

# **Penn State Nuclear Engineering Society (PSNES)**

**Annual Report  
to the  
Penn State Engineering Alumni Society**

**July 2015 – June 2016**

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# Penn State Nuclear Engineering Society (PSNES)

## 1) Mission Statement

As Alumni, our mission is:

- 1) To foster a lifelong relationship among the Penn State nuclear engineering alumni and the Penn State Nuclear Engineering Program,
- 2) To facilitate, for all Penn State nuclear engineering graduates, a career avenue to the nuclear profession, and
- 3) To provide our individual and collective effort to support the Penn State Nuclear Engineering Program.

Note: Through its Constitution, PSNES explicitly includes both the College of Engineering's Nuclear Engineering Program and the Radiation Science and Engineering Center. Our Alumni view both organizations as integral and unique parts of the Penn State Nuclear Engineering experience. For this PSNES Annual Report, both organizations are included.

## 2) Purpose

PSNES was created as an Affiliate Program Group (APG) of the Penn State Engineering Alumni Society (PSEAS) in 2001.

The purpose of PSNES shall be to promote fellowship and communication among the alumni, faculty and students of the Nuclear Engineering Program (NE or Program) in order to work for the improvement of the Program, the Mechanical and Nuclear Engineering Department, and the College of Engineering.

## 3) Membership

Since inception, the Pennsylvania State University has 2155 Nuclear Engineering graduates with 1232 having active e-mail addresses on file with Penn State. Of this population, 643 are active in the Penn State Alumni Association. (Source: PSEAS Staff, May 16, 2016)

The PSNES LinkedIn private group contains 119 members (as of June 7, 2016). The membership in this group is open to Students, Alumni, Faculty and Friends of the PSU Nuclear Engineering Program and the PSU College of Engineering Radiation Science and Engineering Center.

| PSNES Membership              |   |
|-------------------------------|---|
| Number of Members             | 299<br>(Source: MNE Webmaster as of May 14, 2016)   |
| How is membership determined? | E-mail Registration via the PSNES Website or via methods as outlined in Article III of the PSNES Constitution. (See Appendix B) |

# Penn State Nuclear Engineering Society (PSNES)

## 4) Board of Directors

| Name                | Title  | Company Affiliation                     | Degree / Year                     | Board Term   | Officer/Notes          |
|---------------------|--|---|-----------------------------------|--|------------------------|
| Patricia A. Loftus  | Manasota Chapter 116 Executive Committee & SCORE Certified Business Mentor | SCORE Association, Manasota Chapter 116 | 1975 BS NucE                      | Board Appointment (12/2015-2016 Election turnover) | Interim President      |
|                     | Executive Consultant   | Business Owner                          |                                   | Board Appointment (7/2015-2016 Election turnover)  | Interim Vice President |
| Tom Richard         | Senior Nuclear Engineer  | DTE Energy, Fermi 2                     | 2011 MEng NucE                    | 2013-2016  | Secretary/Treasurer    |
| John Atchison       | Senior Engineer  | Information Systems Laboratories, Inc.  | 1976 BS NucE                      | 2013-2018  | At-Large Director      |
| Eric Beaumont       | VP Global Research   | Barclays                                | 1992 BS NucE; 1994 MS NucE        | 2013-2018  | At-Large Director      |
| Michael Pantano     | Graduate Research Assistant  | MIT                                     | 2012 BS NucE, ME, Mathematics     | 2013-2018  | At-Large Director      |
| Joseph Sholtis, Jr. | Owner/Principal Consultant   | Sholtis Engineering & Safety Consulting | 1970 BS NucE                      | 2011-2016  | At-Large Director      |
| James Tusar         | Senior Manager, BWR Design Nuclear Fuels                                   | Exelon                                  | 1984 BS NucE                      | 2011-2016  | At-Large Director      |
| Rachel Heath        | Senior Reactor Operator  | Exelon                                  | BS NucE                           | 2011-2016  | At-Large Director      |
| Duane Karchner      | Refuel Floor Manager - Susquehanna   | Talen Energy                            | 1981 BS NucE                      | 2013-2018  | At-Large Director      |
| Hilary Neal         | Senior Program Analyst, Performance Improvement                            | Westinghouse                            | 2009 BSME & BS NucE; 2012 ME NucE | 2013-2018 (see Note 1)                             | At-Large Director      |
| Doug Wood           | Executive Consultant - Retired   | Tetra Tech Inc.                         | 1973 BS NucE                      | 2013-2018  | At-Large Director      |

# Penn State Nuclear Engineering Society (PSNES)

| Name                           | Title  | Company Affiliation               | Degree / Year | Board Term                         | Officer/Notes   |
|--------------------------------|--|-----------------------------------|---------------|------------------------------------|---|
| Dr. Arthur Motta               | Chair of Nuclear Engineering   | The Pennsylvania State University |               | Ex-Officio member per Constitution | Member with vote  |
| Dr. Kenan Unlu                 | Director, Radiation Science & Engineering Center, Professor of Nuclear Engineering | The Pennsylvania State University |               | Ex-Officio member per Constitution | Member with vote as both RSEC Director and NucE Faculty |
| Rick Etling                    |  | Retired                           | 1978 BS NucE  | 2013-2018                          | Immediate Past President with vote (see Note 2)         |
| Jeremy Barnhart                | MNE Student  | PSU ANS Student Chapter President |               | 2015-2016                          | Ex-Officio, ANS Student Chapter President without vote  |
| Michael Erdman & Dale Hoffmann |  | PSEAS President                   |               | Ex-Officio member                  | Member (PSEAS President) without vote                   |

By 12/2016 Board Appointment, Catherine Perego will assume the role of President from the 2016 Election turnover (8/21/2016) through the 2018 Election turnover.

Note 1: Effective with the 2016 Election turnover (8/21/2016), Hilary Neal assumes the role of Secretary/Treasurer. In April 2016, the PSNES Board of Directors elected to appoint an At-Large Director to be named to fill the remainder of her At-Large Director term through the 2018 Election turnover.

Note 2: In December 2016, the PSNES Board of Directors appointed Rick Etling (last elected President) to remain in the Immediate Past President position through the 2018 Election turnover.

## 2016 PSNES Election Summary:

The 2016 PSNES elections took place from January 25, 2016 through March 31, 2016. The new Board transition/turnover will be completed at the August 21st PSNES Annual Meeting.

# Penn State Nuclear Engineering Society (PSNES)

The PSNES Officers for the August 2016-2018 Term are:

- Interim President: Catherine Perego
- Vice President/President Elect: Ramon Cruz
- Secretary/Treasurer: Hilary Neal

The complete At-Large Director roster through 2018 with their respective terms is:

- Term 2016-2020: Matt Ellis, Jim Tusar, Matt Wargon
- Term 2013 - 2018: John Atchison, Eric Beaumont, Duane Karchner, Vacant Position (Hilary Neal), Michael Pantano, Doug Wood

## 5) PSNES Priorities and Focus Areas

| Priorities and Focus Areas  | Progress Update  |
|---|--|
| PSNES Revitalization & 2016 Elections/ BOD Transition   | <ul style="list-style-type: none"> <li>• PSNE turnaround and 2016 Elections complete.</li> <li>• Board of Directors (BOD) transition on track for 8/2016.</li> </ul>   |
| What can PSNES do to help, support, and advance the NucE Program, RSEC, Student American Nuclear Society (ANS), and PSU Women in Nuclear (WIN)? | <ul style="list-style-type: none"> <li>• MNE Senior Recognition Banquet sponsorships</li> <li>• MNE E-Knowledge Commons PSNES Computer Lab Naming Opportunity promotion</li> <li>• Future of Nuclear Energy presentations/roundtable</li> <li>• RSEC 60th Anniversary Celebration: PSNES Resolution plaque and event speaker</li> <li>• Annual selection of Beecher-Loftus Service &amp; Leadership in Nuclear Engineering award recipient</li> <li>• Active engagement with PSU nuclear related student clubs (PSNES Liaisons) and PSEAS Board</li> <li>• Broad Outreach: PSNES LinkedIn private group</li> <li>• Nuclear Engineering Time Capsule &amp; Decal Design Competition (collaboration with Student ANS)</li> </ul> |
| PSNES Membership Growth and Engagement  | <ul style="list-style-type: none"> <li>• Broad Outreach: 11/9/2016 Welcome Reception at American Nuclear Society (ANS) venue; PSNES LinkedIn private group, 6 PSNES E-News Briefs listserv, New PSNES Website &amp; Digital Marketing/Social Media Plan execution</li> <li>• 2016 New Grad Reception (PSEAS APG Grant)</li> <li>• Early Career Award proposal development</li> <li>• Support to ANS Career Path Options Pilot (Space)</li> </ul>   |
| Student Mentoring/Networking Growth & Engagement  | <ul style="list-style-type: none"> <li>• Student driven mentoring/networking on demand (PSNES member resumes hosted in ANGEL)</li> <li>• Annual New NucE Student Orientation speaker &amp; social event participation</li> </ul>   |

# Penn State Nuclear Engineering Society (PSNES)

## 6) Summary of PSNES Activities & Events

| Activity/Event Name  | Does PSNES have a program like this?<br>YES or NO | Date(s)  | Number of Alums Participating               | Notes  |
|--|---|--|---|--|
| Mentoring Program  | <b>YES</b>  | See Section 8 of Report for Details              |   |  |
| PSNES Leadership (Board of Directors) Conference Calls                                 | <b>YES</b>  | 7/29/2015<br>10/1/2015<br>12/3/2015<br>1/20/2016 | Typically ranges from 9-14/call             | See PSNES Website for Meeting Minutes  |
| PSNES Leadership (Board of Directors) Face-to-Face Meetings w/ Dial-In                 | <b>YES</b>  | April 2016                                       | 9 + 4 via Proxy Vote                        | See PSNES Website for Meeting Minutes  |
| Speakers Bureau (informal)   | <b>YES</b>  |  | Typically 1-2/year                          | Alumni speakers for NucE 590; 2016 Future of Nuclear (event in development)          |
| PSNES Alumni Tailgate  | <b>NO*</b>  | <b>N/A</b>                                       | PSNES does not track this                   | *Promote PSEAS event   |
| PSNES Facebook Group   | <b>NO*</b>  |  | PSNES does not track this                   | * MNE posts relevant to NucE. PSNES members contribute limited photos/content.       |
| PSNES LinkedIn Group   | <b>YES</b>  |  | 119   | Includes Alumni, Students, Faculty and Staff of NucE/RSEC                            |
| PSNES Mailed Newsletter  | <b>NO*</b>  | <b>N/A</b>                                       | PSNES does not track this                   | *Articles in MNE Publications  |
| PSNES e-Newsletter   | <b>YES</b>  | Various (11/2015-6/2016)                         | 6 x 299                                     | 6 News Briefs issued via PSNES Member Listserv                                       |
| Young Alumni Career Award  | <b>NO*</b>  | <b>N/A</b>                                       | <b>N/A</b>                                  | * 2016 priority. BOD Proposal Team: 4.   |
| NucE Time Capsule  | <b>YES</b>  | Schedule to align w/ MNE E-Knowledge Commons     | PSNES Member content contributions on-hold. | Time Capsule procured & located in MNE Office. Goal to house in E-Knowledge Commons. |
| RSEC 60th Anniversary Celebration  | <b>YES</b>  | August 2015                                      | 10+   | PSNES Resolution (plaque, speaker)   |
| Annual selection of Beecher-Loftus Service & Leadership in Nuclear Engineering Awardee | <b>YES</b>  | Fall 2015  | Awards Committee: 4                         | See PSNES Website for Meeting Minutes (Student award endowed by Alumna)              |

# Penn State Nuclear Engineering Society (PSNES)

| Activity/Event Name  | Does PSNES Have Program/Event Like this?<br>YES or NO | Date(s) | Number of Alums Participating                                | Notes   |
|--|---|---------|--|---|
| Student Mentoring/Networking   | <b>YES</b>  |         | 13 Alumni  | Student driven. Resumes in ANGEL.   |
| E-Knowledge Commons PSNES Computer Lab Naming Opportunity Promotion      | <b>YES</b>  |         | PSU NucE Alumni e-mail listserv (1200+?)                     | 3 PSNES Members to co-sign MNE Letter (e-mail) to all NucE Alumni   |
| 11/9/2016 Welcome Reception (Winter ANS Meeting Venue)                   | <b>YES</b>  |         | PSNES Attendees: 10+ (event registration list not available) | Event co-sponsored by PSU MNE & 4 additional industry organizations. PSNES BOD/ members, Student ANS, Student WIN attended.     |
| 4/30/2016 New Grad Reception (PSEAS APG Grant)                           | <b>YES</b>  |         | 9  | PSNES BOD attendees   |
| New PSNES Website content support & Digital Communication Plan Execution | <b>YES</b>  |         | PSNES does not have access to MNE analytics                  | NucE Program Communications & BOD are content contributors. Website Support: 3. Digital Communications: <5 active contributors. |
| Constitution Review/Succession Planning Team                             | <b>YES</b>  |         | PSNES BOD: 4   | See PSNES Website for Meeting Minutes   |
| Member support to ANS Career Path Options Pilot (Space)                  | <b>YES</b>  |         | PSNES BOD: 2   | See PSNES Website for Meeting Minutes   |
| Annual Fall New NucE Student Orientation speakers & social event         | <b>YES</b>  |         | PSNES BOD speaker: 1   | See PSNES Website for Meeting Minutes   |
| Annual MNE Senior Recognition Banquet                                    | <b>YES</b>  |         | Anecdotal - See Meeting Minutes                              | PSNES Award Committee Chair: 1 Typical Alumni sponsorships: 3+  |
| PSU on-campus events supported by Members                                | <b>YES</b>  |         | See Meeting Minutes  | RSEC Safeguards Review Committee  |

# Penn State Nuclear Engineering Society (PSNES)

## 7) Grant Report

| Semester/Year | Grant Name         | Dollar Amount Received | Status  |
|---------------|--------------------|------------------------|---|
| Spring 2016   | New Grad Reception | \$1000                 | 4/30/2016 Event. Follow-on actions in progress. PSEAS approved grant schedule extension to November 30, 2016. |

## 8) Mentoring Program Synopsis and Statistics

The Department of Mechanical and Nuclear Engineering (MNE) and the Penn State Nuclear Engineering Society (PSNES) jointly sponsor the Nuclear Engineering Mentoring Program to facilitate the professional development of MNE students by providing guidance, counsel and networking opportunities. Mentors interact with their student mentees on a confidential, one-to-one basis using a mutually agreed-upon method of communication.

In this program, students drive the interaction: they decide the objectives, select the mentor(s) they would like to contact from resumes hosted on the ANGEL site, and initiate the connection. This connection could be a one-time contact or the beginning of a long-term mentoring relationship. It is up to the student and depends entirely on his or her needs.

| Number of Alumni Mentors | Number of Student Mentees          | Total Number of Students Who Could Request a Mentor | Percentage of Students Requesting Mentor (as compared to potential total student population) |
|--------------------------|------------------------------------|---|--|
| 13<br>(as of Fall 2015)  | N/A - Confidential, student driven |   |  |



# **Penn State Nuclear Engineering Society (PSNES)**

## **Appendix A – APG Final Grant Report**

**Not Applicable - PSEAS approved PSNES's APG Grant schedule extension to November 30, 2016.**

# **Penn State Nuclear Engineering Society (PSNES)**

## **Appendix B – PSNES Constitution**

(See PSNES Website: <http://www.mne.psu.edu/Alumni/PSNES/Constitution.aspx>)

### **PSNES Constitution**

#### **Article I. Name**

The name of this organization shall be the Penn State Nuclear Engineering Society, hereinafter referred to as PSNES or the Society. This Society shall be an affiliate group of the Penn State Engineering Alumni Society (PSEAS).

#### **Article II. Purpose**

The purpose of this organization shall be to promote fellowship and communication among the alumni, faculty and students of the Nuclear Engineering Program (NE or Program) in order to work for the improvement of the Program, the Mechanical and Nuclear Engineering Department, and the College of Engineering.

Hereinafter, reference to Program graduates or alumni includes reference to alumni of the former Department of Nuclear Engineering.

#### **Article III. Membership**

##### **Section 1**

Members - All living graduates of Program who have indicated a desire to be a member of PSNES are automatically members.

##### **Section 2**

Associate Members - Penn State graduates who are not nuclear engineering graduates but who desire to become a member of PSNES can do so by either self-nomination or by nomination by a member. Such a request must be made in writing.

##### **Section 3**

Honorary Members - When appropriate, the Board of Directors may designate non-alumni as Honorary Members in recognition of acknowledged eminence in some area of engineering or who have rendered outstanding service to the Program. Honorary Membership requires approval by a majority vote of the Board of Directors.

# **Penn State Nuclear Engineering Society (PSNES)**

## **Article IV. Organization**

### **Section 1**

A Board of Directors shall govern the general affairs of PSNES; the Board shall consist of:

1. the Society Officers: President, Vice-President/President-Elect and Secretary/Treasurer,
2. the Chair of the Program, ex officio with vote,
3. the Director of Radiation Science and Engineering Center, ex officio with vote,
4. a current NucE faculty member,
5. the PSNES immediate past president,
6. six to nine members to be elected at-large,
7. the President of the PSEAS or designee (ex officio without vote), and
8. the ANS student section president (ex officio without vote).

### **Section 2**

All actions of the Board of Directors shall be decided by majority vote when a quorum is present. A majority vote is defined mathematically as one (1) plus half of those Board members who are present (either physically or by telephone conference call, assuming an even number of participants); or in the case of an odd number of participants (either physically or by telephone conference call) a majority shall be half of the participants rounded to the next higher even number present at any regular or duly called meeting of the Society.

A quorum shall consist of eight members of the Board. If a quorum is not present at a scheduled Board of Directors Meeting, a detailed description of the proposed action may be prepared and distributed to all Board Members within 14 days of the meeting. Within 14 days of receiving the proposed action, each member must submit their vote by postal mail or email to the Board Secretary/Treasurer. A tally of the votes will dictate the disposition of the action.

### **Section 3**

The Board of Directors may solicit funding from members as necessary to cover the cost of special projects or operations.

# **Penn State Nuclear Engineering Society (PSNES)**

## **Article V. Elections**

### **Section 1**

The Board of Directors will nominate a slate of candidates for at-large Board positions and for the Society officers: President, Vice-President/President-Elect and Secretary/Treasurer. The nominations will be posted on the PSNES website and the membership will be notified of this electronically three months prior to the election. For those members without an E-mail address, the list of candidates will be sent by mail. Additional nominations from PSNES members may be made over the next 30 days after the list of candidates is sent to the membership by e-mail provided that the nominee has agreed to be nominated.

### **Section 2**

Officers and Board Members shall be elected by a majority vote of those members who have submitted their vote electronically. The electronic vote will be taken by posting nominees names on the PSNES website for one month.

### **Section 3**

At-large members' terms shall be staggered such that half (or approximately half) are subject to election/re-election every two years. At-large members may be appointed at any time by the Board of Directors to fill Board vacancies. At-large members so appointed will serve the balance of the unexpired term.

### **Section 4**

Officers shall be elected for two year terms, with the exception of the Vice President/President-Elect, who upon election will have a four year obligation.

- a. At-Large Board members shall be elected for four year terms. Vacancies may be filled by appointment by the Board of Directors between every two-year election. Board members and Officers so appointed will serve the balance of the unexpired term.

### **Section 5**

No Officers may be elected to the same office for more than two consecutive terms. The Vice President/President-Elect will have one combined term of four years. No Board Member may be elected to the same At-Large Director position for more than three consecutive terms.

# **Penn State Nuclear Engineering Society (PSNES)**

## **Article VI. Duties of Officers**

### **Section 1**

The President shall preside at all meetings and shall be responsible for general supervision of all work of the Society. The President and Vice-President/President-Elect must be Penn State Program graduates.

- a. The President, or designee, shall serve on all committees as an ex-officio member.
- b. The President, or designee, shall serve as this society's delegate to the PSEAS Board of Directors.

### **Section 2**

The Vice-President/President-Elect shall serve in the absence of the President and shall also perform such duties as may be assigned by the President. The Vice-President/President-Elect shall assume the duties of the President in the event of the incapacity or absence of the President.

### **Section 3**

The Secretary/Treasurer shall be responsible for the recording and reading of the minutes of all meetings, creating Society correspondence and reports, and shall be responsible for depositing, disbursing and accounting of all monies of the Society.

## **Article VII. Committees**

The President may appoint standing and/or ad-hoc committees as required to accomplish the purposes and objectives of the Society. Furthermore, the President may terminate previously established standing or ad-hoc committees as required.

## **Article VIII. Meetings**

### **Section 1**

At least one meeting of the membership shall be held each year to be known as the annual meeting, and it shall be held at the time and place fixed by the Board.

### **Section 2**

Special meetings of the Society shall be called at the discretion of the President. The Secretary shall send, to the membership, written notices (or E-mail if such addresses are available) of the annual and special meetings at least one month in advance.

# **Penn State Nuclear Engineering Society (PSNES)**

## **Section 3**

The Board shall meet at the call of the President or at the request of a majority of the members of the Board. Secretary shall send, to the membership, written notices (or E-mail if such addresses are available) of the Board meetings at least one month in advance.

## **Section 4**

The committees shall meet on the call of the committee chairman or at the request of the President.

## **Article IX. Amendments**

### **Section 1**

This Constitution may be amended by a two-thirds vote of the Society members present at any Society meeting as defined by Article VIII (meetings) above provided:

- (1) The amendments have been placed before the Board of Directors at least one month before the meeting, and
- (2) The amendments have been approved by a majority vote of the board members as defined in Article IV Section 2 above.

### **Section 2**

This Constitution and its amendments must not be in conflict with the constitution of the PSEAS or the rules and regulations for constituent societies as established by the Executive Board of the Penn State Alumni Association.