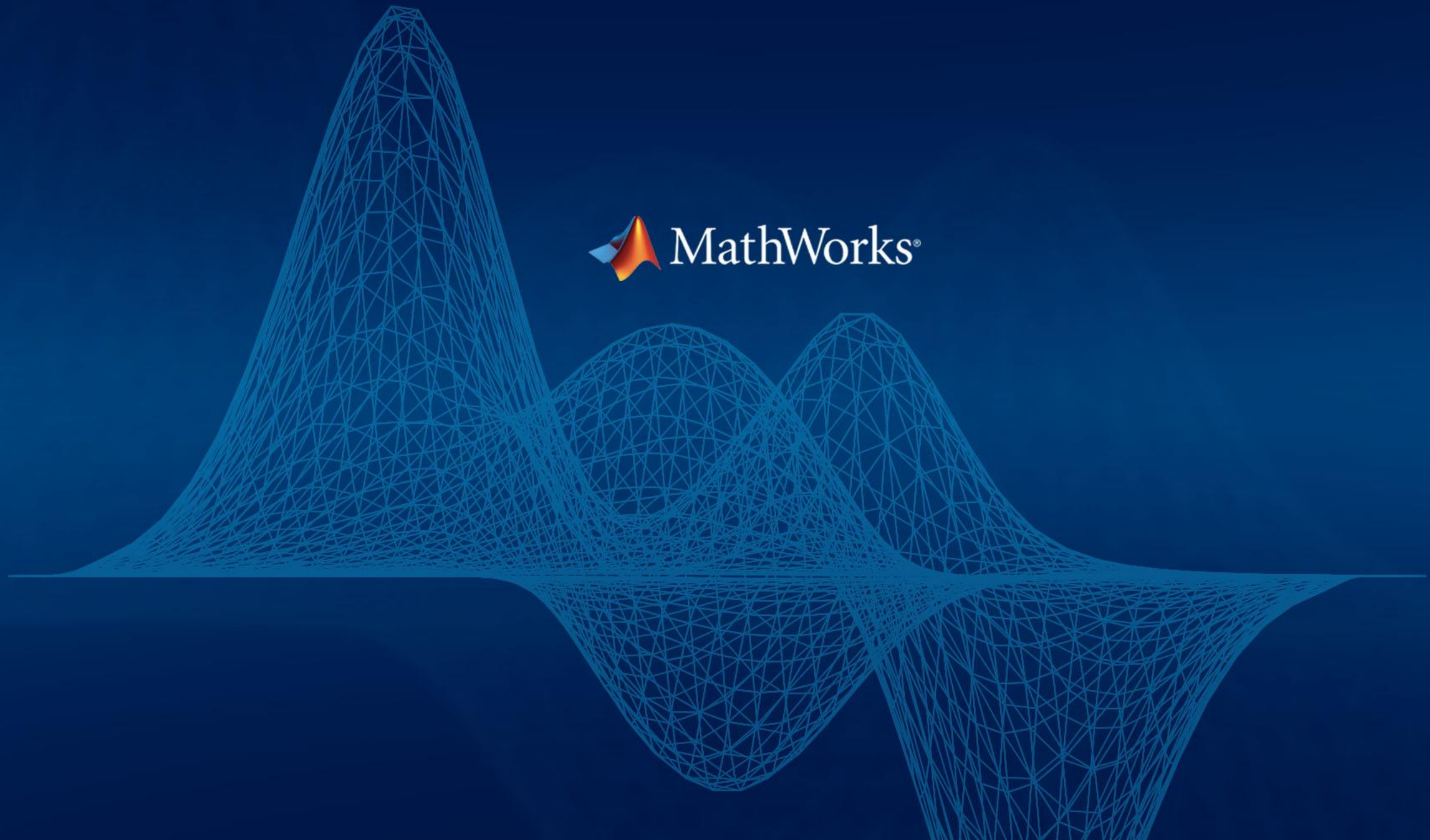
Join us for some live online sessions from the MathWorks Educational Customer Success Engineering Team and be part of one of the largest educational conversations of 2021!

Learn more at
https://bit.ly/2QhLqYo



MATLAB® & SIMULINK®

MathWorks®


MathWorks®