## Minutes of the Executive Committee Meeting ANS Thermal Hydraulics Division

## 2003 ANS Summer Meeting San Diego, CA, Town and Country Resort & Convention Center 5:00 –7:00 PM, Sunday, June 1, 2003, Pacific 4

## Attendees: Jong Kim, Shripad T. Revankar, F. Bill Cheung, Whee Choe, Yassin Hassan, Akira Yamaguchi, Hisashi Ninokata, Tom K Larson, Donald Todd, Donald M. McEligot, Karen Vierow, Mitch Harkensrider. (see Attachment A)

## 1. Opening

Jong Kim called the THD Executive Committee Meeting to order at 05:30 p.m.

## 2. Agenda

Meeting agenda was introduced (See attachment B) and was approved.

## 3. Minutes from November 2002 Meeting

The meeting minutes from November 2002 meeting at Washington, DC were approved.

## 4. Action Items from November 2002 Meeting

Program Committee membership by-laws prepared by Robert Martin was introduced (See Attachment C).

The following corrections were made on each item and were approved.

- THR9.2.1- Membership
  - 1. In the second sentence "Certain activities .. members." and third sentence " The EC .. necessary." were removed.
  - 2. In the first sentence "vice chair" was replaced by "secretary".
- THR9.2.2 Officers
  - 1. In the first sentence "vice chair," was removed.
- THR9.2.3 –Election and Eligibility
  - 1. In the first sentence "vice chair," was removed. In the second sentence "at the summer NHTC meeting" was removed.
- THR9.2.5 Amendments

In the first sentence the right hand side missing bracket ")" was placed.

The following action items were identified

- Tom Larson and Bill Cheung will prepare yearly membership list and send nomination list
- Kim Jong will check the if Summer 2004 ANS meeting is at least 1 month away from ASME 2004 NHTC meeting and inform the program committee of joining/sponsoring ASME 2004 NHTC.

## 5. Treasurer's Report

There was no treasurer's report.

## 6. **Program Committee Report**

Karen Vierow presented the program committee report. Highlights of this reports were: The ANS has four session for 2004 ANS Summer Meeting. The ANS will sponsor 4 sessions in NHTC 2004 meeting. Jong Kim will represent our division to negotiate with ASME for the decision of the NTHC dates. NUTHOS-6 status report was presented by Prof Ninokota. ANS has approved to cosponsor this meeting. Dr. Baek presented status report on NURETH-10 to be held in Korea. Per Peterson will contact Prof. Delhay about the NORETH-11 meeting in France. There was no report by the web site subcommittee. An action item was identified for the election of editorial subcommittee. Membership issues were discussed.

## 7. Honors and Awards Committee Report

The ExecutiveCommittee approved the presentation of THD TechnicalAchievementAward at the NURTETH –10 meeting in Korea. The nominations for the THD Technical Achievement Award are sought. It was requested that the nomination packages be sent to Bill Cheung within a month. EC approved that a best paper award will be presented at NURETH-10 (10/5-10/9/2003) meeting based on papers presented at 2003 ANS Summer Meeting and ASME 2003 meeting.

A new award Service Award was suggested by Bill Cheung and voted approved. *Action item* on this was that Jong Kim will work to implement this award.

## 8. Nominating Committee/Election

Under new by-laws approved by EC, the committee will have one Division Chair/Elect

and Secretary position.

## 9. Membership/ Member Nomination Issue

Tom Larson will look into the active membership and the membership nomination for EC.

## 10. Student Conference 2003/2004

At the beginning of the EC meeting, UC Berkeley's ANS student chapter representative, Miss Darby Kimball presented report on the 2003 ANS Student Conference held at the UC Berkeley ( see attachment D) . The highlights were: 220 students attended the conference (a new record). 21 Organizations participated. 90 technical papers were presented. A total of \$24,000 student support towards travel was generated. The student representatives thanked AND THD for continued strong support.

Ross Rodel from ANS Chapter of the University of Wisconsin Madison introduced the 2004 ANS Student Conference to be held at Madison WI, from April 1-3, 2004 (See attachment E). Student representatives were requesting monetary support from THD for the conference activities. *THD committed verbally with to support financially this conference as it had done in the previous student conference*.

## 11. Old Business

*Bill Cheung asked to submit nomination of THD Technical Achievement Award. to the EC Chair.* 

## 12. New Business

There was no New Business

## 13. Adjourn

The meeting was adjourned at 7:15 pm

Minutes prepared by Shripad T. Revankar

## Attachment A

**Attendees List** 

Nong S.T. Revanen F. Prec Crang Yassin Hassan Whee Choe Jong Kim Hisashi Ninokata Ativa Yamaguchi T.K. Warson Donald Todd Visitor Donald M. MC\_ELIGOT doserver Kamt voior Mitch Harkenrider

e- mail Shup ad @ cen porelue et fx c 4 @ pour edu y-hassan @ Eamu. whee choe @ txu. con jKim@epri.com kninokata@nr.titech.ac.jp yamaguti@oec.jnc.g.jp tkl@ind.gov Smuld todd @fromshine - App. Com dm 6@ inel.gov vierow@ecn.purdue.edu mhurkenre purdue. edu

## Attachment B

## AGENDA

## American Nuclear Society – Thermal Hydraulics Division

## **Executive Committee Meeting**

## Town and Country Resort & Convention Center, San Diego, California 5:00 –7:00 PM, Sunday, June 1, 2003, Room: Pacific 4

- 1. Opening
- 2. Approval of Meeting Agenda
- 3. Minutes from November 2002 Meeting
- 4. Action Items from November 2002 Meeting
- 5. Treasurer's Report
- 6. Program Committee Report
- 7. Honors and Awards Committee Report
- 8. Nominating Committee/Election
- 9. Membership/Member Nomination Issue
- 10. Old Business
- 11. New business

### Attachment C

A quorum shall be constituted by a majority of the voting members of the EC.

## THR9.2 - Program Committee

#### THR9.2.1 - Membership

- Membership is conferred to all currently active members of the Executive Committee (EC). Certain activities of the Program Committee (PC) may require the participation of additional members. The EC should nominate and elect such individuals, as necessary.
- 1.2. The appointed members, other than the officers, shall have terms not exceeding three years with a maximum of two consecutive-terms. For elected EC members, the terms of membership to the PC will coincide with the terms of membership to the EC. Members elected by the EC shall serve a maximum of one (1) three-year term. The terms designated for each shall expire following a summer Program Committee (PC) meeting and shall be such as to maintain effective continuity of experience in the PC. In selecting members an effort will be made to obtain a good representation by discipline, affiliation, and geographic location.
- The most recently retired PC Chair and the Division Chair and Vice-Chair shall be members, ex officio, without power to vote.
- 3. The division Nominating Committee (NC) will review yearly the PC membership, and will nominate candidates to all positions (including <u>chair and vice chair</u> officers and subcommittee chairs) vacated by rotating-out, resigning, or defaulting members. The PC recommendations arrived at by appropriate election procedures will be transmitted to the NC by the PC Chair (who is also an ex-officio NC member with no voting rights). All appointments will be ratified by the Executive Committee (EC). For untimely vacancies, a PC officer position will be filled by appropriate action of the EC such needs shall be forwarded to the Division Chair, by the PC Chair, through the NC, which should develop appropriate rcommendations.
- 4.A PC member will be found in default if he/she misses two consecutive PC meetings and fails to provide a strong evidence of interest by contributing absences will result in the member's dismissal from the PC with no further notice.

### THR9.2.2 - Officers

- The PC officers include, chair, vice-chair, and secretary, and they serve one -year terms. Normally the secretary will be elevated to vice-chair and finally to chair in the succession of three-years.
- 2. The chair shall have the overall supervision of the PC. He/she will be responsible for an effective liaison with the EC and the NC.
- The Vice-Chair will prepare for his responsibilities as Chair in the following year and will fill-in for the Chair as necessary.
- 4. The secretary will keep a record of the proceedings of the PC in each meeting, write the minutes and distribute them to PC members within thirty (30) days after each meeting. He/she will keep a cumulative file of such minutes to hand in to the next secretary and so on. The Secretary will also maintain a cumulative file (tabular form) of attendance and screen members for good standing (see THR9.2.1, item 4).

#### THR9.2.3 - Election and Eligibility

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<u>TheAll elections of the PC officerschair, vice-chair, and subcommittee chairs, and members will be made by the EC on the basis of its NC recommendations (seeTHR9.2.1, 1)</u>

item3). Program Committee input for these positions is developed through open nominations and voting in PC meetings at the summer NHTC meeting.

- 2. The secretary of the EC shall also serve as secretary of the PC.
- Normally officers and subcommittee chairs of the PC will be selected from the PC membership, but any THD member can be selected at the discretion of the NC and EC.

## THR9.2.4 - Standing Subcommittees

- Major programmatic functions of the PC shall be administered by three subcommittees: (i) Editorial (ES), (ii) National/International Heat Transfer (NHTS), and (iii) National/Topical ANS (N/TS). The goals and procedures of these subcommittees are given under Procedures.
- The PC Secretary maintains a cumulative file of subcommittee chairs and membership to ensure compliance with terms of office as specified.

## THR9.2.5 - Meetings

- The PC will meet twice a year\_during the ANS Winter and the summer THTC meetings. All meetings are open to THD membership. All matters of major significance to PC shall be put to vote after adequate discussion. All programs developed by the PC are subject to final approval by the EC and the National Program Committee (NPC). The PC Chair is responsible for effective liaison in this regard to both the EC and the NPC (the latter through the National/Topical Subcommittee (N/TS) Chair who is the Division representative).
- A quorum for transactions of business at a PC meeting shall <u>be constituted by a majority</u> of the voting members of the PC consist of ten PC members or 50% of the current PC membership, whichever is smaller.

## THR9.2.6 - Amendments

Any of these rules can be modified with a recommendation from the PC (two-thirds vote majority) and approval by the EC.

## Appendix D

## CONFERENCE REPORT 2003 ANS Student Conference \* April 2-5, 2003 \* Berkeley, CA

#### About the Conference

The 2003 ANS Student Conference in Berkeley, CA was a resounding success. Held from April 2-5 on the University of California Berkeley campus, the conference was attended by over 220 students from 23 different schools. This year's theme was "Living in a Nuclear Free Zone", which was inspired by

the ironic "Nuclear Free Zone" signs that greet visitors at the Berkeley city limits. The theme was intended to serve as a reminder that vehement opposition to nuclear applications still exists. During the conference, students were encouraged to talk about ways to overcome this and other obstacles as we move towards a new era of nuclear science and engineering.



The "Nuclear Free Zone" sign.

The Student Conference is the only national gathering of nuclear engineering students each year. It serves as an important venue for networking, making new friends, and reinforcing the tradition of technical excellence that the American Nuclear Society has come to embody. This year was no exception.

#### **Opening Plenary**

The conference officially began on Thursday evening with the opening plenary. After opening remarks, incoming ANS President Dr. Larry Foulke listed the top ten "Good News" nuclear issues and convinced the students of why a nuclear renaissance is inevitable. The next to speak was Dr. Ruth Weiner of Sandia National Laboratory, who gave an insider's perspective of anti-nuclear sentiments within the environmental community. Ted Quinn (past ANS President and outgoing chair of the Operations & Power Division) spoke about upcoming workforce shortages and offered students several suggestions for helping to keep enrollment and employment in balance. The keynote speech was given by Tom Christopher (President and CEO of Framatome) gave the final talk, who updated the audience on challenges facing nuclear utilities in the coming years.



#### Tours

Earlier that day, students had the opportunity to participate in several area tours. One popular tour was that of Lawrence Livermore National Laboratory. Volunteers at the lab organized and paid for an entire day of events for the students. Students viewed several LLNL facilities such as the National Ignition Facility and the ASCI supercomputing facility. The tour also featured a rare treat: lunch and a question and answer session with the distinguished Dr. Edward Teller.

Other tours included a Sushi Seminar to introduce students to one of the Bay Area's culinary delights, info sessions on San Francisco tourist traps and the Napa Valley wine country, and the Body Modification tour (mandatory knowledge for those living in Berkeley).

#### **Technical Sessions**

Beginning Friday morning, undergraduate and graduate students presented over 90 papers in 13 topical tracks. These papers represented work done primarily by the students, usually as a research project outside of normal coursework. Several of the judges commented on the high quality of the research and the presentation skills that they saw.

A variety of research topics were presented. Each topical track was broken down into "mini-sessions" which grouped papers more closely by topic. To illustrate the wide range of work being done by the students, we have listed the session titles below.

- Aerospace Applications I: Radiation & Dosimetry
- Aerospace Applications II: Power & Propulsion
- Automation & Instrumentation
- Biology & Medicine
- Education & Training
- Fuel Cycle I: Fuel Fabrication Fuel Cycle II: Radioactive Waste
- Fuel Cycle II: Radioactive waste
  Isotopes & Radiation I: Detection
- Isotopes & Radiation I: Desention
  Isotopes & Radiation II: Desimetry & Shielding
- Materials I: Stress and Deformation
- Materials II: LBE Corrosion
- Materials III: Stress Corrosion Cracking
- Matchais III: Stress Convision Cracking Math & Computation I: Validation & Verification
- Math & Computation II: Validation & Ven
  Math & Computation II: Code Efficiency
- Nuclear Installations Safety I: Accident Analysis
- Nuclear Installations Safety II: Threat Reduction
- Plasma & Fusion I: Technology Applications
- Plasma & Fusion II: Energy & Confinement Concepts
- Policy & Economics
- Reactor Design I: Generation III and III+
- Reactor Design II: Generation IV and Beyond
- Thermal-Hydraulics I: Computer Modeling
- Thermal-Hydraulics II: Experimental Measurements

Opposite: The speakers and conference organizers pose at the plenary. From left to right are Tom Christopher, Ted Quinn, Darby Kimball, Lance Kim, Dr. Ruth Weiner, and Dr. Larry Foulke.

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## CONFERENCE REPORT 2003 ANS Student Conference \* April 2-5, 2003 \* Berkeley, CA

#### Professional Development Sessions

During lunchtime on Friday, three Professional Development Sessions were held. These sessions allow students to interact with professionals in a more intimate atmosphere in order to learn skills that will be valuable to their career development. The NAYGN (North American Young Generation in Nuclear) section at Diablo Canyon hosted two sessions, titled "New Hire Programs at Nuclear Utilities" and "The Nuclear Industry in the Mass Media". A third session focused on the process for obtaining a Professional Engineering license, and was led by Larry Foulke and a representative from the NCEES (National Council on Examinations for Engineers and Surveyors).



#### **Career Fair**

The Career Fair, held Friday and Saturday, featured 21 organizations (setting a new record for a West Coast conference). Five graduate schools, six national laboratories, and nine companies were present, in addition to representatives from ANS National Headquarters. Students welcomed the chance to speak at length with representatives from the companies, and many résumés exchanged hands.

Non-nuclear engineering students from UC Berkeley also attended the Career Fair. Most expressed surprise at how many companies were present. "I never knew that this was something I was qualified to do," said one mechanical engineering major. "Now I'm finding out there are companies that really need me."



#### Social Event

The social event was held Friday night at Blake's on Telegraph (a bar and music venue frequented by the UC Berkeley NE Department). The performance floor was rented out, and attendees were treated to lots of food, a DJ, and a local ska band. As a special Berkeley treat, there was also a henna tattoo artist. The establishment even agreed to serve some special "nuclear" drinks just for us.

#### The Cherenkov:

- 1 shot (2 oz.) Russian vodka
- <sup>1</sup>/<sub>2</sub> shot (1 oz.) blue curaçao
- Tonic water

Pour liquor over ice in a highball glass. Fill with tonic and stir gently. Serve under black light for a pretty blue glow.

Students and professionals alike attended the social event, and so there is an estimated 98% likelihood that incoming ANS President Larry Foulke was captured in a compromising photo, or one that could be altered to look compromising. A reward is being offered for any such photo.

#### Awards Banquet

The conference closed on Saturday with an awards banquet featuring a distinguished speaker. Dr. Alan Waltar, past president of ANS, managed to keep the audience entertained and awake for an astounding lecture on the benefits of nuclear power and nuclear applications.



Dr. Waltar, still working on his presentation just hours before he is due to speak.

Top left: The representative from the National Council on Examinations for Engineers and Surveyors asks students why they think the Professional Engineer's license might be important.

Opposite: A student speaks to Dr. Theron Marshall of INEEL. We swear this photograph was not posed.

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After Dr. Waltar's speech, awards were given for exceptional technical presentations. Within each topical track several awards were given. "Outstanding presentation" winners received a certificate, a \$50 check, and a commemorative medal. "Best presentation" winners received \$100 and a certificate and medal. Listed here are the award winners and the title of their presentations.

#### Nuclear Installations Safety

Best Presentation: "Spent Fuel Pool Modeling and Severe Accident Analysis in MELCOR," Ryan E. Alley (Purdue University) Outstanding Presentation: "Monitoring Continuous Automated Vault

Outstanding Presentation: "Monitoring Continuous Automated Vault Inventory System with Expert System," Joseph Michael Bowling (University of Tennessee)



Manipulation," Walter Jerome McNeil (Kansas State University) Outstanding Presentation: "Development of Neutron Irradiation

**Isotopes and Radiation** 

System with Texas A&M University Reactor," S.Y. Jang (Texas A&M University)

Best Presentation: "Neutron Beam

#### Policy and Economics

Best Presentation: "Using Immersive Virtual Reality to Develop and Evaluate NPP Construction Schedules," V.E. Whisker (Pennsylvania State University)

Si Young Jang displays his certificate and medal.

#### Thermal Hydraulics

Best Presentation: "Image Processing in Multiphase Flows," B.N. Reddy Vanga (Purdue University)

Outstanding Presentation: "Characterization of a Rotating Free-Surface Turbulent Flow," Philippe Bardet (University of California, Berkeley)

#### Automation and Instrumentation

Best Presentation: "Pressurized Water Reactor Low Power Plant Automation," Ryan M. Lipsky (North Carolina State University)

#### **Biology and Medicine**

Best Presentation: "TG-43 Dosimetric Characteristics for the 198Au Brachytherapy Seed," Lucile S. Dauffy (Texas A&M University)

#### Reactor Design

Best Presentation: "Neutronics Screening of Breed and Burn GFR Fuel," P. Yarsky (Massachusetts Institute of Technology)

Outstanding Presentation: "Fuel Rod Design Optimization for 2-Year Fuel Cycles," F. X. Buschman (Pennsylvania State University)

#### Plasma and Fusion

Best Presentation: "Effects of "Waste" Electrons in an Inertial Electrostatic Confinement Device," Krupakar Murali Subramanian (University of Wisconsin, Madison)

Outstanding Presentation: "Z-Accelerator: What Is It?" Don Williamson (University of Wisconsin, Madison)

#### Education and Training

Best Presentation: "Penn State American Nuclear Society Boy Scout Atomic Energy Merit Badge Workshop," Kaydee Kohlhepp (Pennsylvania State University)



Representatives from Westinghouse made a favorable impression on the students.

Fuel Cycle

Best Presentation: "Selectivity for Strontium and Cesium in Nb-substituted Titanosilicate," Dmitri Medvedev (Texas A&M University) Outstanding Presentation: "Dealing with Radioactive Waste, Now and in the Future," D.R. Williamson, T.E. Uchytil (University of Wisconsin-Madison)

#### Aerospace Applications

Best Presentation: "Feasibility of Powering a FEEP Thruster with a Nuclear Battery," Andrew Zillmer (University of Wisconsin, Madison) Outstanding Presentation: "Investigation of Gravitational Anisotropies on Alpha Emission," Thomas J. Quirk IV (University of New Mexico)

#### Math and Computation

Best Presentation: "Cross Section Generation for the Pebble Bed Modular Reactor," R. Mphahlele (Pennsylvania State University) Outstanding Presentation: "Monte Carlo Verification and Modeling of

Uutstanding Presentation: "Monte Carlo Verification and Modeling of Lead-Bismuth Spallation Targets," Daniel Lowe (University of Nevada, Las Vegas)

#### Materials

Best Presentation: "High-Temperature Deformation of Alloy EP-823 for Transmutation Applications," Martin Lewis (University of Nevada, Las Vegas)

Outstanding Presentation: "Environment-Induced Degradation of Cladding Materials," Subhas Pothana, Heidi Aquino (University of Nevada, Las Vegas)



At the Awards Banquet, Dr. Larry Foulke practices "outreach" with David Barnes, Technical Chair.

ANS / Berkeley would like to extend a very heartfelt thank-you to Dr. Larry Foulke, who provided not only the photographs, but support, encouragement, and good humor.

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## CONFERENCE REPORT 2003 ANS Student Conference \* April 2-5, 2003 \* Berkeley, CA

#### Sponsors

Sponsorship for this conference exceeded expectations. Thanks to the generosity of the nuclear community, the conference organizers were able to provide nearly \$24,000 in travel funding to students attending the conference (an average of over \$100 per student). In appreciation and recognition, we have chosen to re-publish the complete list of sponsors in this brochure.

Passerby (Undisclosed Amount) Andrew Bielen James Brickey Lisa Cordova William Danchus Alison Hedges Brian Kiedrowski Simon Lobdell Aaron McGee Jeremy McGrew Walter McNeil Lola Neisius Sean Puskas Ross "Fusionman" Radel Philip Smagacz Andrew Stephan Frank Szakaly Kunihiko Tomiyasu Ben Wolter Andrew Zillmer

#### Jerk (\$1) Matthew Hiatt Ryan Marlow Dave Petersen

Starving Undergrad Student (\$5) Ryan Alley Nathaniel Bobek Erie Edwards Alex Garmoe Willam Harding Steven Hatton Jeffrey Lane Brent Lindeburg Curtis Martin Christopher Putre Rob Shuster-Edelson Tracy Uchytil

#### Starving Grad Student (\$10)

Andrew Casella Giovanni Cone Lucile Dauffy Ryan Giar Thad Heltemes Sara Jordan Richard Silva Isaac Stephen Pete Yarsky Charles Yeamans

#### Civil Servant (\$25)

Research Lab Employee (\$50) ANS Ginna Nuclear Station / RGE Local Section

Familiar Face (\$75)

Affiliate (\$100)

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#### Real Good Buddy (\$600)

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Righteous Dude (\$800) ANS Environmental Sciences Division

Would Lend Socks To (\$900)

Benefactor (\$1000) ANS Education and Training Division ANS Fuel Cycle and Waste Management Division ANS Northern California Local Section ANS Mathematics and Computation Division ANS Radiation Protection and Shielding Division Brookhaven National Laboratory Dominion Idaho National Engineering and Environmental Laboratory Pacific Gas and Electric Southern California Edison Transnuclear, Inc.

A Real Prince (\$1500) ANS Nuclear Installation Safety Division ANS Reactor Physics Division ANS Thermal Hydraulics Division. Argonne National Laboratory GE Nuclear Energy Los Alamos National Laboratory Nuclear Energy Institute Pacific Northwest National Laboratory

#### Big Spender (\$2000)

Aerotest Operations, Inc. Bettis Atomic Power Laboratory Exelon Framatome ANP Knolls Atomic Power Laboratory The National Science Foundation

Deep Pockets (\$2500) ANS Operations and Power Division Westinghouse Electric Company

Uncle Moneybags (\$5000) ANS National Headquarters Lawrence Livermore National Laboratory UC Berkeley College of Engineering United States Department of Energy, Office of Nuclear Energy

Might Lend Underwear To (\$7500)

Grand Poobah (\$10000)

Darby's Special Friend (\$25000)

Has Proud Mom (\$50000)

#### Member (\$10000)

The 2004 ANS Student Conference will be held at the University of Wisconsin, Madison from April 1-3, 2004. The conference theme is "Out of the Ashes: Revival of the Nuclear Era". For more information, contact the organizers: Ross Radel ( )

Lola Neisius ( 1500 Engineering Drive Madison, WI 53706 Phone: (608) 265-8699

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# **2004 ANS Student Conference**

Out of the Ashes: Revival of the Nuclear Era

University of Wisconsin-Madison April 1-3, 2004

## **Conference Highlights**

## Technical sessions in:

- Medical Physics
- Fusion/Next Generation Technologies
- Core Design
- Thermal Hydraulics
- Environmental Impact
- Policy/Public Outreach

### Career Fair

Leadership and Writing Workshops

**Engineering Competition** 



## **Contact Info:**

#### Website

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