

Welcome to NACK's Webinar

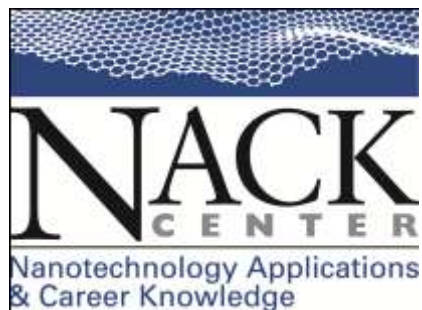
Nanotech Works - Alumni Success Stories

NACK is an NSF-funded ATE Resource Center supporting
faculty in Nanotechnology Education

Hosted by MATEC Networks

www.matecnetworks.org





NACK is the NSF ATE National Center for
Nanotechnology Applications and Career
Knowledge

The NACK National Center is located at
Penn State University



Funded, in part, by a grant from the
National Science Foundation.
DUE-08020498





Poll

Participants

- Participants
- Mark Viquesney (Moderator, Me)

1 Participant

Raise hand/smile/clap

Whiteboard - Main Room

15/29 Welcome to MATEC NetWorks Webinar

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Chat

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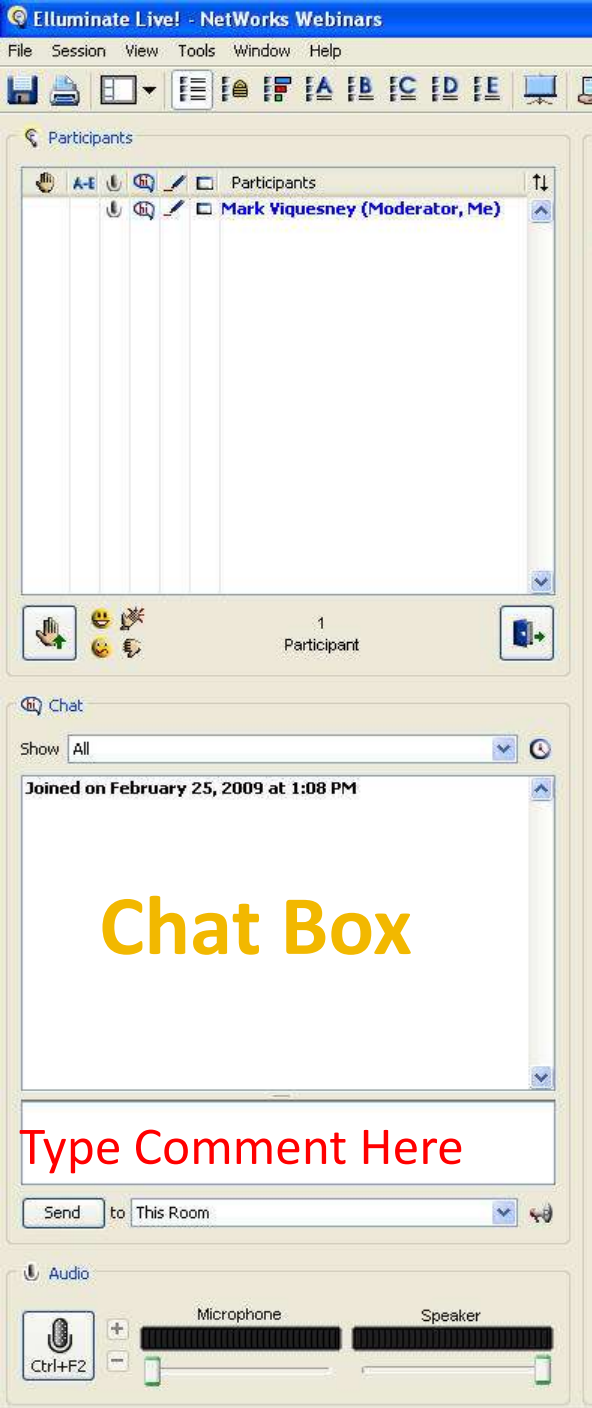
Chat

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Chat Box

In the **Chat Box**, please type the name of your school or organization, your location, and how many people are attending with you today.



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Participants

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Participant's Box

1 Participant

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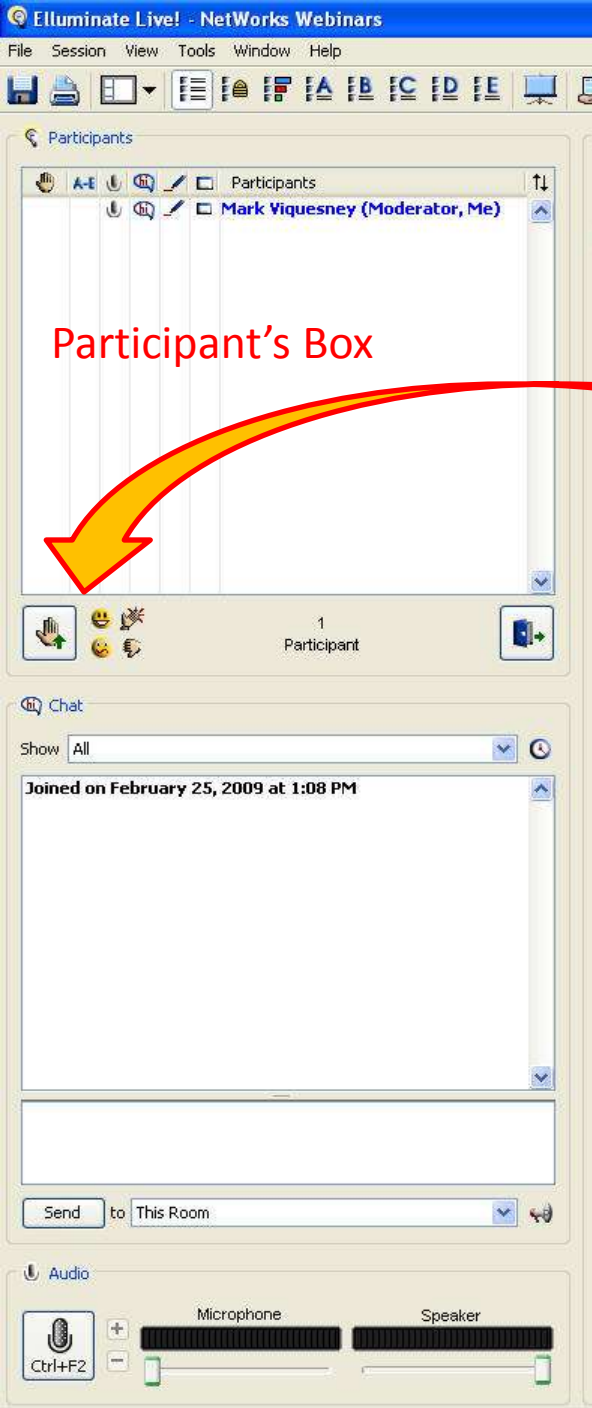
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Participant's Box

Allows you to non-verbally respond to the presenter's comments.





Participant's Box

Participant's Box

Smile



Raise Hand

Clap

Let the presenter know if you like what they say with a smile or clap. Raise a hand if you have a question – and then type it into the chat box.





Poll

Click A-E to take the Poll

This webinar will have a Poll. Please answer:
I heard about this webinar through:

- A. @matec
- B. Email from ETD list serv
- C. Email from NACK
- D. Friend or colleague
- E. Other (please type where in chat box)



NACK's Webinar Presenter

Dr. Karen Halvorson

Presented by Karen Halvorson, ED.D.
NACK Alumni Network Coordinator
Dakota County Technical College
Nano-Link Center
halvorkaren@msn.com
480-219-6760



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Nanotech Works: Student Success Stories

Outline of Presentation

Introducing Careers in Nanotech...Karen Halvorson

Student Success Stories

- Brandon Harris
- Paul Pennington
- Ines Martin
- Lage von Dissen
- Harley Hart

Alumni Network Resources...Ramie Chackan



Hot Jobs in Nanotech

According to the National Science Foundation (NSF), more than 2 million jobs and 6 million supporting positions will be generated in nanotechnology by 2015.

Data Source: National Science Foundation 2010



Nanotechnology Products Today & Tomorrow

- Products where nanotechnology plays a key role will grow by an estimated \$1 trillion per year by 2015.
- The rate of market increase is expected to show a 25% increase per year.
- By 2020, there will be an estimated \$3 trillion in products that incorporate nanotechnology as a key performance component.
- The nanotechnology markets and related jobs are expected to double every three years.

Data Source: Michail Roco 9/30/2010



Examples of Companies That Have Hired Graduates for Micro- and Nanotechnology Jobs

Biological/Biotech/Medical/Pharmaceuticals

Bioforce Nanosciences; Boston Applied Technologies; Boston Scientific; Cetero Research Group; GlaxoSmithKline; Harvest Foods; Hershey Medical Center; Ionic Fusion Corporation; Johnson & Johnson; Pace Analytical Services; Philips Medical Systems; Phillips Plastics; Upsher-Smith.

Chemical/Materials

3M; Adhesives Research; Advanced Gas Technologies; Advanced Powder Products; Alcoa; Bergquist; Boston Scientific; Crystalplex; Dupont; Illuminex; Ionic Fusion Corporation; Merck; NaturalNano, Inc; Pace Analytical Services; RJA Dispursions; Westmoreland Mechanical Testing & Research.

Environmental/Energy

BP Solar; Cosmos Technologies; EnerG2; First Energy; GTS; Neah Power Systems; NDSCS; Plextronics; PPL; Solarity; Spectrum Technologies, Inc.

Electronics/Communications/Optics

3M; Advanced Research Corporation; Advantech; Apogee Photonics/CYOICS; Applied Materials Corporation; Carbon NanoProbes; Cyoptics; EnerG2; Fairchild Semiconductor; General Dynamics Robotic Systems; Hutchinson Technologies; Intel Corporation; Keystone Communications; Lockheed Martin

Components/Devices/Industrial Processing/Equipment

Carbon NanoProbes; Correge Sensors; Cummins Engines; Dana Corporation; Filtration Systems; Fincor Automation; Hysitron; Judson Technologies; Lutron Electronics; Maxima Technologies; Probes Unlimited.

Data Source: NACK Alumni Network 2010



Job Titles for Nanotech Careers

Biological Laboratory Technician
Biofuels Technician
Chemical Laboratory Technician
Microscope Operator
Scanning Probe Operator
Scientist Specialist
Solid State Technician
Cleanroom Technician
Deposition Technician
Device Technician
Equipment Maintenance Technician
Engineering Technician
Etch Technician
Failure Analysis Technician
Laboratory Technician/Manager
Lithography Technician
Medical Lab Technician
Materials Science Lab Technician
Medical Devices Technician
Microfabrication Technician

Nanobiotech Researcher
Metrology Technician
Nanoelectronics Expert
Nanofabrication Technician
Nano Lab Technician
Nanomaterials Research Associate
Nanoscale Fabrication Technician
Nanoscience Technician
Nanotechnologist
Process Technician
Production Technician
Production Scientist
Quality Control Technician
Research Assistant
Scanning Technician
Test Technician
Thin Films Technician
Vacuum Technician

Data Source: NACK Alumni Network, 2010

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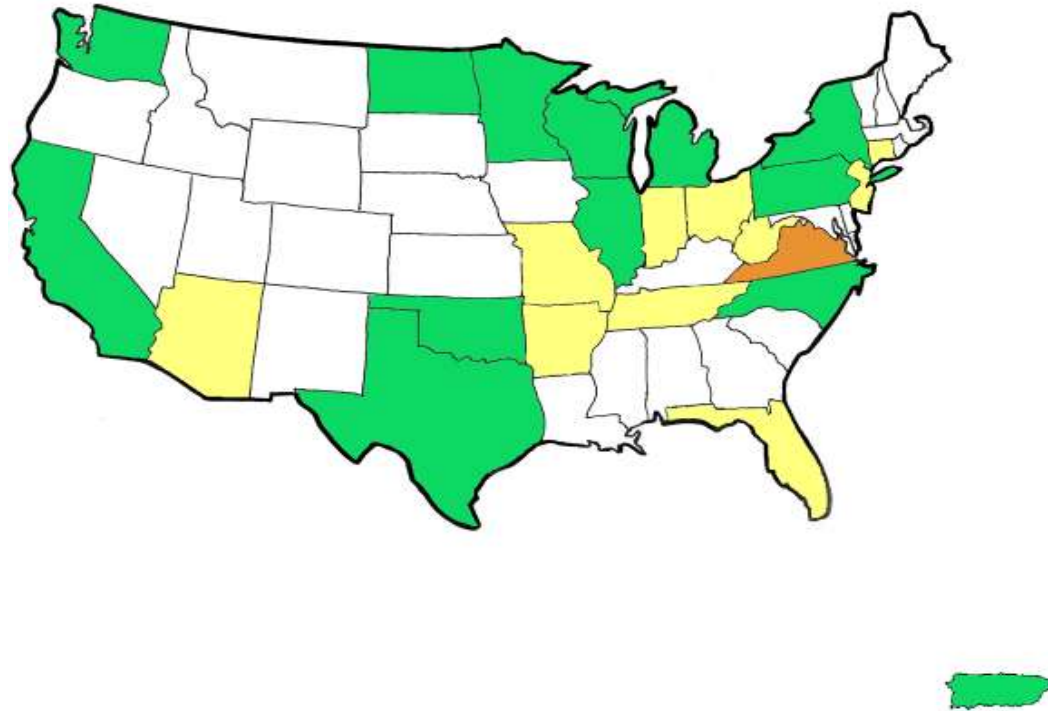
Projected Earnings

Two-Year Associates Degree	\$30,000 - \$50,000
Four-Year Bachelors Degree	\$35,000 - \$65,000
Six-Year Master's Degree	\$40,000 - \$80,000
Eight-Year Doctoral Degree	\$75,000 - \$100,000

Data Source: P.S.U. Center for Nanotechnology Education and Utilization



Nanotechnology Associate Degree Programs PLUS Programs under Development



Brandon Harris



- Graduate of Penn State Capstone Program via Pennsylvania College of Technology, A.A.S. in Electronics and Computer Engineering Technology, Nanofabrication emphasis
- Working at Fairchild Semiconductor in Mountain Top, Pennsylvania
- Job Title: Etch Process Engineer
- Enrolled at Wilkes University in Wilkes Barre, Pennsylvania to earn B.S. in Chemistry
- Niche: Semiconductor manufacturing





Paul Pennington

- Graduate of Dakota County Technical College in Rosemount, Minnesota; Capstone Program at University of Minnesota; A.A.S. in Nanoscience Technology
- Working at 3M in St. Paul, Minnesota
- Job Title: Lab Technician
- Niche: Nano Composite Materials



Ines Martin



- Graduate of Penn State Capstone Program via Bucks County Community College, A.A.S. in Nanofabrication Technology
- Enrolled at Drexel University in Philadelphia, Pennsylvania to earn M.S./B.S. degree
- Major: Materials Science and Engineering with specialty in Nanomaterials
- Current research: multi-component nanowires for electronic and photonic devices
- Niche: Nanomaterials





Lage von Dissen

- Graduate of Dakota County Technical College in Rosemount, Minnesota; Capstone Program at the University of Minnesota; A.A.S. Nanoscience Technology
- Working at the Nanofabrication Center at the University of Minnesota located in Minneapolis, Minnesota
- Job Title: Principal Laboratory Technician/Process Engineer
- Niche: nanoelectronics, nanomaterials, and nanobio
- Enrolled at University of Minnesota to earn B.S. in Chemistry





Harley Hart

- Graduate of Pennsylvania State University Capstone Program via Community College of Allegheny County, A.A.S. in Manufacturing Technology--Nanofabrication
- Working at the West Virginia Shared Research Facilities in Morgantown, West Virginia
- Job Title: Staff technologist
- Niche: Multidisciplinary





Harley Hart

ALCOA Technical Center

- www.alcoa.com

Seagate Technology

- www.seagate.com

Plextronics, Inc.

- www.plextronics.com

West Virginia University Shared Research Facilities

- sharedresearchfacilities.wvu.edu



Questions for Panelists?



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NACK Alumni Network



- Ramie Chackan
- Career Specialist for NACK Alumni Network
- Director of Career Services for Dakota County Technical College
in Rosemount, Minnesota





The National Center for Nanotechnology Applications and Career Knowledge (NACK) at Pennsylvania State University invites all undergraduate degree (associate and baccalaureate) nanoscience technology graduates from colleges and universities across the country to join our NACK Nanotechnology Alumni Network.

PURPOSE

The NACK Alumni Network is designed to help nanoscience graduates enhance their professional opportunities, inform them of educational opportunities, and connect them with networking groups.

BENEFITS

- Provide online networking opportunities
- Access career resources
- Connect students to alumni mentors
- Keep alumni informed of current events
- Share success stories

SIGN UP NOW

Nano4Me.org/Alumni



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Alumni Network Resources

- Website for alumni of nanotechnology undergraduate education programs across the nation

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Alumni Network Resources

- Website for alumni of nanotechnology undergraduate education programs across the nation
- Accessed through NACK website (nano4me.org/alumni)



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- Shares alumni profiles and success stories



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- Shares alumni profiles and success stories
- Connects current nano students to alumni mentors



Alumni Network Resources

- Provides online networking opportunities

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Alumni Network Resources

- Provides online networking opportunities
- Offers Career Resource Services for alumni, current nano students, industry and academia



Alumni Network Resources

- Provides online networking opportunities
- Offers Career Resource Services for alumni, current nano students, industry and academia
- Identifies transfer agreements



Alumni Network Resources

- Provides online networking opportunities
- Offers Career Resource Services for alumni, current nano students, industry and academia
- Identifies transfer agreements
- Contains information on nano trends and events



Check Out the NACK Alumni Network

www.nano4me.org/alumni



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Questions?



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How Can We Better Serve You?

Whether you are joining us live or watching the recorded version of this webinar, please take 1 minute to provide your feedback and suggestions.

<http://questionpro.com/t/ABkVkZJhhf>



Thank you for attending

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Nanotech Works - Alumni Success Stories

You may find additional resources and free curriculum for nanotechnology at www.nano4me.org and click Educators.



Upcoming NACK Workshops

April 5-7 Hands-on Introduction to Nanotechnology
for Educators

May 2 -5 Nanotechnology Course Resources I:
Safety, Processing, and Materials

Aug 8-11 Nanotechnology Course Resources II:
Patterning, Characterization, and
Applications

Go to nano4me.org/educators for further information.



Upcoming NACK Workshops

May 9 – 13 Micro Nano Technology Conference

Go to nano4me.org/educators for further information.

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To access this recording or slides, visit

www.matecnetworks.org

Keyword Search:

NACK Alumni Success Stories

You may also find over 100 resources in the
NetWorks Digital Library by using the
Keyword Search: nanotechnology



NACK Upcoming Webinars

April 29: Nanotechnology in Medicine

May 26: Recruiting Under-Represented Minorities

Visit www.nano4me.org and click Educators and then the Webinar tab for more details about these and other upcoming webinars.



Certificate of Participation

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certificate of participation, please email
Sue Barger at sbarger@engr.psu.edu



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