



The World's Forum for Aerospace Leadership

1801 Alexander Bell Drive, Suite 500, Reston, VA 20191-4344
703.264.7500 • 800.639.2422 (toll free) • 703.264.7551 (fax)

www.aiaa.org

August 2011

To: TAC, TC Chairs, Board of Directors, Corporate and Government Contacts, Section Chairs, Faculty Advisors, Other Interested Parties

From: Betty Guillie, Staff Liaison for Technical Activities

Re: Technical Committee (TC) Nominations

The AIAA Technical Committee (TC) Nomination period is now open for nominations for terms beginning 1 May 2012. Please feel free to distribute the information among your friends and colleagues!

Nominations may also be submitted via the AIAA website. The form is located at www.aiaa.org, under "Inside AIAA" then "Technical Committees".

The nominations are due by 1 November 2011. As always, your participation is very much appreciated.

Please feel free to call me at 703/264-7573 if you have any questions. I look forward to your input!



August 2011

The American Institute of Aeronautics and Astronautics (AIAA) is pleased to open membership nominations for its Technical Committees (TC) for 2012/2013. Our TCs have between 30 and 35 regular members each. Nearly one-third of the members rotate off the committees each year, leaving six to ten openings per TC.

The activities of the TCs vary widely, and each TC is responsible for setting meetings and other functions. Some examples of TC activities this year included: workshops, continuing education courses, technical tours, special speakers, white papers and position papers, production of books and journal issues, design competitions, as well as major contributions to the development of technical conference programs. Please use the enclosed list of TC chairs to contact them individually to hear more about individual TC activities.

The TC chairs and the Technical Activities Committee (TAC) work diligently to maintain a reasonable balance in (1) appropriate representation to the field from industry, research, education, and government; (2) the specialties covered in the specific TC scopes; and (3) geographical distribution relative to the area's technical activity. TAC encourages the nomination of young professionals, and has instituted a TC associate member category. (See associate member guidelines). Associate members, with identified restrictions, are included on TCs in addition to the 35 TC regular member limit. **Nominees selected for membership who are not AIAA members in good standing must become members or renew their membership within 45 days of notification.**

If you or someone you are sponsoring currently serve on a TC do not nominate yourself. You will automatically be considered for the 2012/2013 TC year if you are not at the end of your term.

To assist you in selecting nominees, enclosed is the following information:

- (1) Instructions for completing nomination forms
- (2) TC Associate Membership Guidelines
- (3) A listing of the TC Chairpersons and their telephone numbers
- (4) 2012/2013 TC Requirements
- (5) Nomination and endorsement form

We look forward to receiving your nominations. If you have any questions concerning nominations, please call Betty Guillie at 703/264-7573, fax number 703/264-7551, or by e-mail at bettyg@aiaa.org. You may also submit a nomination via our website at <http://www.aiaa.org>, click on Inside AIAA/Technical Committee, nomination form.

INSTRUCTIONS FOR COMPLETING TECHNICAL COMMITTEE NOMINATION FORMS

1. Submit one nomination for each nominee. First-time nominees who are not selected for committee membership for 2012 will automatically be considered for membership in 2013. As the nomination forms are therefore held for an additional year, it is not necessary to resubmit a form for someone who was not selected for the 2011/2012 term. You may send updated information to be attached to an existing nomination form.
2. You do not have to be nominated by someone else; you may submit an application for yourself.
3. A resume or biographical data must be attached and submitted with the nomination form.
4. Membership is restricted to one technical committee (TC) the first year. If you nominate someone to more than one committee, use one form. Individuals should not apply for membership on more than two technical committees at the same time. This form will be duplicated at AIAA and sent to each TC indicated. All information should be detailed and complete.
5. Attached is a listing of current TCs and their chairpersons. You are welcome to follow up with the TC chairs to assure that you or your nominees are properly placed, or if you have questions regarding that particular TC's activities.
6. The Technical Activities Committee (TAC) strongly suggests that special consideration be given to members 34 years of age and under or have recently graduated with a professional engineering degree. See attached "Technical Committee Associate Membership Guidelines."
7. The endorsement form, indicating that the nominee may travel to two meetings per year and have some time to devote to committee business, must be signed to document this understanding.
8. **All TC members must join AIAA (if they are not already members) within 45 days of their appointment to a technical committee and must remain current members of AIAA throughout their term of service.**
9. TC membership is generally for one year with two additional years possible, but contingent upon committee participation, ongoing projects, and AIAA membership. It is not necessary to send a new nomination form for someone who is already on a committee. All committee members are automatically considered for a second and third year of membership.
10. Deadline for receipt of nominations is 1 November 2011. Nominations received after this date may be held for consideration until the next year.
11. Send nominations to:

AIAA TC NOMINATIONS
BETTY GUILLIE
1801 ALEXANDER BELL DRIVE
SUITE 500
RESTON, VA 20191

TECHNICAL COMMITTEE ASSOCIATE MEMBERSHIP GUIDELINES

The purpose of instituting an associate membership category for technical committees (TC) is to encourage the nomination of young professionals for TC membership. TCs have a membership limit of 35. TCs may add associate members in addition to the 35 regular member limit.

1. Associate membership is restricted to those who have not yet reached their 35th birthday or received their engineering degree fewer than 10 years ago.
2. Associate membership is a one year term renewable to three years.
3. Associate membership is restricted to current AIAA members.
4. Selection to associate membership is based on technical merit. The associate members should show promise within the field of the technical committee.
5. Associate members may attend TC or subcommittee meetings and will assist in carrying out committee work.
6. At the discretion of the TC, associate members may be assigned a volunteer full member as counselor. The counselor will advise and guide the associate member on TC procedures and activities.
7. Associate members will have no voting privileges on the TC, but may (with consent) act as a substitute for their counselor.
8. Associate members will not count toward the TC membership limit.
9. Application forms for associate membership are the same as those for full membership but a resume is a required attachment. Applicants for full membership who were not selected may be considered for associate membership provided they meet the age restriction.
10. Each TC is encouraged to have at least two associate members. At no time should the number of associate members exceed that of full members.

AIAA - TAC Manual

TAC Manual

Adaptive Structures Technical Committee

Gregory S Agnes
23354 Reunion Ct
Valencia, CA 91354
Phone : (818)354-9317
Fax : (818)393-4057
Email : gregory.s.agnes@jpl.nasa.gov
Affiliation : Jet Propulsion Laboratory

Aerodynamic Measurement Technology Technical Committee

James R Gord
AFRL/RZTC Bldg 5
1950 Fifth St
Wright-Patterson AFB, OH 45433-7251
Phone : (937)255-7431
Fax : (937)255-1125
Email : james.gord@wpafb.af.mil
Affiliation : Air Force Research Laboratory

Aerospace Sciences Group

David R Riley
14140 Crosstrails Dr
Chesterfield, MO 63017
Phone : (314)233-6458
Fax : (314)232-4141
Email : david.r.riley@boeing.com
Affiliation : Boeing Engineering Operations & Technology

Aircraft Design Technical Committee

Michael L Drake
903 170th PL SE
Bellevue, WA 98008
Phone : (425)417-6858
Email : michael.l.drake@boeing.com
Affiliation : Boeing Commercial Airplanes

Astrodynamics Technical Committee

Thomas F Starchville
15049 Conference Center Drive
M/S: CH4-500
Chantilly, VA 20151
Phone : (571)307-4203
Fax : (571)307-4317
Email : thomas.f.starchville@aero.org
Affiliation : The Aerospace Corporation

Balloon Systems Technical Committee

Debora A Fairbrother
Rm 314
Bldg E107
Wallops Island, VA 23337
Phone : (757)824-1717

Aeroacoustics Technical Committee

Krishna Viswanathan
The Boeing Company
M/S 0R-JF
PO Box 3707
Seattle, WA 98124
Phone : (425)237-2773
Fax : (425)237-5247
Email : k.viswanathan@boeing.com
Affiliation : Boeing Commercial Airplanes

Aerospace Design & Structures Group

Kathleen M Atkins
227 Hanson Way
Marietta, GA 30064
Phone : (770)494-2869
Fax : (770)494-0070
Email : kathleen.m.atkins@lmco.com
Affiliation : Lockheed Martin Aeronautics

Air Breathing Propulsion Systems Integration Technical Committee

Jeffrey D Flamm
16 Victory St
Hampton, VA 23681
Phone : (757)864-5955
Fax : (757)864-8469
Email : jeffrey.d.flamm@nasa.gov
Affiliation : NASA-Langley Research Center

Aircraft Operations Technical Committee

Rick Shay
P.O. Box 29
#4
Littleton, CO 80160
Phone : (303)807-1793
Email : richard.f.shay@nasa.gov
Affiliation : Double Black Aviation Technology, LLC

Atmospheric and Space Environments Technical Committee

Nelson W Green
4800 Oak Grove Drive
Pasadena, CA 91109-8099
Phone : (818)393-6323
Fax : (818)393-0351
Email : Nelson.W.Green@jpl.nasa.gov
Affiliation : Jet Propulsion Laboratory

Communications Systems Technical Committee

Mario Caron
3701 Carling Ave
Ottawa, ON K2H 8S2
Phone : 6139982864
Fax : 6139900316

Aerodynamic Decelerator Systems Technical Committee

John W Watkins
PO Box 207
45 South Satellite Rd
South Windsor, CT 06074
Phone : (860)528-0092 (227)
Fax : (860)528-5404
Email : john.watkins@zodiac aerospace.com
Affiliation : Pioneer Aerospace Corporation

Aerospace Power Systems Technical Committee

Gregory A Carr
4800 Oak Grove Drive
Pasadena, CA 91109
Phone : (818)354-0680
Fax : (818)393-5143
Email : gregory.a.carr@jpl.nasa.gov
Affiliation : Jet Propulsion Laboratory

Air Transportation Systems Technical Committee

David R Maroney
7515 Colshire Drive
MS Y350
McLean, VA 22102-7539
Phone : (703)983-7917
Fax : (703)983-1083
Email : dmaroney@mitre.org
Affiliation : The MITRE Corporation

Applied Aerodynamics Technical Committee

Robin E Vermeland
1011 Lockheed Way
Advanced Development Programs
Palmdale, CA 93599
Phone : (661)572-3776
Fax : (661)572-5798
Email : rob.vermeland@lmco.com
Affiliation : Lockheed Martin Aeronautics

Atmospheric Flight Mechanics Technical Committee

Agamemnon L Crassidis
Mechanical Engineering
76 Lomb Memorial Dr
Rochester, NY 14623-5603
Phone : (716)475-4730
Email : alceme@rit.edu
Affiliation : Rochester Institute of Technology

Computer Systems Technical Committee

Kevin B Carbajal
Information Technology Directorate
Bldg 237 Rm 216
Moffett Field, CA 94035-1000
Phone : (650)604-3639

Fax :(757)824-2149
 Email :deborah.a.fairbrother@nasa.gov
 Affiliation :NASA

Design Engineering Technical Committee

Gerald A Brown
 5301 Bolsa Av
 Huntington Beach, CA 92647
 Phone :(714)896-1379
 Email :gerald.a.brown@boeing.com
 Affiliation :The Boeing Company

Electric Propulsion Technical Committee

Vlad J Hruby
 11 Tech Circle
 Natick, MA 01760-1023
 Phone :(508)655-5565
 Email :judy@busek.com
 Affiliation :Busek Co Inc

Fluid Dynamics Technical Committee

John D Schmisser
 Room 325
 875 N Randolph St
 Arlington, VA 22203-1954
 Phone :(703)696-6962
 Email :john.schmisser@afosr.af.mil
 Affiliation :USAF AFOSR/NA

Ground Testing Technical Committee

Joe Patrick
 1055 Richardson Road
 Smyrna, GA 30080-1040
 Phone :(770)494-4158
 Fax :(770)494-4790
 Email :joe.patrick@lmco.com
 Affiliation :Lockheed Martin Aeronautics

History Technical Committee

Kevin R Burns
 4045 Hancock Street
 Defense and Maritime Operations Division
 San Diego, CA 92110
 Phone :(619)225-2568
 Fax :(619)225-2601
 Email :kburns8@csc.com
 Affiliation :CSC

Intelligent Systems Technical Committee

Christopher R Tschan
 7250 Getting Heights
 Colorado Springs, CO 80916
 Phone :(719)375-6324
 Email :tschan@comcast.net
 Affiliation :The Aerospace Corporation

Email :mario.caron@crc.gc.ca
 Affiliation :Communications Research Centre

Digital Avionics Technical Committee

John C Gonda
 7515 Colshire Drive
 MS Y350
 McLean, VA 22102-7539
 Phone :(703)983-2772
 Fax :(703)983-1367
 Email :jgonda@mitre.org
 Affiliation :The MITRE Corporation

Energetic Components & Systems Technical Committee

Donald L Jackson
 7977 South 7320 West
 West Jordan, UT 84081
 Phone :(801)251-3640
 Fax :(801)251-2992
 Email :Donald.Jackson@ATK.com
 Affiliation :ATK Space Systems

Gas Turbine Engines Technical Committee

Ian Halliwell
 6489 Pleasant Chapel road
 Heath, OH 43056
 Phone :(937)322-5000
 Email :ihalliwell@avetec.org
 Affiliation :Avetec

Guidance, Navigation & Control Technical Committee

John D Schierman
 1410 Sagem Place Ste 202
 Barron Associates. Inc.
 Charlottesville, VA 22901
 Phone :(434)973-1215
 Fax :(434)973-4686
 Email :schierman@bainet.com
 Affiliation :Barron Associates Inc

Hybrid Rockets Technical Committee

Steven A Frolik
 PO Box 92957
 Los Angeles, CA 90009-2957
 Phone :(310)336-5743
 Fax :(310)563-5661
 Email :Steve.A.Frolik@aero.org
 Affiliation :The Aerospace Corporation

Legal Aspects Aero & Astro Technical Committee

James D Rendleman
 975 War Eagle Dr N
 Colorado Springs, CO 80919
 Phone :(719)331-4808
 Email :napatarheel@hotmail.com
 Affiliation :L. Rendleman and Assoc.

Fax :(650)604-6990
 Email :kevin.b.carbajal@nasa.gov
 Affiliation :NASA Ames Research Center

Economics Technical Committee

Annalisa L Weigel
 5 Aberdeen Rd
 Wellesley, MA 02482
 Phone :(617)253-1207
 Email :alweigel@mit.edu
 Affiliation :Massachusetts Institute of Technology

Flight Testing Technical Committee

Ernesto Morales
 MS 248-3
 NASA Ames Research Center
 Flight Controls
 Moffett Field, CA 94035
 Phone :(650)604-6002
 Fax :(650)604-4000
 Email :ernesto.morales@us.army.mil
 Affiliation :US Army Aeroflightdynamics Directorate

General Aviation Technical Committee

Roy Y Myose
 Wichita State University
 Aerospace Engineering Department
 Aerospace Engineering Dept.
 Wichita, KS 67260-0044
 Phone :(316)978-5935
 Email :roy.myose@wichita.edu
 Affiliation :Wichita State University

High Speed Air Breathing Propulsion Technical Committee

Joaquin H Castro
 Marketing & Strategy
 PO Box 109600
 West Palm Beach, FL 33410-9600
 Phone :(561)796-3453
 Fax :(860)755-9596
 Email :joaquin.castro@pwr.utc.com
 Affiliation :Pratt & Whitney Rocketdyne

Information and Command & Control Systems Technical Committee

Jimmie G McEver
 Mail Stop 17-5371
 11100 Johns Hopkins Road
 Laurel, MD 20723-6099
 Phone :(240)228-2385
 Email :jimmie.mcever@jhuapl.edu
 Affiliation :The Johns Hopkins University Applied Physics Laboratory

Life Sciences & Systems Technical Committee

Jeffrey Johnson
 W172 Brooklyn Albany Rd
 Evansville, WI 53536
 Phone :(608)827-5000
 Email :johnsonj@orbitec.com
 Affiliation :Orbital Technologies Corporation

Lighter-than-Air Systems Technical Committee

Curt J Westergard
 Suite 200
 100 West Jefferson St
 Falls Church, VA 22046-3400
 Phone :(703)534-7500
 Fax :(301)576-5252
 Email :curt@airphotoslive.com
 Affiliation :Digital Design & Imaging Service, Inc.

Materials Technical Committee

Gregory M Odegard
 1505 Ravine Side Drive
 Houghton, MI 49931
 Phone :(906)487-2329
 Email :gmodegar@mtu.edu

Missile Systems Technical Committee

Amanda N Horton
 Bldg 5400
 RDMR-WDS-S
 Redstone Arsenal, AL 35898
 Phone :(256)876-1898
 Fax :(256)955-9411
 Email :amanda.horton@amrdec.army.mil
 Affiliation :US Army RDECOM

Non-Deterministic Approaches Technical Committee

Ravi C Penmetsa
 9783 Old Creek Ct.
 Centerville , OH 45458
 Phone :(937)255-8440
 Fax :(937)656-6321
 Email :ravi.penmetsa@wpafb.af.mil
 Affiliation :Wright State University

Product Support Technical Committee

Jens Strahmann
 Airbus-Allee 1
 Bremen, 28199
 Phone :494215383536
 Fax :494215384093
 Email :jens.strahmann@airbus.com
 Affiliation :Airbus S.A.S.

Sensor Systems Technical Committee

Matthew D Nixon
 Suite 350
 4411 The 25 Way NE
 Albuquerque, NM 87109
 Phone :(505)449-4687
 Fax :(505)345-8303
 Email :matthew.d.nixon@boeing.com
 Affiliation :Boeing Defense, Space & Security

Solid Rockets Technical Committee

Robert E Black

Liquid Propulsion Technical Committee

Eric Besnard
 Mechanical and Aerospace Engr
 1250 Bellflower Blvd
 Long Beach, CA 90840
 Phone :(562)985-5442
 Fax :(562)985-4408
 Email :besnarde@csulb.edu
 Affiliation :California State Univ Long Beach

Meshing, Visualization, and Computational Environments Technical Committee

David S Thompson
 PO Box A
 Dept of Aerospace Engineering
 Mississippi State, MS 39762
 Phone :(662)325-2068
 Fax :(662)325-7730
 Email :dst@ae.msstate.edu
 Affiliation :Mississippi State University

Modeling & Simulation Technical Committee

Terry J Burress
 P.O. Box 748
 Aeronautics
 Fort Worth, TX 76101
 Phone :(817)777-2873
 Email :terry.j.burress@lmco.com
 Affiliation :Lockheed Martin Corporation

Nuclear & Future Flight Propulsion Technical Committee

Bryan A Palaszewski
 NASA Glenn Research Center
 21000 Brookpark Rd
 Propulsion Systems Division
 Cleveland, OH 44135
 Phone :(216)977-7493
 Fax :(216)433-5802
 Email :bryan.a.palaszewski@nasa.gov
 Affiliation :NASA Glenn Research Center

Propellants & Combustion Technical Committee

Joseph C Oefelein
 Combustion Research Facility
 7011 East Avenue, MS9051
 Livermore, CA 94551-0969
 Phone :(925)294-2648
 Fax :(925)294-3055
 Email :oefelei@sandia.gov
 Affiliation :Sandia National Laboratories

Society & Aerospace Tech Technical Committee

Jarret M Laffleur
 333397 Georgia Tech Station
 Georgia Institute of Technology
 Atlanta, GA 30332-1495
 Phone :(401)474-1879
 Fax :(404)894-2760
 Email :gtg416i@mail.gatech.edu
 Affiliation :Georgia Institute of Technology

Space & Missiles Group

Trevor C Sorensen

Management Technical Committee

P. David Elrod
 Aerospace Testing Alliance
 Suite A205, MS: 1205
 100 Kindel Dr
 Arnold AFB, TN 37389-1205
 Phone :(931)393-6681
 Fax :(931)393-6389
 Email :david.elrod@jacobs.com
 Affiliation :Jacobs Technology

Microgravity & Space Processes

Stephen D Tse
 Mechanical and Aerospace Engineering
 98 Brett Rd
 Piscataway, NJ 08854
 Phone :(732)445-0449
 Email :sdytse@rci.rutgers.edu
 Affiliation :Rutgers University

Multidisciplinary Design Optimization Technical Committee

Eliot H Winer
 1620 Howe Hall
 Ames, IA 50011
 Phone :(515)450-1077
 Email :ewiner@iastate.edu
 Affiliation :Iowa State University

Plasmadynamics & Lasers Technical Committee

David L Carroll
 CU Aerospace
 301 N. Neil St. - Suite 400
 Champaign, IL 61820
 Phone :(217)239-1703
 Fax :(217)239-0630
 Email :carroll@cuaerospace.com
 Affiliation :CU Aerospace LLC

Propulsion and Energy Group

Ashwani K Gupta
 Dept of Mechanical Engineering
 2181 Martin Hall
 College Park, MD 20742
 Phone :(301)405-5276
 Email :akgupta@umd.edu
 Affiliation :University of Maryland

Software Systems Technical Committee

Rao Y Mannepilli
 166 Chancellor Dr
 Deptford, NJ 08096-5155
 Phone :(732)432-7751
 Email :softc.aiaa@gmail.com
 Affiliation :Lockheed Martin Electronic Systems

Space Architecture Technical Committee

Theodore W Hall

Aerojet
5731 Wellington Road
Gainesville, VA 20155-1612
Phone : (703)754-5367
Fax : (703)754-5638
Email : rob.black@aerojet.com
Affiliation : Aerojet

Hawaii Space Flight Laboratory
University of Hawaii at Manoa POST 501
1680 East-West Road
Honolulu, HI 96822
Phone : (808)956-4715
Fax : (808)956-6322
Email : sorensen@hsfl.hawaii.edu
Affiliation : University of Hawaii at Manoa

1903 Pointe Lane
303
Ann Arbor, MI 48105
Phone : (734)272-3172
Email : twhall@twhall.com
Affiliation : University of Michigan

Space Automation & Robotics Technical Committee

Steven E Fredrickson
1415 Crystal Lake Circle West
Pearland, TX 77584
Phone : (281)483-1457
Fax : (281)483-3204
Email : steven.fredrickson@nasa.gov
Affiliation : NASA-Johnson Space Center

Space Colonization Technical Committee

Mark G Benton
1700 East Imperial Highway
Mail Code W-S50-X403
Space & Intelligence Systems
El Segundo, CA 90245-2646
Phone : (310)901-3076
Fax : (310)416-0346
Email : mark.benton@boeing.com
Affiliation : Boeing Defense, Space & Security

Space Logistics Technical Committee

Alan W Johnson
1530 Kathy Marie Ct
Xenia, OH 45385
Phone : (937)255-3636
Email : alan.johnson@afit.edu
Affiliation : Air Force Institute of Technology

Space Operations & Support Technical Committee

Jeffrey R Laube
5089 Saratoga Ave
Cypress, CA 90630
Phone : (310)812-2794
Email : jeff.laube@ngc.com
Affiliation : Northrop Grumman Aerospace Systems

Space Resources Technical Committee

Leslie Gertsch
1006 Kingshighway
Missouri University of Science and Technology
Rolla, MO 65409-0660
Phone : (573)341-7278
Fax : (573)341-4368
Email : gertschl@mst.edu
Affiliation : Missouri University of Science and Technology

Space Systems Technical Committee

Jerry J Sellers
14 Via Piedras
Manitou Springs, CO 80829
Phone : (719)685-5432
Fax : (866)311-4437
Email : jerry.sellers@mac.com
Affiliation : Teaching Science & Technology, Inc.

Space Tethers Technical Committee

Sven G Bilén
213N Hammond Bldg
University Park, PA 16802
Phone : 18148531526
Fax : 18148637229
Email : sbilén@psu.edu
Affiliation : The Pennsylvania State University

Space Transportation Technical Committee

Tony P Taylor
3000 W Segerstrom
Santa Ana, CA 92704
Phone : (714)868-3719
Fax : (714)719-2051
Email : tony.taylor@airborne-sys.com
Affiliation : Airborne Systems NA

Structural Dynamics Technical Committee

Dale M Pitt
6145 Southern Dr
Saint Louis, MO 63123
Phone : (314)233-8631
Fax : (314)777-1550
Email : dale.m.pitt@boeing.com
Affiliation : Boeing Engineering Operations & Technology

Structures Technical Committee

Stephen P Engelstad
Lockheed Martin Aeronautics
86 South Cobb Drive
MZ 0663
Marietta, GA 30063-0663
Phone : (770)494-9714
Email : steve.engelstad@lmco.com
Affiliation : Lockheed Martin Aeronautics

Survivability Technical Committee

Alex G Kurtz
Bldg 1661
2700 D St
Wright-Patterson AFB, OH 45433-7605
Phone : (937)255-6302
Fax : (937)255-2237
Email : alex.kurtz@wpafb.af.mil
Affiliation : Eglin Air Force Base

Systems Engineering Technical Committee

Tsutomu S Bright
501 Mira Villa Dr
Saint Peters, MO 63376-7618
Email : tsutomu.s.bright@boeing.com
Affiliation : Boeing Defense, Space & Security

Terrestrial Energy Systems Technical Committee

David G Lilley
7221 Idlewild Acres
Stillwater, OK 74074
Phone : (405)372-6427
Email : Lilley@okstate.edu
Affiliation : Lilley & Associates

Thermophysics Technical Committee

Ab Hashemi
POBox 1228
Los Altos, CA 94023
Phone : (650)424-2391
Fax : (720)563-2063
Email : ab.hashemi@lmco.com
Affiliation : Lockheed Martin Space Systems

V/STOL Aircraft Systems Technical Committee

John R Sprague
10901 SW Hawk View Cir
Stuart, FL 34997-2712
Phone : (772)283-6888
Fax : (772)283-6888
Email : spraguej2@comcast.net

Weapon System Effectiveness Technical Committee

David D Lyman
4901 Olde Towne Parkway
Marietta, GA 30068

Phone : (770)579-4413

Fax : (770)973-6971

Email : lymand@saic.com

Affiliation : Science Applications International Corporation

2012-2013 TC Requirements

ADAPTIVE STRUCTURES

This committee supports technical activities that advance the relevant art, science and technologies required for the successful application of adaptive structures to aerospace systems. Adaptive Structures are structures that incorporate sensors, actuators, and processors to enable adaptation to changing operational and/or environmental conditions, thereby enhancing performance, stability, and/or safety.

AEROACOUSTICS

Prospective members should have a background in one or more of the following research and development activities: subsonic and supersonic jet noise; fan and compressor noise; combustion and internal engine noise; propagation and attenuation of acoustic waves in ducts; sonic boom and/or atmospheric sound propagation; boundary layer and airframe noise; human response to aerodynamic noise; STOL, VTOL, and helicopter noise; general acoustics; propagation of sound through structures.

AERODYNAMIC DECELERATOR SYSTEMS

This committee is seeking members active in the development and application of aerodynamic deceleration systems and subsystems thereof for deceleration, stabilization, and controlled landing of personnel, equipment and aerospace vehicles. The committee has traditionally sponsored the biannual Aerodynamic Decelerator Systems Technology Conference and Seminar and periodically sponsors a weeklong shortcourse on the fundamentals of design of aerodynamic decelerator systems. Members must be able to actively participate in and contribute to approximately three committee meetings per year. Committee members are also expected to actively contribute to one or more of the teams of the committee and to serve as session chairs for the ADS conference.

AERODYNAMIC MEASUREMENT TECHNOLOGY

Prospective members should be active as researchers or as managers of research programs associated with the development of advanced measurement techniques or with their application to aerodynamic research and development. Members are expected to have sufficient technical expertise to allow them to organize, chair and report original work in technical sessions regarding aerodynamic measurement technology, to author review articles summarizing and evaluating modern advances in the technology, and to present overviews of the related activities in the organization. Examples of the technologies emphasized include optical and spectroscopic techniques, flow visualization, laser velocimetry, advanced aerodynamic probes, advanced surface measurement methods for boundary layer transition, skin friction, heat transfer and pressure, and related methods for data acquisition, processing and presentation. Applications of interest include flight and ground testing of aerodynamic and propulsion systems with emphasis on measurements of the fluid dynamic aspects of the flow.

AEROSPACE POWER SYSTEMS

Prospective members should be currently active in the analysis, design, test or application of Electric Power Systems or elements of Electric Power Systems for aerospace use. Applications include those for aircraft, missiles and space systems. Power source and energy storage may be nuclear, electrochemical, solar, electromechanical or thermal. All aspects of the energy conversion, power generation and storage processes, power management and thermal control are of interest. A goal is to maintain representation from aerospace prime contractors, government organizations (NASA, DOE, and DOD), government support and consulting organizations (FFRDC's), the academic community and second tier power system suppliers. The objectives of the committee are: (1) provide information aerospace power; (2) keep the technical public informed on issues regarding the general area of power; and (3) provide recognition for contributions to the aerospace power area.

AIR BREATHING PROPULSION SYSTEMS INTEGRATION

The application of mechanical design, fluid mechanics and thermodynamics to the science and technology of air vehicle propulsion and power systems integration, including: Installed performance and controls, Propulsion aerodynamics; inlet and nozzle systems, Power and thermal management and All aspects of propulsion system / air vehicle interface & certification.

AIR TRANSPORTATION SYSTEMS

The Committee examines the impact on the air transportation system of technological, operational, economic and political developments, and reports on these impacts through sponsored meetings, papers and articles in Aerospace America. The effects of both internal and external events on the system are evaluated. Committee membership is drawn from all areas of air transportation, with emphasis on systems-level rather than technology-level people. Prospective Air Transportation System Committee members should have

2012-2013 TC Requirements

expertise in one or more of the following areas: (1) application of systems analysis techniques to planning, evaluating and operating airlines, airports, and air traffic control systems; (2) forecasting of air transportation system changes to markets, airline characteristics, technology and operations; (3) planning and scheduling of airline fleets, crews and operations; (4) economic analysis of air transportation systems, including capital, operating and other costs, revenues and other sources of funds, and return-on-investment; (5) planning and design of airports and airport systems, particularly airside, terminal and landside integrated operations, and including capacity, noise and environmental impact factors; (6) analysis of the air traffic control systems, including procedures for increasing ground and airspace capacity, reducing delays, and conserving fuel; and (7) safety of air transportation, as affected by operating procedures, aircraft design and human factors.

AIRCRAFT DESIGN

Prospective members should have active interest in design, optimization and/or evaluation of air vehicle systems for either military or civilian applications. The committee emphasizes the importance of aircraft design as a vital segment of U.S. industry and defense. In this regard, members are tasked to organize, produce, present and publish documents that show the direction and state-of-the-art of aircraft design. The committee will organize and conduct conferences, lectures, discussion and assessment groups, and workshops to foster and improve the understanding of future aircraft requirements, technology needs, new opportunities, and efficient, effective processes for new aircraft designs. Additionally, the committee interfaces with other committees and groups to foster development of young aircraft designers and recognition of outstanding individuals and achievements in the field. The committee meets three times a year in various parts of the United States. Members must be able to actively participate in all meetings as well as support activities between meetings.

AIRCRAFT OPERATIONS

The Committee develops, promotes, and facilitates solutions-oriented programs for pilots, flight crews, flight dispatchers, and those associated with aircraft operations. The Committee sponsors panels, workshops, and technical sessions at AIAA-sponsored conferences including the annual Air Transportation, Integration, and Operations Forum held in conjunction with Aviation Week's Aerospace Expo. The Committee desires members who actively represent the operational, research, consulting, or academic communities with strong backgrounds in flight operations, flight deck design, human factors, and/or flight safety and efficiency. Members should have a sincere interest in solving aircraft operational problems that arise from many sources: e.g., new air traffic management developments, new flight deck automation systems, evolution to "free flight" and self separation, emergence of uninhabited aerial vehicles (UAVs) in civil airspace, design and manufacturing developments associated with the flight deck, environmental constraints to flight operation.

APPLIED AERODYNAMICS

The committee is seeking prospective members who can represent the technical community and are engaged in analysis, design, research and development in applied aerodynamics of airborne and surface vehicles. Prospective members should be active in one or more of the following technical areas: (1) development, verification, and application of aerodynamic analysis and design techniques, (including computational, wind tunnel, and flight testing techniques and associated correlations); (2) aerodynamic research and configuration optimization for all classes of air vehicles and surface vehicles for which aerodynamics is a significant design discipline, such as transports, bombers, fighters, V/STOL aircraft, general aviation, missiles, launch and reentry vehicles, UAVs, ships, cars, and trains; and (3) configuration and conceptual aerodynamics research of advanced and innovative concepts, including all aerodynamic flight regimes and technical areas (cruise and maneuver, high angle-of-attack, low-speed/high-lift, weapons carriage and separation, and subsonic-transonic-supersonic-hypersonic speed regimes).

ASTRODYNAMICS

Prospective members should be currently active in one or more of the following disciplines: orbital mechanics and perturbation analysis; space trajectory design, prediction, estimation, correction, optimization, computation, and analysis; celestial mechanics, space navigation, optimal filtering, and orbit determination; space mission design and analysis; re-entry trajectories; and spacecraft attitude dynamics and estimation.

2012-2013 TC Requirements

ATMOSPHERIC AND SPACE ENVIRONMENTS

Our concerns are two-fold: how the aerospace environment affects aviation and space vehicle design and operations and how those operations in turn affect the aerospace environment. We are especially interested in the impact of, for example, icing, turbulence, and severe weather on aviation and space vehicle operations, space plasma environment and space weather on space systems, aviation-related pollution on the atmosphere, and aerospace operations on potential modification of the atmosphere. Our committee members have expertise in meteorology and climatology as applied to aviation and aerospace vehicle atmospheric design and operations and in space physics as applied to spacecraft interactions and design. Fields of competence include: atmospheric physics and chemistry, space physics and chemistry, aeronomy, space weather, radiative energy transfer, severe storm morphology, atmospheric and space environment modeling, meteorological measurement systems, satellite applications, atmospheric predictions, and the effects of the aerospace environment on aircraft and spacecraft performance.

ATMOSPHERIC FLIGHT MECHANICS

We are interested in prospective members who are experienced in one or more of the following technical specialties: (1) aircraft flight performance, stability and control, handling qualities, and the influence of these factors on vehicle design; (2) manned or unmanned vehicle flight dynamics and performance during launch or entry into a planetary atmosphere; (3) projectile or missile dynamics, unsteady and high-alpha aerodynamics, (4) flight path selection and control, trajectory characteristics, trajectory optimization, maneuverability, energy management, etc.; (5) flight test research, system identification and parameter estimation, dynamic wind-tunnel model experiments and simulations.

BALLOON SYSTEMS

The committee seeks members who are actively involved in the development and applications of free floating balloon systems for military, scientific and commercial uses; researchers, scientists and other operators are especially encouraged to join. Prospective members should have expertise in one of the major areas of design, fabrication, materials, structures, flight prediction, launch and recovery, and applications. Members must be able to actively participate in and contribute to approximately two committee meetings per year. The committee is open to U.S. and international members who meet the above requirements.

COMMUNICATIONS SYSTEMS

The Communications Systems Technical Committee focuses on the broad range of technical, programmatic and regulatory issues related to domestic and international commercial, government and military communications systems and networks and the communications aspects of satellite navigation systems. Such systems and networks include spaceborne, airborne and terrestrial elements. The scope of these issues includes: acquisition and transmission of voice, data and imagery; interfacing with terrestrial and space communications systems and networks; monitoring and control of space segments, systems and networks; and development and implementation of standards for the above. Committee members from industry and academe are typically involved in activities such as: development and evaluation of requirements; concept development for system and network architectures; systems and network modeling, analysis and simulation; design and development of systems and networks or component technologies and subsystems; and systems testing and evaluation. Applicable areas of expertise include: network, systems and communication theory and analysis; electromagnetic theory applied to antennas, transmission lines, devices and propagation; information and signal processing techniques and technologies; hardware and software research, design, development, implementation and testing; regulatory constraints (FCC, ITU, ISO, etc.); business case development and market forecasting; and related technologies such as launch vehicles and space qualification, reliability and quality control.

COMPUTER SYSTEMS

The committee focuses on the general areas of computer systems, computer hardware and technology, embedded computers and related technical topics as they apply to both the avionics and space aspects of the aerospace industry. Computer systems form one of the technology bases that most other TCs must utilize and thus we collaborate with other AIAA TCs and industry groups including a strong tie with the Software Systems TC. The membership of this committee represents the academic, industry and government communities with interest in the above topics. The committee is actively interested in new members with specific computer application knowledge as well as broad computer technical experience and backgrounds. Members must be able to support monthly one-hour telecons and at least two of the three meetings held each year. Members are strongly encouraged to present papers and provide technical input at each meeting and at a variety of committee supported conferences as well as to specific projects of value to the technical community. A strong attempt is made to create committee membership value via technical contacts across the industry plus direct technical information available during each meeting.

2012-2013 TC Requirements

DESIGN ENGINEERING

The committee is actively soliciting student members and industry, government and academic members who have aerospace design experience, including those involved in propulsion systems, flight structures, subsystems and design optimization. The committee's objective is to promote the development and dissemination of design technologies, solutions and processes to assist the design engineer and manager in creating and defining practical aerospace products. The committee also promotes the importance of the design process in aerospace engineering education through collaboration with academia in student design competitions, curriculum development and research. Prospective members should expect to actively participate in the affairs of the committee and of AIAA.

DIGITAL AVIONICS

The purpose of the DATC is to provide a forum for the exchange of new knowledge in digital avionics among professionals and students in the fields of commercial, military and general aviation and space applications. The DATC supports the Digital Avionics Systems Conference (DASC), the Integrated Communication, Navigation and Surveillance Systems Conference, and the AIAA Infotech at Aerospace Conference. The DATC also provides scholarships, industry awards, and promotes understanding of standardization, integration, technological, and other issues & policies that are important to digital avionics systems.

ECONOMICS

The vision of the Economics TC is to promote and advance economics as a critical discipline for AIAA members, and to engage academia in promoting excellence in this field as it relates to Aerospace. Economics is a critical discipline in advancing technological change in society. Aerospace and aerospace-related activities are at the forefront of cutting-edge technological change. Therefore economics has a very significant role in aerospace. Economic growth and scientific/ technological achievement have been intertwined since the dawn of history, in an ever-expanding spiral. It is only recently that we have understood and begun to quantify the strong interdependent relationship of economic growth and technology. Aeronautical and space activities have been and will continue to be catalysts for revolutionary changes in our global society, significantly contributing to economic strength and the advancement of our nation and world. Aerospace economics has thus become a key element in any exchange of information in the aeronautical and astronautical arena, whether in illuminating the way to optimize the allocation of scarce resources or in modeling/measuring the economic impacts and implications of technological change. From market analyses of supply and demand to issues facing the nation in our international activities, economics is crucial to both intelligent decision-making and our understanding of the world.

The Economics TC covers a broad set of topics and interest areas, including economic and cost-benefit analysis, cost estimating and analyses, financial/investment analysis, resource allocation, cost-effectiveness, cost reduction initiatives, risk analysis, and affordability. Topics range from the microeconomics of the individual firm to the macroeconomics of national and international economies.

ELECTRIC PROPULSION

This committee is engaged in the promotion of research, development, and space application of electric propulsion systems including thrusters, power electronics, and propellant feedsystems. We are interested in both auxiliary and primary propulsion for satellites and spacecraft, as well as subsystems and systems optimization and new mission analysis. The committee is basically composed of one or two representatives from each major institution having interest in electric propulsion. This includes government and private laboratories, aerospace companies, and universities, as well as some foreign representation.

ENERGETIC COMPONENTS AND SYSTEMS

Prospective members are desired who are currently active in the field of energetic components or their system integration. The Energetic Components and Systems Technical Committee's primary goal is to improve communication, education, and interaction among energetic component designers, suppliers, and system integrators. Our emphasis in energetic components and systems encompasses both civilian and military applications. Energetic components and systems contain explosive materials with high energy densities that provide directed energy, released in a controlled manner, to perform a variety of functions in applications ranging from aircraft, space vehicles, missiles, defense platforms, automotive safety, demolition, mining, and mineral production. Members with technical interests in this broad field including chemical, mechanical, electrical, and optical design; analysis and testing, manufacture, reliability, and safety are needed.

2012-2013 TC Requirements

FLIGHT TESTING

The committee seeks prospective members who are currently technically active in or support the flight testing of aircraft, missile, unmanned air vehicle, and spacecraft systems or sub-systems. Prospective members from industry, government, military services and academia should desire to advance flight test methodology, promote the importance of flight testing in system development and design, and promote the interchange of ideas and technical knowledge; especially concerning flight test safety. Additional members from the general aviation community, FAA, and space vehicle testing community, as well as international members, are desired and welcome. Members are expected to actively participate in, and contribute to, the projects and activities (such as symposia, conference sessions, position papers, etc) of the TC including attendance at two of the three meetings each year. Younger members are encouraged to apply.

FLUID DYNAMICS

The Fluid Dynamics Technical Committee (FDTC) represents members interested in the fundamental behavior of gases and liquids in motion and their desired control in contexts relevant to aerospace systems and applications, across the full range of speeds from subsonic to hypersonic, as well as in interdisciplinary areas such as bio-fluid flow, aeroacoustics, aeroelasticity, propulsion, aerothermodynamics, micro-fluidics and micro systems, electromagnetics, and heat transfer. Prospective members should be technically active in fluid dynamics research and/or applications and possess backgrounds that stress activity and experience in one or more specialty areas within the broad field of fluid mechanics. Nominee's expertise may either overlap with the current FDTC discussion and working groups or include new areas of emerging significance. Members are expected to have sufficient technical expertise to allow them to organize and chair technical sessions, participate in discussion and working groups, and contribute to existing FDTC activities and/or new initiatives. Nominees are encouraged to visit the FDTC website (<https://info.aiaa.org/tac/ASG/FDTC>), which provides an overview of the current FDTC activities as well as other information of interest to the prospective FDTC members.

GAS TURBINE ENGINES

The application of mechanical design, fluid mechanics and thermodynamics to the science and technology of air vehicle gas turbine engines and engine components, including: Compression systems, Combustors and augmenters, Turbines and Auxiliary systems and structures.

GENERAL AVIATION

Prospective members are sought who are dedicated to the development of general aviation technologies and systems including support systems and airport and airways issues. The TC objective is to promote the technical development, growth and public understanding of general aviation. A well-balanced committee representing the general aviation technical community is desired.

GROUND TESTING

This committee addresses and attacks specific technical issues that are of major importance to the ground testing community, resulting in the development of AIAA standards, guides, and recommended practices. We put the 'T' in TC, focusing on technical products in the areas of test techniques and methodologies, instrumentation applications and advancements, and the design, enhancement, calibration, and data quality of ground testing facilities. We also reinforce integrated modeling and testing, address test processes and management, and pursue innovations and advancements in ground testing. We promote ownership and strongly advocate camaraderie and team-building activities between members of the GTTC, as well as between the GTTC and other TCs, which allows the members a chance to interact and network in a more informal setting. Prospective members should be interested in doing technical work for AIAA and should have a background in industry, government, or academia relating to the field of aerodynamic or propulsion testing. Applicable disciplines may include testing in subsonic, transonic, supersonic, or hypersonic speed regimes as well as external and internal flow interactions.

GUIDANCE, NAVIGATION & CONTROL

The role of this committee is to advance technology and provide forums to address the broad aspects of guidance, navigation and control (GN&C) of flight vehicles and the control of related aerospace systems. Committee members should have backgrounds and experience in one or more of the following fields: control theory, analysis and design; guidance, navigation and tracking theory; aircraft, spacecraft and missile guidance, navigation and control; GN&C components and avionics; control and dynamics of flexible aerospace structures; artificial intelligence applications; robotics, space automation and control of robots; and GN&C concepts in air traffic control. As GN&C technology and applications evolve, the committee will adjust its focus to stay in the mainstream of this technology area.

2012-2013 TC Requirements

HIGH SPEED AIR BREATHING PROPULSION

The HSABP TC brings together experts in high speed air breathing propulsion providing the opportunity to exchange research findings, ideas, disseminate knowledge, and network within colleagues from around the globe. We leverage the application of mechanical design, fluid mechanics, thermodynamics, science and technology of systems that enable supersonic and hypersonic vehicle propulsion, including: Ramjets and Scramjets; Combined cycle systems and Unsteady propulsion devices (e.g. Pulse Detonation Engines). We work to advance high speed air breathing propulsion technology by: Developing and sponsoring technical sessions and other conferences of interest; Coordinate with other AIAA TCs and PCs and other technical societies to organize and promote joint sessions and activities; Provide for technical communications and reviews, educational activities, and awards recognition of special achievements. We also provide AIAA with authoritative technical opinions and public policy recommendations on subjects related to high speed propulsion.

HISTORY

The role of the History Committee is to stimulate historical research and publications; to encourage preservation of historical artifacts and documentation, including audiovisual records; and to encourage interest, scholarship, and appreciation of aerospace history. Nominees should be one or more of the following: (1) deeply interested in the history of aerospace technologies; (2) a professional historian or scholar employed as an educator, museum curator, member of industry or government employee; (3) author of publications related to the history of the aerospace sciences and related fields of technology; (4) a graduate of an accredited curriculum in the history of science and technology; and (5) an individual who has participated for an extended period of time in the aerospace industry and who has personal knowledge of one or more aerospace programs.

HYBRID ROCKETS

The Hybrid Rocket Technical Committee is actively involved with the development and application of hybrid rocket propulsion technologies and their subsystems. Prospective committee members should have interest in technical disciplines such as: grain ballistic performance, fluid flow analyses, fuel formulations, combustion process optimization, oxidizer injection & vaporization, ignition system sequencing & optimization, insulation, nozzle and motor case materials, and those issues associated with the design, implementation and optimization of complete systems. Members should have a strong desire to initiate and conduct projects to further the technology of hybrid rocket propulsion.

INFORMATION AND COMMAND & CONTROL SYSTEMS

This Committee focuses on Command, Control, Communications and Intelligence (C3I) concepts, systems and technologies, considering both materiel and non-materiel capabilities. Prospective members should have background and active experience in command and control, communications networks and network-enabled capabilities, and decision-making and decision support. Although the Committee's focus is generally oriented toward military applications, there is a special need for members from industry, government and academic institutions with interest in the civilian equivalent of large command and control systems. Current interests include command and control for irregular warfare, cyber operations and warfighting in the cyber domain, and the engineering of complex systems of systems; however, the Committee is seeking members with a wide range of C2-related interests and perspectives. Prospective members should be able to commit to meetings held four times a year at various locations in the U.S. and to actively participate in the work of the subcommittees.

INTELLIGENT SYSTEMS

The committee seeks AIAA members from government, academia, and industry who are actively advancing the state-of-the-science in Intelligent Systems and are actively participating in research, development, design, analysis, and deployment of these systems for the airborne, space, and ground communities. Committee members' interests include, but are not limited to: machine learning techniques, model-based reasoning, knowledge-based systems and knowledge engineering, real-time reasoning and learning, neural networks, planning and scheduling algorithms, qualitative simulations, fuzzy logic, expert systems, and evolutionary algorithms.

2012-2013 TC Requirements

LEGAL ASPECTS OF AERONAUTICS & ASTRONAUTICS

To foster an understanding of legal areas uniquely related to aeronautical and space science and technology, including national and international space law, the legal systems protecting intellectual property, and the laws governing satellite communications, remote sensing of the earth's resources, and commercial use and industrialization of space.

LIFE SCIENCES & SYSTEMS

The AIAA Life Sciences and Systems Technical Committee is a group of scientists and engineers who are dedicated to the advancement of the science and technology that enables humans to live and work in space and other hostile environments and that helps us to understand the effects of those environments on biological systems. Major discipline areas represented by the committee members include: Environmental Control and Life Support Systems, Medical Sciences and Systems, Biological Sciences and Systems, Human Factors Engineering, Extravehicular Activity (EVA) Systems and Techniques, Biotechnology Applications, and Astrobiology. Prospective members should have significant experience in one or more of these discipline areas. Members are also expected to have strong skills in communication, leadership, and innovation and a strong desire to contribute actively to the work of the committee.

LIGHTER-THAN-AIR SYSTEMS

Stimulate and apply the development of knowledge related to Lighter-Than-Air Systems for transport, communications, surveillance, optics, and utility applications and to disseminate such knowledge throughout the aerospace community. Emphasis shall be placed on the technical disciplines of low speed aerodynamics and control, propulsion, structures, economic analyses and new material developments, as they apply to airships, aerostats, hybrids and derivatives thereof.

LIQUID PROPULSION

This committee is interested in prospective members who have a strong background of analysis, design, test or application in the following areas of liquid rocket technology: (1) bipropellant systems; (2) monopropellant systems; (3) thrust chambers and injectors; (4) turbomachinery; (5) propellant feed systems and components; (6) liquid rocket controls; and (7) physics of liquid propulsion.

MANAGEMENT

A formal education in both the technical (engineering and/or science) and the management (leadership, management or finance) fields is desired. Practical experience in each field is mandatory with both line and staff experience desired. Must have at least 10 years experience in aerospace programs and must currently be in a position of substantial leadership/management responsibility. Prospective members should have a strong interest in the art of leadership and management as applied in the aerospace industry and has personally contributed to each in the form of speeches, papers, etc. He or she should be a member of, and have demonstrated personal interest in, the AIAA through past or current active contributions. Similar interest demonstrated in other professional management societies is desirable.

MATERIALS

The committee is seeking member candidates who possess an active interest in an interdisciplinary approach to the modeling, development, testing, and evaluation of conventional and custom-design materials for aerospace, astronautics, and related fields. Members are needed that represent all aspects of the materials community including suppliers, developers, manufacturers, and end users. Nominations are invited from a broad cross-section of government research and development agencies, universities, and industry. Members must be capable and willing to actively participate in the activities of the committee and AIAA.

MESHING, VISUALIZATION, AND COMPUTATIONAL ENVIRONMENTS

The scope of the MVCE TC is to explore the application of computer science to pre-processing, post-processing, and infrastructure in support of simulation in the aerospace community. The committee is actively soliciting industry, academic, and government members with experience in the development and application of tools, processes, and techniques for computational simulation. Engineering specialists and first-level managers are sought in particular.

2012-2013 TC Requirements

MICROGRAVITY & SPACE PROCESSES

The Microgravity & Space Processes Technical Committee seeks individuals with an interest and background in the physical and life sciences and related practical applications to explore the technical, economic, and programmatic issues associated with research and development conducted in zero- or partial-gravity environments. Research and commercial development programs include fundamental scientific studies with links to Earth-based applications and strategic research intended to support future space exploration. Specific areas of interest include fundamental physics, fluid physics and transport phenomena, combustion science and chemically reacting systems, biotechnology, and materials science. The committee is dedicated to advancing professional and public awareness of microgravity and space processing science as well as awareness of technology issues and opportunities.

MISSILE SYSTEMS

This committee focuses on technologies associated with the design, development, operations, and utilization of strategic and tactical (including RPV's) missile systems. Prospective members should have broad overall technical backgrounds in systems management, an understanding of interrelationships among missile component subsystems, and/or an understanding of systems usage, support, and logistics. Candidate personnel should also have perspectives to help guide the direction, development, and operation of missile programs necessary to continued technological growth. The committee is organized specifically: (1) to plan and execute technical meetings and conferences to inform the AIAA membership and community about technical progress in tactical and strategic missile systems; (2) to advocate for students and young professionals to seek missile sciences careers; (3) to provide a forum where representatives of government and industry can jointly discuss topics of national interest in the missile and rocket fields; and (4) to provide a source of counsel on these system matters to the AIAA Publications Committee and to other TC's.

MODELING AND SIMULATION

Prospective members should have technical backgrounds in the design, development, or use of ground based or in-flight simulators, the development or utilization of real time or non-real-time simulations, or the creation and use of simulation models for the research, development or training associated with aerospace vehicles or systems.

MULTIDISCIPLINARY DESIGN OPTIMIZATION

This TC provides a forum for engineers representing all major disciplines involved in the design of both aerospace vehicles and general consumer products who are interested in methods allowing tight integration and interaction between optimization and analysis methods. This makes the committee open to folks ranging from disciplinary specialists to design generalists. Consequently, the TC seeks members from industry, academia, and government whose professional background may include such diverse areas as: optimization, aerodynamics, structures, guidance and control, vehicle performance analysis, propulsion, materials, electromagnetics, CAD/CAM, modeling and simulation, visualization, artificial intelligence, computer science, and other related areas. As a unifying factor, prospective members should view their specialties as interacting parts in the design process, and should have an active interest in the ways in which their specialties interact with each other. Familiarity with and interest in the formal methodologies for system design based on analysis, deterministic and non-deterministic approaches, sensitivity analysis, optimization, and non-numerical (AI-based) methods is an asset for the TC.

NON-DETERMINISTIC APPROACHES

Non-Deterministic Approaches (NDA) feature philosophies and methods for quantifying and mitigating the effects of uncertainties in engineered systems. NDA are rapidly gaining ground as preferred methods for analysis and design with potentially high payoffs (e.g., cost and safety) in aeronautics, astronautics, and other similarly complex applications. The NDA Technical Committee seeks members interested in developing and applying these methods, both in traditional and emerging disciplines. Candidates should be active in this area as basic or applied researchers, or managers of programs, such that they can organize, chair, and report original work in technical sessions; review papers; and participate in committee activities.

NUCLEAR & FUTURE FLIGHT PROPULSION

The purpose of the Nuclear & Future Flight Propulsion Technical Committee (NFFPTC) is to provide an open forum for the discussion of the current and future technology needs for nuclear and advanced propulsion applications and developments. The membership has a broad representation from the nuclear and advanced propulsion community encompassing industry, government, and universities. The NFFPTC is interested in a

2012-2013 TC Requirements

number of advanced propulsion areas, including nuclear fission, nuclear fusion, high energy density chemical systems, antimatter-based concepts, solar sails, plasma sails, momentum exchange and propulsive tethers, and far-term breakthrough physics concepts with the potential to revolutionize spacecraft propulsion. These interests include not only the technical disciplines associated with the technologies of nuclear and future flight propulsion such as neutronics, plasma physics, fluid mechanics, classical and relativistic mechanics, electrodynamics, thermodynamics, thermal chemistry, materials, heat transfer, and their underlying disciplines, but also the design, safety, and implementation of complete systems. The latter include the disciplines associated with the design of unique components and supporting technologies as well as those associated with propulsion systems integration, testing, safety, and operations. Prospective members with an active interest in the areas of nuclear propulsion and advanced spacecraft propulsion concepts are encouraged to join and participate.

PLASMADYNAMICS AND LASERS

This committee is seeking prospective members who are active in fundamental and/or applied aspects of plasmadynamics and gaseous lasers, including laser devices, optical physics (including aero-optics), and systems, laser applications and diagnostics; directed energy technologies and applications; reactive non-equilibrium flows, high and low pressure plasma chemistry; MHD power generator gasdynamics, electrical phenomena, and diagnostics; space plasma diagnostics and applications; plasma diagnostics of controlled thermonuclear fusion experiments; laser or plasma interactions with materials or fluids, plasma processing, computational electromagnetics, computational magneto-aerodynamics, weakly ionized gases, and also plasmadynamic phenomena of any other applications in propulsion, power and energy conversion and cleanup.

PRODUCT SUPPORT

The purpose of the Product Support Technical Committee (PSTC) is to advance the quality, technology, and excellence of post-production aviation products and services by providing an international, industry-wide forum for networking and exchanging of best practices, and setting of standards. The main objectives of the PSTC are:

- *To support knowledge development, cross communication and professional growth amongst suppliers and users of aviation products and services.
- *To create feedback mechanisms between members of the PSTC and the AIAA for the exchange of product support expertise.
- *To promote an understanding of regulations, technical systems, organizations and human factors affecting post-production aviation products and services.
- *To expand the awareness of aviation products and services such as non-destructive and functional testing, repair, maintenance repair overhaul and modifications, ground support equipment, etc.

PROPELLANTS AND COMBUSTION

This committee needs members with talent in one or more of the following technical areas: formulation of solid propellants, gas generants, and fuels for air-breathing combustors; combustion of liquid fuels and propellants; combustion of solid propellants, hybrid propellants, and gun propellants; combustion-generated pollution; aerothermochemistry, including non-equilibrium flow phenomena; combustion diagnostics; unsteady combustion and combustion control; gas-dynamic and chemical lasers; fire safety; fuel spray formation; and modeling of combustion and related processes, especially combustion-turbulence interactions.

SENSOR SYSTEMS

Candidates for the Sensor Systems TC should be technical or technical management personnel currently involved with sensor systems or sensor technology. The Charter of the Sensor Systems Technical Committee (SENTC) is to foster the development, application, and operation of advanced sensor systems and sensor technologies throughout the aerospace community. The committee promotes the advancement of sensor systems by facilitating information exchange (via technical correspondence and conferences), and by providing informed positions on emerging sensor system issues.

Sensor Systems technologies are broadly defined to include sensor-based systems utilized for (1) acquisition and interpretation of remote sensing or in-situ measured imagery or other data forms, (2) measurement and definition of physical, electromagnetic, electrical, chemical, biological or other related data characterizing terrestrial, oceanographic, atmospheric or extraterrestrial phenomena and effects, (3) measurement and acquisition of inertial sensing data and (4) applications of nanotechnology and advanced micro-electro-mechanical system (MEMS) devices as primary sensors in the Sensor Systems defined above and in other related technology areas.

2012-2013 TC Requirements

SOCIETY AND AEROSPACE TECHNOLOGY

The AIAA Society and Aerospace Technology Technical Committee (SAT TC) focuses on (1) how aerospace technology and techniques help solve critical societal challenges and improve quality of life, and (2) understanding interactions between the aerospace enterprise and broader social and cultural trends.

SOFTWARE

SOFTC (Software TC) is looking for active members who want to be part of an authoritative and respected voice in all things aerospace software. It is interested in all facets of software. This includes but not limited to, Software, Software Engineering, Architectures, Tools, Techniques, Technologies, Processes, Standards, Education and Public Policy issues. SOFTC wants to have an international character and appeal by being relevant and attractive to all aerospace faring nations (India, China, Brazil, Russia, Korea, Israel, France and Germany etc.) and organizations (like Google, Cisco, Microsoft, ISRO, ESA, NASDA, NAL, InfoSys) because the aerospace systems developed for/by US DOD are no longer the prime movers of state-of-the art in our field. It actively cooperates with IEEE and ACM. Most of our members are also active members in them. SOFTC has an active "Angels" program, where deserving members (including international members) are encouraged and helped to advance their membership and win major awards. It also provides the mentoring opportunities (as both mentors and mentees). SOFTC uses the modern communication technology to make it possible for the members to make significant and meaningful contributions without disturbing their other responsibilities.

SOLID ROCKETS

The Solid Rocket Technical Committee (SRTC) is seeking prospective members active in areas of education, research, design, testing, manufacturing and application of solid rocket systems. Individuals are desired with technical backgrounds related to solid propellants, nozzles, composite structures, design, risk and reliability, systems analysis, motor processing and integration of solid rockets into space, defense, and commercial systems. The SRTC is committed to nurturing and promoting professionalism and knowledge among those interested and engaged in the advancement of solid propulsion systems.

SPACE ARCHITECTURE

Prospective members should have a background in architectural design of living and working environments in space related facilities, habitats, and vehicles. These include, but are not limited to: space vehicles, stations, habitats and lunar and planetary bases; and earth-based control, experiment, launch, logistics, payload, simulation and test facilities. Earth analogs to space applications may include Antarctic, airborne, desert, high altitude, underground, undersea environments and closed ecological systems. Designing these forms of architecture presents a particular challenge: to ensure and support safety, habitability, human reliability, and crew productivity in the context of extreme and unforgiving environments.

SPACE AUTOMATION AND ROBOTICS

Prospective members are sought that are active in the field of automation and robotics (A&R) and have an interest in space applications of A&R. The Technical Committee on Space Automation and Robotics (SARTC) supports and promotes informed AIAA decisions and actions on automation and robotics in space program applications. Generated information includes coverage of the design, development, fabrication, application, and operation of SAR systems and components, and consideration of SAR technology development needs and human-machine interfaces. It also includes programmatic aspects, such as the role of SAR in achieving overall U.S. Space Program objectives and related international activities, and the relationship of SAR to terrestrial automation and robotics. Prospective members should be able to commit to meetings held two times a year at various locations in the U.S., and to actively participate in the work of the subcommittees.

SPACE COLONIZATION

The SCTC will foster development of human space colonization, including: (A) space tourism; (B) space base operations in orbit, in transit, and on planetary surfaces; (C) robotic/automated and human space exploration and data needs; (D) use of insitu Space Resources; (E) human colonization in space; and (F) Mars and other planetary terraforming activities. The TC will also promote development of: (A) informed positions; (B) forums for communication, networking, and policy development; (C) creation and distribution of educational materials; and (D) development of technical interchange and awareness on emerging issues. The TC will also promote leadership in developing: (A) mission justifications; (B) assessments of environmental, legal and science ethics; (C) identification of technical issues; (D) identification of social issues; (E) implementation criteria; and (F) space colonization methods and a credible timetable.

2012-2013 TC Requirements

SPACE LOGISTICS

The Space Logistics Technical Committee actively participates in and promotes the technologies and disciplines associated with providing manned and unmanned space logistical support activities both insitu and on orbital trajectories associated with earth and other celestial bodies. Included are earth-based and space-projected infrastructures of facilities, equipment, maintenance and repair, depot retrofit and refurbishment, inventory control and supply, education and training, personnel, transportation as well as other traditional logistic support elements and operations. As appropriate, the technical committee members interface and work with other professionals through inter and intra society, institute, committee and organization working relationships to explore, develop and disseminate core space logistic technologies commensurate with the needs of users and providers in the government, industry and academia. Members should be well grounded in related areas of logistics, systems, planning, engineering, economics, servicing, support operations and management. In addition, they must desire to be active in contributing to the accomplishment of goals in the areas of committee sponsored meetings, studies, papers, reports, symposia, workshops and technical disciplines.

SPACE OPERATIONS AND SUPPORT

The Space Operations and Support Technical Committee focuses on a number of areas that are key to the success of spacecraft and launch systems with an emphasis on the operational aspect. Members are sought to support the Committee's interests in: human and robotics space exploration; launch, orbital, and planetary operations; automation and reducing cost of operations; human factors; developing and integrating advanced technology; mission operations assurance; collision avoidance and co-location of space systems; prevention and mitigation of orbital debris; and the development of space policies to improve all aspects of space operations. Members are expected to actively participate and contribute to TC projects and activities, including our annual Space Operations Workshop, and attend at least two of the three committee meetings each year.

SPACE RESOURCES

The Space Resources Technical Committee (SRETC) will foster:

1. Development of space resources, including: (a) resources from the Moon; (b) resources from Mars; (c) resources from asteroids and other objects in the Solar System; (d) commercialization of space resources
2. Development of: (a) informed positions; (b) forums for communication, networking, and policy development; (c) creation and distribution of educational materials; and (d) development of technical interchange and awareness on emerging issues to our members, the AIAA, industry, academia, the general public, the federal and foreign governments; and Leadership in developing: (a) mission justifications; (b) assessments of environmental, legal and science ethics; (c) identification of technical issues; (d) identification of social issues; (e) implementation criteria; and (f) space resource utilization methods and timetables for action.

SPACE SYSTEMS

This technical committee seeks to promote informed decisions about space systems. As such it is concerned with the objectives, the technological, operational and economic feasibility, and the major issues regarding the complete space systems, as well as the communication of this information. It has a corresponding concern with the content and quality of education in space system engineering. Its charter also includes the promotion of Space Science within the AIAA. As appropriate, it and other AIAA committees work together regarding related technologies, disciplines, meetings, papers and reports. Members should therefore have experience in space system engineering, including requirements, concept formulation, design, analysis, critical technologies, standards, subsystem integration, interface definition, development, test and evaluation, deployment, manned and unmanned operations, and program management. Members should also have strong skills in communication, leadership and innovation, with equally strong desires to contribute actively to committee affairs.

SPACE TETHERS

This committee seeks to promote concepts, missions, and technologies related to the development of space-tether systems. These systems include, but are not limited to, electrodynamic propulsion, momentum-exchange propulsion, formation flying, and scientific missions. Topics of interest include tether system design; observation, modeling, and control of tether dynamics; safe operation of tether systems; methods for tether deployment and retrieval; methods for tether-payload rendezvous; ground-based experimental demonstrations; interactions between tethers and other space objects; characterization of the mechanical

2012-2013 TC Requirements

characteristics of new tether materials or structures; effects of the space environment on tether materials; methods for improving capabilities for tracking and propagating tethered systems; tether designs for survivability; operational controllability of tether systems for maximum performance; and efficient charge collection/emission physics for electrodynamic systems

SPACE TRANSPORTATION

This committee is actively involved with piloted and robotic space transportation systems. Membership includes representatives from the United States, Canada, Europe, and Japan. A balanced United States membership from government agencies, industry, and universities is desired. Prospective committee members should have interdisciplinary experience in all areas of space transportation. Members should have a strong desire to contribute actively to committee affairs.

STRUCTURAL DYNAMICS

This committee is actively seeking candidates from academic, industry, and government organizations who are actively involved in the study, advancement, and application of structural dynamics. This committee supports technical activities that advance the relevant art, science, and technologies required for the successful application of flexible structures to air and space platforms. Prospective members should have expertise in one of the following major areas (linear and/or nonlinear): acoustics, aeroelasticity, dynamics, and vibration testing. Members must be willing and able to actively participate in and contribute to two committee meetings per year. The committee is open to U.S. and international members who meet the above requirements.

STRUCTURES

This committee is actively seeking candidates from academic, industry, and government organizations who are actively involved in the study, advancement, and application of structural analysis and design. The following technical backgrounds are required for prospective members: (1) structural design or analysis of aircraft, helicopters, missiles or spacecraft; (2) advanced materials applications; (3) computer-aided and knowledge based analysis and design; (4) continued airworthiness of in service (military or commercial) aircraft; (5) academic-aerospace, structural engineering. Members must be willing and able to actively participate in and contribute to committee activities, including two committee meetings per year and assisting in abstract review for SDM conferences. A publication record and past participation in SDM conferences is desirable.

SURVIVABILITY

The committee is actively seeking industry, academic, and government members who are interested in either survivability assessment methodology or survivability enhancement technology for air and space systems. Survivability involves both susceptibility and vulnerability. The threats to system survivability consist of weapons encountered in combat, terrorist weapons, and other hostile environments.

SYSTEM ENGINEERING

Modern market forces are driving a systematic optimization of the development process. To support this trend, the committee charter is focused on three areas: 1) process development and improvement, 2) tools and methodology, and 3) education. Prospective members should have an interest and expertise in system engineering. We are seeking members from aeronautics, space, computer, ground, and support systems as well as from the developer, the customer community, and academia. We are looking for energetic individuals from private industry, DOD, other Federal agencies, and academia that will work with us to move forward the state-of-the-art in this important discipline. Members are expected to actively participate in, and contribute to, the projects and activities (such as symposia, conference sessions, position papers, etc) of the TC including attendance at one of the two meetings each year. Younger members are encouraged to apply.

TERRESTRIAL ENERGY SYSTEMS

The Terrestrial Energy Systems Technical Committee has concerns that future energy supplies may be inadequate to support a modern industrial society. The committee charter is focused on enhancing the application of Aerospace Power Technology to terrestrial applications. Special interest is the areas of dual-use technology as well as hazardous waste, waste management, fume and dust control, solid and liquid waste, combustion, power generation and transportation. The committee seeks members with interest in the application of current and advanced technologies to the solution of problems in terrestrial energy systems.

2012-2013 TC Requirements

All facets of energy use are addressed: production, storage, distribution, used hardware, conservation, environmental effects, and economics.

THERMOPHYSICS

Prospective members who are active in one or more of the following technical areas are sought: (1) thermophysical properties of solids; (2) spacecraft and aircraft thermal control, thermal design, and thermal analysis; (3) planetary thermophysical characteristics; (4) radiative transfer and light scattering; (5) heat transfer aspects of aerospace oriented chemical, nuclear fission and fusion, power conversion, and energy storage and transmission systems; (6) thermal insulation and isolation; (7) heat pipes; (8) rocket plume radiation; (9) detection of environmental pollutants by radiative transfer techniques; (10) contamination and/or degradation of thermal control and optical surfaces; (11) thermophysics flight experiments; (12) ascent and entry heating; (13) vacuum aspects of nuclear, power conversion, and energy storage and transmission systems; (14) remote sensing of thermal properties; (15) conduction/contact resistance; (16) nonintrusive diagnostics; (17) computational methods in thermophysics; (18) convection heat transfer; (19) laser irradiation effects; (20) heat transfer in plasmas; and (21) aerospace thermal applications of cryogenic technology.

V/STOL AIRCRAFT SYSTEMS

The committee is actively looking for industry, academic, and government members who have experience in the design and analysis of vertical takeoff and landing (V/STOL) aircraft consisting of either fixed or rotary wing configurations and their propulsion/control systems. Also experience in: (1) ground or flight testing of operational applications, (2) operational requirements, or (3) familiarity with regulations governing operation for military or commercial systems would qualify. The committee sponsors or co-sponsors the biennial International Powered Lift Conference, developed and sponsors a week-long short course entitled V/STOL Fundamentals, and is active in supporting aircraft design competitions. The V/STOL Aircraft Systems T.C. is interested in attracting experienced and new to the industry members who will support these and other TC activities and who will consistently maintain an active role in carrying out the committee's charter to generate, enhance and disseminate V/STOL technologies.

WEAPON SYSTEM EFFECTIVENESS

Desires qualified and experienced engineers, scientists, program managers and government officials active in the discipline of weapon system lethality, or effectiveness, and its related subdisciplines. Interested university students are also encouraged to join as associate members. The committee is engaged in developing and promoting the science and technology of predicting, measuring, evaluating, and improving the lethality, or effectiveness, of weapon systems. It is organized specifically to: 1) encourage multidisciplinary interaction and synergism; 2) provide a forum for technical interchange among the professional community; 3) promote informed decision-making on all aspects of system lethality within AIAA, industry and government; 4) encourage and promote publication of technical papers; 5) publish AIAA position papers and articles; 6) offer and sponsor short courses; 7) provide a liaison with other AIAA TCs, local AIAA sections and other related professional organizations and societies; and 8) recognize significant contributions to the advancement of the understanding of system lethality and its related technologies. Members should be active in the management, design, analysis, test or application of technologies related to weapon system lethality assessment, validation and/or verification. A goal is to maintain balanced representation from aerospace prime contractors; support contractors; government organizations, agencies and laboratories; weapon system program offices; the military services (including users); and academia. As with other AIAA TCs, the Weapon System Effectiveness TC is interested in attracting only members who are free to actively and consistently participate in committee responsibilities and who have a strong interest in promoting the understanding of weapon system lethality issues and technologies.



The World's Forum for Aerospace Leadership

AIAA TECHNICAL COMMITTEE (TC) NOMINATION FORM

Please submit one copy (photocopies are acceptable) of this form, and one copy of nominee's resume, to **AIAA Technical Committee Nominations, 1801 Alexander Bell Drive, Reston, VA 20191**. Submissions may be faxed to 703.264.7551. Nominations may also be submitted via our Web site at www.aiaa.org, Inside AIAA, Technical Committees.

For additional information about AIAA Technical Committees, please visit www.aiaa.org/content.cfm?pageid=192

Date _____

Name (Mr. / Ms. / Dr. / Prof.) _____

Title _____

Are you applying for an associate membership? (Yes/No) _____
Associate membership is available only for members under 35 years of age.

Organization _____

Business Address _____

Telephone _____ Fax _____

E-mail _____

Home Address _____

Home telephone (to be used by TC chairman only – not published) _____

Preferred mailing address (This is the address to which your *Aerospace America* and technical journal subscriptions will be sent, and the address that will be published in the Technical Activities Roster.) _____

() Business () Home

Technical Activities Committee

College or University _____

Degree _____ Year _____

Major/Field of Study _____

Graduate degrees _____

College or University _____ Year _____

AIAA Membership Grade and Number _____
You must be a current member of AIAA to join a Technical Committee.

Are you currently a member of any AIAA Technical Committee? Yes / No
If yes, what technical committee are you a member of, and when does your term end? _____

Individuals should not apply for membership on more than two Technical Committees at the same time.

Individuals are not allowed to join two Technical Committees simultaneously. After you have been a member of a Technical Committee for at least one year, you may apply to join a second Technical Committee.

Please list the TC(s) you are interested in joining in priority order:

1. _____

2. _____

Please explain briefly why you would like to join these Technical Committees, any activities associated with these Technical Committees that you are currently supporting, and what you hope to accomplish as a Technical Committee member.



Technical Activities Committee

Please list activities you have been active in that are relevant to the Technical Committee charter _____

AIAA offices held _____

Membership in other societies, committees, boards, or other AIAA activities _____

Primary professional interest _____

Secondary professional interests _____

Positions held pertinent to above _____

Professional publications (attach additional pages if necessary) _____

Honors and/or awards _____

Please provide a brief description on what projects you have recently worked on or are currently working on _____

Nomination submitted by (if other than self) _____

Title _____
Organization _____
Address _____

E-mail _____
Please feel free to attach separate sheets as needed. If you have any questions, please contact Technical Activities at 703.264.7573.

ENDORSEMENT

This form must be signed by the nominee's supervisor to document the understanding of time and travel commitments.

I endorse the nomination of _____
for membership on the _____ Technical Committee.

I understand that he/she will be expected to commit time and travel resources to support committee activities and meetings.

SIGNATURE _____
NAME _____
TITLE _____
ORGANIZATION _____
TELEPHONE _____