#### MECHANICAL ENGINEERING FACULTY

### Allen Robinson

Professor, 1998–, Raymond J. Lane William J. Brown Professor, 2002–, Distinguished Professor and Department Head, 2013–

#### Paul Steif

Professor, 1983–, Associate Department Head, 2013–

# **Shelley Anna**

Professor, 2003-

#### Mark Bedillion

Associate Teaching Professor, 2016–

## Jack Beuth

Professor, 1992-

## Jonathan Cagan

George Tallman & Florence Barrett Ladd Professor, 1990–, and Associate Dean, 2015–

#### **Steven Collins**

Associate Professor, 2010–

#### Maarten de Boer

Professor, 2007-

## Jimmy Hsia

Professor, 2015-

## B. Reeja Jayan

Assistant Professor, 2015-

# Aaron Johnson

Assistant Professor, 2016–

## Levent Burak Kara

Professor, 2007-

### Philip LeDuc

William J. Brown Professor, 2002–

# Shawn Litster

 $Associate\ Professor,\ 2008-$ 

## Carmel Majidi

 $Associate\ Professor,\ 2011-$ 

# Jonathan Malen

Associate Professor, 2009–

# Alan McGaughey

Professor, 2005-

# Jeremy Michalek

Professor, 2005-

# O. Burak Ozdoganlar

Ver Planck Professor, 2004–

## Albert Presto

Assistant Research Professor, 2012–

## **David Quinn**

Special Faculty, 2016-

### Yoed Rabin

Professor, 2000-

## **Edward Rubin**

Alumni Chair Professor, 1969-

# Sheng Shen

Associate Professor, 2011–

# Kenji Shimada

Theodore Ahrens Professor of Engineering, 1996–

#### Satbir Singh

Assistant Teaching Professor, 2012–

# **Koushil Sreenath**

 $Assistant\ Professor,\ 2013-$ 

# Ryan Sullivan

Assistant Professor, 2012–

#### Subra Suresh

President,

Carnegie Mellon University

## Rebecca Taylor

Assistant Professor, 2016-

### Venkat Viswanathan

Assistant Professor, 2014-

## **Kate Whitefoot**

Assistant Professor, 2016-

#### Shi-Chune Yao

Professor, 1977-

## Yongjie Jessica Zhang

Professor, 2007-

## **EMERITI**

## Adnan Akay

Lord Professor and Head, Emeritus, 1992–

## Norman Chigier

Professor, Emeritus, 1981–

# Jerry Griffin

William J. Brown Professor, Emeritus, 1981–

### Wilfred Rouleau

Professor, Emeritus, 1954–

# DEPARTMENT OF MECHANICAL ENGINEERING

CONFERRING OF DEGREES AND AWARDS CEREMONY

MAY 20, 2017



# Carnegie Mellon University

The Design Expo Winners, selected by attendee vote, conceptualize and implement novel product ideas through a formal design process in the senior capstone classes.

Awardees: Overall best Design - Fall

Core 3 Drink Stabilizer Team member names:

Andreas Fatschel Anthony Rueda Nickolas Halbedl Ryan Pearce Anthony Rueda Nathaniel Thompson

Overall best design - Spring Multi-color Pancake printer Team Member names:

Justin Abel Osvaldo Chimalpopoca Aaron Tian Joshua Fuhrman

Overall best design, Section B -Spring "TruLie"

Team Member names:

Samer Abdelmoty Andrew Chellman Nadia Florman Alyssa Meyer Stephen Scott Alex Woodward

**Department Research Honors** recognizes graduating seniors who meet rigorous academic

criteria and complete a two-semester research project under the supervision of a Mechanical Engineering faculty member.

Awardees:

Frank Bello IV Jon Cagan "Analyzing Cognitive Design Process via Machine Learning"

Nicole Bustos Alan McGaughey "Model for predicting maximum focused ultra-sound induced cavitation bubble size in soft material"

**Turga Ganapathy** Jon Malen "Near-Field Thermal Radiation and Gas Conduction in a Nanostructured Gap Measured by Frequency Domain Thermoreflectance (FDTR)\*

Kyung Min Lee Kenji Shimada "Computational Method for Complex Geometric Patterns on 3D Printed Customizable Jewelry'

**Alexander Russell** Satbir Singh "Direct Numerical Simulations (DNS) of Aerosol Deposition in Turbulent Flows"

Allan Wang Koushil Sreenath "Vision System for Biped Robotic Walking on Stepping-stones'

June Williams Jon Cagan "Impact of Environmental Stimuli on the Design

The Undergraduate Excellence in Research Award recognizes senior research excellence based on presentations at the Meeting of the Minds research symposium on May 10, 2017.

Awardees: Nicole Bustos Turga Ganapathy Alexander Russel

The Bennett and Forstall Awards are given for excellence in Mechanical Engineering.

Bennett Awardees: Forstall Awardees: Andrew Chellman Melyssa Eigen Jason Dynes Yichu Jin

Margaret Anne Smith

The Graduate Research Symposium Awards

recognize Master of Science research excellence based on presentations at the Mechanical Engineering Graduate Research Symposium on March 31, 2017.

Alex Woodward

Ayush Agrawal: "Controllers for Bipedal Robot

**Paul Choi:** "In-Operando Imaging of Dendrites Using Nanoscale X-Ray Computed Tomography and Epoxy-Free Sample Assembly"

Purva Joshi: "Computerized Planning of Prostate Cryosurgery and Shape Considerations"

Richard Ren: "Deformed State Lattice Planning"

The **Teaching Assistant Awards** are presented to the best graduate student teaching assistant Fall and Spring, as evaluated by students in their class.

Awardees:

TA Fall 2016 - Oleg Spaunkov TA Spring 2017 - Thomas Brubaker

The **Doctoral Research Award** honors a top PhD student for outstanding achievements in research over the course of graduate study.

Awardee:

Christopher McComb

The Jeremiah Mpagazehe Graduate Student Service Award recognizes service and contributions to the graduate student community by both a

Master's and Ph.D. student.

Awardee:

MS Student- Anchit Sood PhD Student- Luke Scime

The Judith A. Resnik Award was established by Carnegie Mellon University in 1990 to honor the life and impact of Challenger astronaut and alumna, Judith Resnik (E 1970). The award is given to recognize and encourage an exceptional senior woman graduating with an undergraduate technical course of study. The awardee must be pursuing graduate or professional training in a technical field.

Awardee: **Nicole Bustos** 

#### **PROGRAM**

#### WELCOME

Allen Robinson

Raymond J. Lane Distinguished Professor and Department Head

#### RECOGNITION OF SENIOR DESIGN EXPO WINNERS

Kate Whitefoot, Assistant Professor

#### RECOGNITION OF DEPARTMENT RESEARCH HONORS

Carmel Majidi, Associate Professor

#### PRESENTATION OF MECHANICAL ENGINEERING AWARDS

Undergraduate Excellence in Research Award

Maarten de Boer, Professor

The Bennett Awards

Koushil Sreenath, Assistant Professor

The Forstall Awards

Levent Burak Kara, Professor

**Graduate Research Symposium Awards** 

Ryan Sullivan, Assistant Professor

**Teaching Assistant Awards** 

Mark Bedillion, Associate Teaching Professor

Jeremiah Mpagazehe Graduate Student Service Award

Alan McGaughey, Professor

#### PRESENTATION OF UNIVERSITY AWARD

Judith A. Resnik Award

Alan McGaughey, Professor

#### PRESENTATION OF DIPLOMAS

Allen Robinson, Paul Steif, Satbir Singh and Jonathan Malen, Professors

Professional photographs of each graduate will be taken and available on our website in June at cmu.edu/me

Following the ceremony, please join us for refreshments at the reception area.