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**Welcome**

**STEM Workforce  
Development in Maine**

**Wednesday, October 14, 2020**

**1:00 - 3:00 p.m. EST**



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# Overview

## STEM Workforce Development in Maine

Wednesday, October 14, 2020  
1:00 to 3:00 p.m. EST

Science is US



This meeting is being recorded. We will notify you when the video is available for on demand viewing.



To reduce background noise, all participants will enter in “listen only” mode. Please mute your line when not speaking to reduce noise.



Click on the “raise hand”  
Type questions using the “chat” panel



A copy of the meeting materials can be found as an attachment in the chat panel.



If you lose your zoom connection, try the following:

- Close zoom and reconnect with the meeting link
- Reboot your computer and reconnect with the meeting link

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# Presenters

## STEM Workforce Development in Maine

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Introductions:

**DANA CONNORS**

President, Maine Chamber of Commerce

Keynote Speaker:

**HEATHER JOHNSON**

Commissioner of the Maine Department of  
Economic & Community Development

Panel Discussion:

**JAMES BROWN**

Executive Director, STEM Ed Coalition

**JOAN FERRINI-MUNDY**

President, University of Maine

**WALTER RAWLE**

IEEE Maine Chapter, General Dynamics

Moderated by:

**ANDRÉ N. PORTER**

Policy Director, Science is US

# Zoom Tips

## STEM Workforce Development in Maine

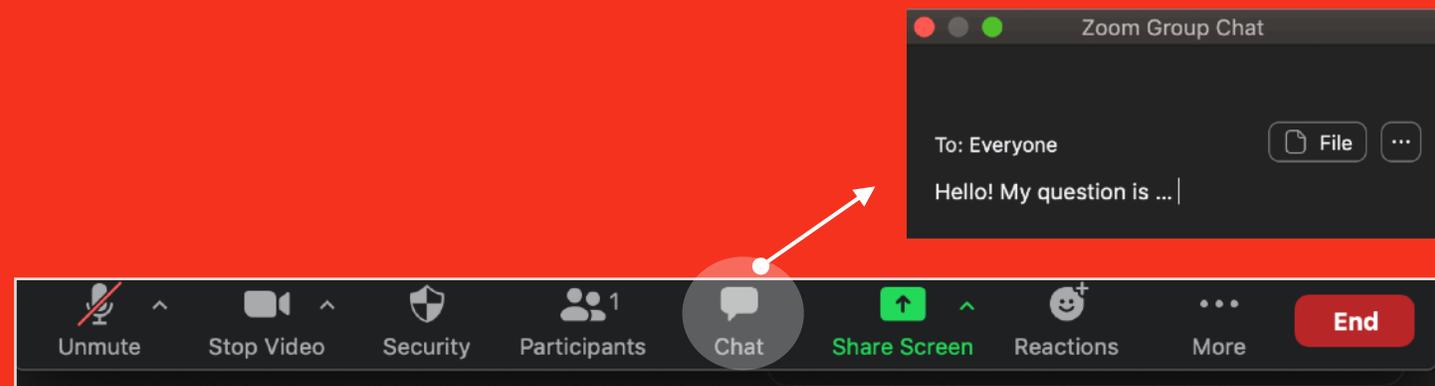
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## To ask a question ...

Participants will be in “listen only” mode during the presentation.

If you have a question, please use the chat feature in your zoom account.



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# Sponsors

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Science is US

Science  
is US

MAINE  
S T A T E  
CHAMBER  
*of*  
COMMERCE



CENTRAL MAINE  
POWER

**Bangor**  
Savings Bank

Eaton  
Peabody  
Attorneys at Law

# Challenges and Opportunities in Higher Education



Joan Ferrini-Mundy, President  
University of Maine  
STEM Workforce Development in Maine  
October 14, 2020

**R&D  
CONTEXT**

**STATE  
ECONOMIC  
DEVELOPMENT**

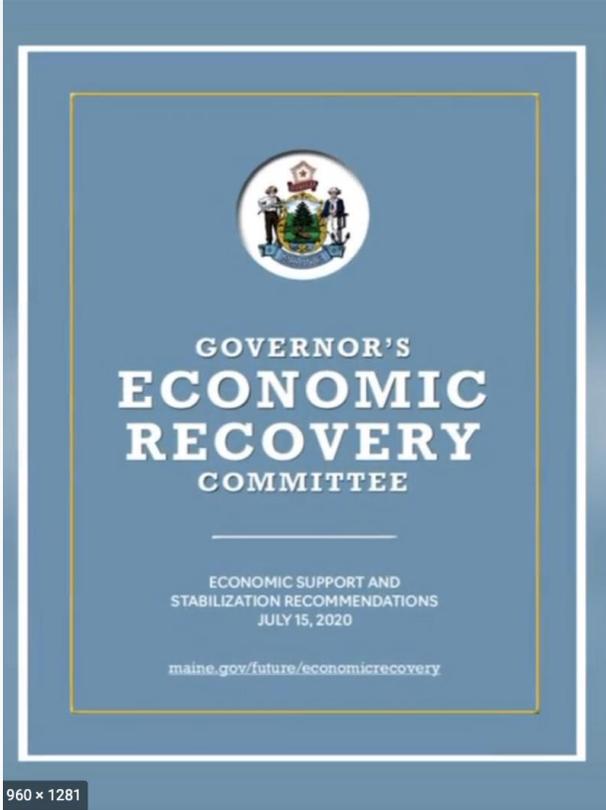
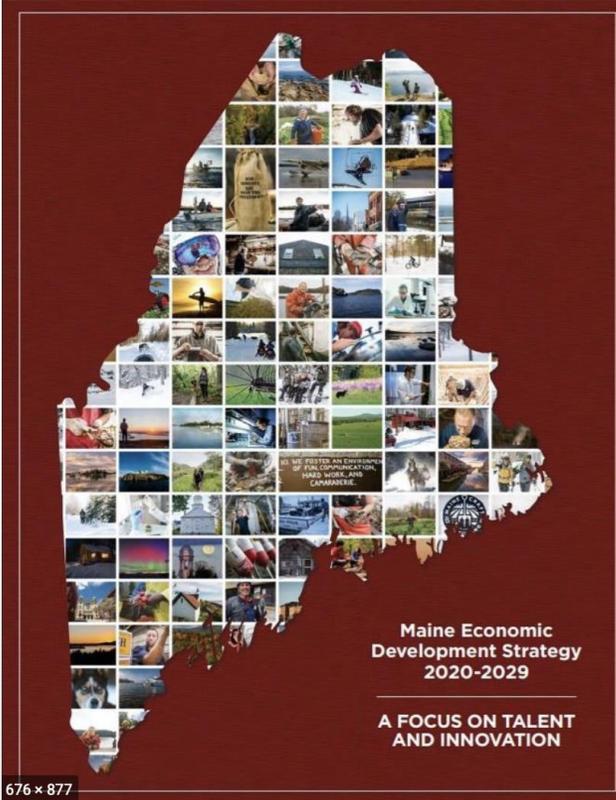
**TALENT DEVELOPMENT**

**HIGHER  
EDUCATION**

From NSB *Science and Engineering Indicators*:

Indicator	US	Maine
High science, engineering, and technology employment establishments as a % of all (2016)	9.23%	6.78%
Individuals in S&E occupations as % of all occupations (2018)	4.89%	3.57%
R&D as % of GDP (2017)	2.80%	.84%

# State Economic Development



# Fisheries



Forestry



Farming

# R&D Context



# Higher Education

E. JAMES & EILEEN P.  
**FERLAND ENGINEERING EDUCATION & DESIGN CENTER**





**R&D  
CONTEXT**

**STATE  
ECONOMIC  
DEVELOPMENT**

**TALENT DEVELOPMENT**

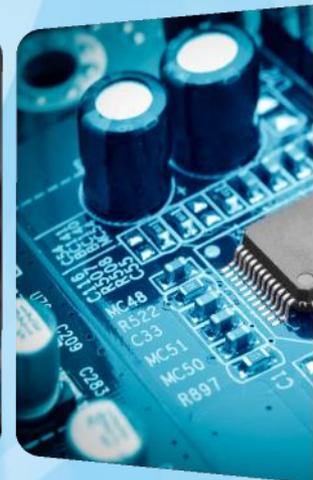
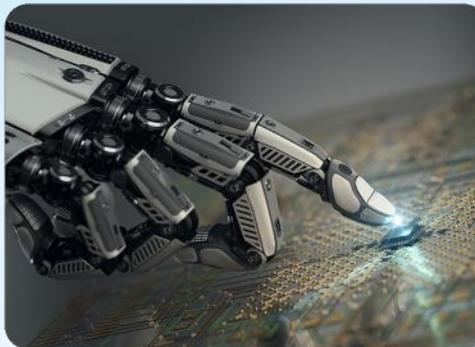
**HIGHER  
EDUCATION**



# Thank you!

[joan.ferrinimundy@maine.edu](mailto:joan.ferrinimundy@maine.edu)





# **STEM Workforce Development in MAINE**

## ***Opportunities & Challenges for Engineering Education***

***W.D. Rawle, PhD***  
***Chair, IEEE Maine Section***  
***October 14, 2020***

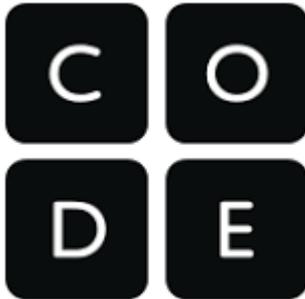


# ***IEEE At A Glance***

- **More than 423,000 members in more than 160 countries**
- **334 Sections in ten geographic Regions worldwide**
- **2,116 Chapters that unite local members with similar technical interests**
- **486 affinity groups;**
  - Consultants' Network, Young Professionals (YP), Women in Engineering (WIE), Life Members (LM), and IEEE Entrepreneurship
- **39 Societies and seven technical councils**
- **More than 4 million documents in the IEEE Xplore® Digital Library**
  - more than 8 million downloads each month
- **1,300 active standards and more than 500 standards under development**
- **Publishes approximately 200 transactions, journals, and magazines**
- **Sponsors more than 1,800 conferences in 95 countries while:**
- **Partnering with more than 1,300 non-IEEE entities globally**
- **Attracting more than 485,000 conference attendees**
- **Publishing more than 1,500 conference proceedings via IEEE Xplore**

# Resources, Resources Everywhere

*Some pricey, some inexpensive, some free*



## *The Challenge:*

**STUDENTS LACK A SOLID  
FOUNDATION TO PURSUE  
ENGINEERING STUDIES**

*Calculus, Differential Equations, Linear Algebra,  
Numerical Methods, Probability & Statistics*

**The biggest failure in engineering education: A student takes first year calculus with high aspirations, and then drops out of an engineering program disillusioned because of ill preparation**

# *Happy to answer any questions*



**W.D Rawle PhD**  
**Chair, IEEE Maine Section**  
**Founder/CTO Oxford Analytics LLC**  
**Sr. Principal Systems Engineer GD-OTS**  
**walter.rawle@maine.edu**

