

# Tulsa Engineering Foundation Resource Booklet

FY16 – July 1, 2015 to June 30, 2017

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TEF Officers and Trustees

List is available as separate document. It is a dynamic list.

## **Tulsa Engineering Foundation Resource Booklet**

TEF Organization Member Representatives

List is available as separate document.

## Tulsa Engineering Foundation Resource Booklet

TEF Member Organization Monthly Meeting Days as of 7/1/2015

Sorted alphabetically

1	ACI	Third Thursday, 11 :30, Oneok Cafeteria
2	AIChE	
3	AISES	
4	APWA	First Wednesday, 11 :30, Oneok Cafeteria
5	ASCE	Third Wednesday, 11 :30, Tulsa Country Club
6	ASHRAE	Second Thursday, 6 PM, Ti Amos Restaurant
7	ASME	Third Thursday, 6 PM, OSU Tulsa
8	AWS	Fourth Thursday, 6 PM,
9	CSI	First Thursday, 6 PM, Baxters Interurban
10	EST	Second & Fourth Monday, 11 :30 AM, Oneok Cafeteria
11	IEEE	Second Tuesday, 6 PM, OSU Tulsa
12	ISA	
13	NSBE	
14	OSPE	First Thursday, 11 :30 AM, Oneok Cafeteria
15	SAME	Third or Fourth Tuesday, 11 :30 AM, Tulsa District
16	SHPE	
17	SME	
18	SPE	Thursday, twice a month, 11 :30 PM, Summit Club
19	SWE	

Sorted by Week of Month

APWA	First Wednesday, 11 :30, Oneok Cafeteria
OSPE	First Thursday, 11 :30 AM, Oneok Cafeteria
CSI	First Thursday, 6 PM, Baxters Interurban
EST	Second & Fourth Monday, 11 :30 AM, Oneok Cafeteria
IEEE	Second Tuesday, 6 PM, OSU Tulsa
ASHRAE	Second Thursday, 6 PM, Ti Amo's Restaurant
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AIChE	
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SWE	
ISA	
NSBE	
SME	

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## About TEF

### Mission Statement

The Tulsa Engineering Foundation coordinates, organizes and sponsors career guidance, youth outreach and profession enhancing activities for the professional engineering community as well as the community at large through operation as a 501.c.3 charitable organization.

### History of TEF

The Tulsa Engineering Foundation was established by the Engineers' Society of Tulsa in the 1980's as a 501 (c)(3) charitable non-profit corporation to provide:

- Educational facilities and programs relating to the engineering profession.
- Operate exclusively for charitable, scientific and educational purposes.
- Qualify for IRS tax exemption under Section 510 (c) (3).

TEF's members are local chapters or professional-technical societies and educational institutions. A board of Elected Trustees is selected from representatives of the member organizations. The officers are elected from the Trustees annually. The TEF meets quarterly and holds its annual meeting in July. Annual dues are \$100. TEF has a modest endowment fund with the ability to receive a wide range of donations and bequests.

TEF serves as a clearing house and coordinating agency to foster cooperative and joint activities among the member societies. Educational outreach activities are the premier functions, including the founding and sponsoring of the annual Tulsa Engineering Challenge (TECh), and aiding with the regional MATHCOUNTS competition and initiating a Project Grant program. A continual fund raising campaign raises \$6,000 to \$10,000 annually through donations from foundations, businesses, individuals and member organizations to supplement the dues income and other fund raising activities. TEF maintains a website with facilities for member organizations to announce programs and post newsletters.

### TEF Meeting Schedule

**Quarterly meetings are held in July, October, January and April.**

July 16, 2015, **Tulsa Tech, Lemley Campus**, Annual Meeting

October 22, 2015, **Tulsa Tech, Lemley Campus**

January 21, 2016, **Fab Lab Tulsa**

April 21, 2016 **Tulsa Tech, Lemley Campus**

July 20, 2016, **Tulsa Tech, Lemley Campus**, Annual Meeting

### TEF Website

The TEF website is [www.TulsaEngineer.org](http://www.TulsaEngineer.org). If the member society so desires, their meeting notices can be posted on the website calendar. Their meeting information should be sent to [info@tulsaengineer.org](mailto:info@tulsaengineer.org). In addition to the joint calendar of meetings, each society has a page where their mission is posted as well as their officer contact. Other information can be posted at the request of the society.

The tabs on the website are Home, Calendar, About TEF, Member Societies, Youth Outreach and Tulsa Eng'g Challenge. Items of interest to the engineering community are posted on the home page.

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**The Tulsa Engineering Foundation, Inc.  
Tulsa, Oklahoma**

## **BY-LAWS**

TEF\_bylaws\_updated\_to\_Apr\_29\_04

### **ARTICLE I - NAME**

Section 1: The name of this Foundation shall be TULSA ENGINEERING FOUNDATION, INC.

### **ARTICLE II - OBJECT**

Section 1: The object of TULSA ENGINEERING FOUNDATION, INC. shall be to operate a charitable organization within the meaning of Sections 501(c)(3) and 170(c)(2) of the Internal Revenue Code of 1954. In order to accomplish that objective, the operation of the corporation shall be subject to the following:

- (a) The corporation may receive and maintain a fund or funds of real or personal property, or both, and, subject to the restrictions and limitations hereinafter set forth, to use and apply the whole or any part of the income therefrom and the principal thereof exclusively for charitable purposes, either directly or by contributions to organizations that qualify as exempt organizations under Section 501(c)(3) of the Internal Revenue Code of 1954 and its Regulations as they now exist or as they may hereafter be amended.
- (b) No part of the net earnings of the corporation shall inure to the benefit of any member, director, officer of the corporation, or any private individual (except that reasonable compensation may be paid for services rendered to or for the corporation affecting one or more of its purposes), and no member, trustee, officer of the corporation or any private individual shall be entitled to share in the distribution of any of the corporate assets on dissolution of the corporation. No substantial part of the activities of the corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the corporation shall not participate in or intervene in (including the publication or distribution of statements) any political campaign on behalf of any candidate for public office.
- (c) The corporation shall distribute its income for each taxable year at such time and in such manner as not to become subject to the tax on undistributed income imposed by Section 4942 of the Internal Revenue Code of 1954 or corresponding provisions of any subsequent federal tax laws.
- (d) The corporation shall not engage in any act of self-dealing as defined in Section 4941(d) of the Internal Revenue Code of 1954 or corresponding provisions of any subsequent federal tax laws.
- (e) The corporation shall not retain any excess business holdings as defined in Section 4943(c) of the Internal Revenue Code of 1954 or corresponding provisions of any subsequent federal tax laws.
- (f) The corporation shall not make any investments in such manner as to subject it to tax under Section 4944 of the Internal Revenue Code of 1954 or corresponding provisions of any subsequent federal tax laws.
- (g) The corporation shall not make any taxable expenditures as defined in Section 4945 (d) of the Internal Revenue Code of 1954 or corresponding provisions of any subsequent federal tax laws.
- (h) Notwithstanding any other provision of these By-Laws or the Articles of Incorporation, the corporation shall not conduct or carry on any activities not permitted to be conducted or carried on an organization exempt under Section 591(c)(3) of the Internal Revenue Code of 1954 and its Regulations as they now exist or as they may hereafter be amended or by any organization contributions to which are deductible under Section 170(c)(2) of such Code and Regulations as they now exist or as they may hereafter be amended.
- (i) Upon the dissolution of the corporation, the Board of Trustees shall, after paying or making provision for the payment of all the liabilities of the corporation, dispose of all of the assets of the corporation exclusively for

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the purposes of the corporation in such manner or to such organization or organizations organized and operated exclusively for charitable, educational, religious literary or scientific purposes as shall at the time qualify as an exempt organization or organizations under Section 501(c)(3) of the Internal Code of 1954, or the corresponding provision of any future United States Internal Revenue Law, as the Board of Trustees shall determine. Any such assets not so disposed of by the district court of the county in which the principal office of the corporation is then located, exclusively for such purposes or to such organization or organizations; as said court shall determine, which are organized and operated exclusively for such purposes.

## ARTICLE III - MEMBERSHIP

- Section 1: The membership of the Tulsa Engineering Foundation shall consist of those groups and classifications, and qualifications listed in Section 2 of this Article.
- Section 2: Member groups.
- a. Organizational Members. An organizational member shall be a professional association, society, or organization of persons having common interests in science, engineering, and/or technology such as, but not limited to, chemistry, electrical, geology, geophysics, seismology, meteorology, architecture, metallurgy, aeronautics, astronautics, instrumentation, materials testing, and technical research.
  - b. Consulting Members. From time to time, the Board of Trustees may wish to extend membership to individuals having knowledge or skills of particular benefit to the Corporation.
- Section 3: Election of Members. An Organization or an individual shall become a member of the Tulsa Engineering Foundation by submitting an application for membership to the Board. The board will review the application elect or deny the membership by a simple majority vote of those Board members attending the next quarterly meeting, after the application is submitted.
- Section 4: The organizational member shall be represented by an individual from that organization, who has the qualifications as listed in paragraph 'a' below. This member shall be entitled to all privileges of membership in the Tulsa Engineering Foundation, including the right to hold any elected office and to vote upon all questions affecting the Corporation which are lawfully submitted to its membership for action.
- (a) The representative member for a member organization shall be an active member of that organization and be duly elected or appointed by that organization to represent them.
  - (b) If a Representative Member, while holding any office in the Corporation, is replaced by the Organization Member, the office held by the individual who is replaced will be considered vacant. The vacancy will be filled as provided in Section 2. Article VI of these By-Laws.
- Section 3: Dues. The dues, if any, of all Organizational members shall be set annually at the annual meeting of members to be held each year. Consulting members shall not pay dues and shall be ineligible to vote or hold office. These members will be designated Consulting Members and will serve for finite periods of the time to be designated by the Board of Trustees.
- Section 4: Suspension of Members. Any member in default in payment or dues shall be ipso facto suspended from all privileges of membership, and if, after notice, such default be not cured within a period of 90 days, the membership of such member shall automatically cease and terminate.
- Section 5: Removal of Members. Any member may be removed from membership by a majority vote of the members present at any annual meeting or any special meeting of the members called for the purpose or cause.

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Section 6: Reinstatement of Members. Any member who has forfeited his/her membership for non-payment of dues may be reinstated by the affirmative vote of two-thirds (2/3) of the trustees upon payment of dues in arrears, which shall be for a period of not more than one year, or the member may re-enter the Foundation as a new member.

### **ARTICLE IV - OFFICERS**

Section 1: President. The president shall be selected by, and from the membership of the Board of Trustees. He shall be the chief executive officer of the corporation. He shall preside over all meetings of the Board and of the members. He shall have general and active management of the business of the corporation and shall see that all orders and resolutions of the Board are carried into effect. He shall be an ex-officio member of all standing committees and shall have the general powers and duties of supervision and management usually vested in the office of president of a corporation.

Section 2: Vice Presidents. At least one vice-president shall be chosen from the membership of the board. Such vice-presidents as are board members, in the order of their seniority, shall perform the duties and exercise the powers of the president during the absence or disability of the president. Vice-presidents shall perform such other duties as may be delegated to them by the Board of Trustees, the president or the Executive Committee.

Section 3: Secretary. The secretary shall be selected by the Board of Trustees. The secretary may be a member of the Board, or an individual from without TEF. The secretary shall attend all meetings of the members and the Board of Trustees, and of the executive committee, and shall preserve in books of the corporation true minutes of the proceedings of all such meetings. He shall keep in his custody the seal of the corporation and shall have authority to affix the same to all instruments where its use is required. He shall give notices required by statute, by-law or resolution. He shall perform such other duties as may be delegated to him by the Board of Trustees or by the executive committee.

Section 4: Treasurer. The Treasurer shall be selected by, and from the membership of the Board of Trustees.

(a) The treasurer shall have custody of all corporate funds and securities and shall keep in books belonging to the corporation full and accurate accounts of all receipts and disbursements; he shall deposit all monies, securities and other valuable effects in the name of the corporation in such depositories as may be designated for that purpose by the Board of Trustees. He shall disburse the funds of the corporation as may be ordered by the Board, taking proper vouchers for such disbursements, and shall render to the president and trustees at the regular meetings of the Board, and whenever requested by them, an account of all his transactions as treasurer and of the financial condition of the corporation.

(b) When In the judgment of the Board of Trustees, the custody of corporate funds and securities warrant such action, the treasurer shall be required to make good and sufficient bond in an amount to be set by the Board, the fee for which will be paid by the Foundation.

Section 5: Assistant Secretary and Assistant Treasurer. The Board may appoint an assistant Secretary and/or an assistant Treasurer as they deem necessary. The assistants must meet the same qualifications as the Treasurer. The assistant secretary, in the absence or disability of the secretary, shall perform the duties and exercise the powers of the secretary. The assistant treasurer, in the absence or disability of the treasurer, shall perform the duties and exercise the powers of the treasurer.

### **ARTICLE V - MEETINGS**

Section 1: Place of Meeting. Any or all meetings of the members, and the Board of Trustees of this corporation may be held within or without the State of Oklahoma.

Section 2: Annual Meeting of Members. The annual meeting of the members shall be held in each year in July, one of the purposes of which shall be to fill vacancies on the Board of Trustees.



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Section 3: Notice of Annual Meeting of Members. At Least ten (10) days prior to the date fixed by Section 2 of this article or the holding of the annual meeting of members, written notice of the time, place, and purposes of such meeting shall be mailed, as hereinafter provided, to each member entitled to vote at such meeting.

Section 4: Delayed Annual Meeting. If, for any reason, the annual meeting of the members shall not be held on the day herein before designated, such meeting may be called and held as a special meeting, and the same proceedings may be had thereat as at an annual meeting, provided, however, that the notice of such meeting shall be the same herein required for the annual meeting, namely, not less than a 10 day notice.

Section 5: Special Meetings of Members. A special meeting of the members may be called at any time by the president, by a majority of the Board of Trustees, or upon written petition of ten members.

Section 6: Notice of Special Meeting of Members. At least three days prior to the date fixed for the holding of any special meeting of members, written notice of the time, place and purposes of such meeting shall be mailed, as hereinafter provided, to each member entitled to vote at such meeting.

Section 7: Organization Meeting of Board. At the place of holding the annual meeting of members and immediately following the same, the Board of Trustees as constituted upon final adjournment of such annual meeting shall convene for the purpose of electing officers and transacting any other business properly brought before it, provided that the organization meeting in any year may be held at a different time and place than that herein provided, by consent of a majority of the trustees of such new Board.

Section 8: Regular Meeting of Board. Regular meetings of the Board of Trustees shall be held quarterly at such time and place as the Board of Trustees shall from time to time determine. No notice of regular meetings of the Board shall be required.

Section 9: Special Meetings of Board. Special meetings of the Board of Trustees may be called by the president any time by means of such written notice by mail of the time, place and purpose thereof to each trustee as the president in his discretion shall seem sufficient, but action taken at any such meeting shall not be invalidated for want of notice if such notice shall be waived as hereinafter provided.

Section 10: Notices and Mailing. All notices required to be given by any provision of these by-laws shall state the authority pursuant to which they are issued (as, "by order of the president," or "by order of the Board of Trustees" as the case may be) and shall bear the written, stamped, typewritten or printed signature of the secretary or assistant secretary. Every notice shall be deemed duly served when the same has been deposited in the United States mail, with postage fully prepaid, plainly addressed to the sendee at his, her, or its last address appearing upon the membership record of this corporation.

Section 11: Waiver of Notice. Notice of the time, place, and purpose or any meeting of the members or of the Board of Trustees, may be waived by telegram, radiogram, cablegram, or other writing, either before or after such meeting has been held.

Section 12: Quorum of Members. Presence in person or by proxy of members representing 10 percent (10%) of the voting rights of this corporation shall constitute a quorum at any meeting of the members.

Section 13: Corporate Member. For the purpose of voting, any member entitled to vote is considered to be a corporate member.

### **ARTICLE VI - BOARD OF TRUSTEES**

Section 1: Number and Term of Trustees. The business, property, and affairs of this corporation shall be managed by a Board of Trustees composed of not less than three and not more than 20 elected persons plus one ex-officio trustee per Organizational Member (who shall be the Representative Member) who shall be members of this corporation. Each elected trustee shall hold office for the term of which he is elected and until his successor is elected and qualified. All trustees have the right to vote and hold office.

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The term of elected trustee shall be for three years. A trustee may be elected to succeed himself/herself except that after serving any two consecutive elected terms, at least one year must elapse before he/she may again be elected to the Board of Trustees. The term of each ex-officio Trustee shall be designated by his/her Organizational Member.

Section 2: Vacancies. Vacancies in the elected members of the Board of Trustees shall be filled by election made by the members of the Tulsa Engineering Foundation. Each person so elected to fill a vacancy shall remain a trustee for the balance of the unexpired term.

Vacancies in Representative Members serving as Trustee shall be designated by his/her Organization Member.

Section 3: Action by Unanimous Written Consent. If and when the trustee shall collectively consent in writing to any action to be taken by the corporation, such action shall be valid as corporation action as though it had been authorized at a meeting of the Board of Trustees.

Section 4: Power to Make By-laws. The Board of Trustees shall have power to make and alter any by-law or by-laws, including the fixing and altering of the number of trustees, provided that the Board shall not make or alter any by-law or by-laws fixing the qualifications, classifications or term of office of any member or members of the then existing Board.

Section 5: Power to elect Officers. The Board of Trustees shall select a president, one or more vice-presidents, a secretary, and a treasurer.

Section 6: Power to Appoint Other Officers and Agents. The Board of Trustees shall have power to appoint such other officers and agents as the Board may deem necessary for transaction of the business of the corporation.

Section 7: Removal of Officers and Agents. Any officer or agent may be removed by the Board of Trustees whenever in the judgment of a majority of the Board the business interests of the corporation will be served thereby.

Section 8: Power to Fill Vacancies. The Board shall have power to fill any vacancy in any office occurring from any cause whatsoever.

Section 9: Delegation of Powers. For any reason deemed sufficient by the Board of Trustees, whether occasioned by absence or otherwise, the Board may delegate all or any of the powers and duties of any officer to any other officer or trustee.

Section 10: Power to Appoint Executive Committee. The Board of Trustees shall have the power to appoint by resolution an executive committee composed of four or more trustees, who, to the extent provided in such resolution, shall have and exercise the authority of the Board of Trustees in the management of the business of the corporation between meetings of the Board.

Section 11: Compensation. The compensation of trustees, officers, and agents if any, may be fixed by the Board, subject to the provisions of ARTICLE II of these By-Laws.

Section 12: Quorum. A majority of the number of the elected trustees shall constitute a quorum.

Section 13: Indemnification. The Corporation shall indemnify an officer or member of the Board of Trustees or former officer or former member of the Board of Trustees against expenses actually and necessarily incurred by him/her in connection with the defense of any action, suit or proceeding to which he or she is made a party by reason of being or having been such officer or member of the Board of Trustees, except in action adjudged to be the result of negligence or misconduct in the performance of duty.

### **ARTICLE VII - COMMITTEES**

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- Section 1: Executive Committee. An Executive Committee composed of the President, Vice-President, Secretary, and Treasurer of the Corporation, and such other members as the Board of Trustees may designate, shall have the authority to conduct the affairs of the Corporation between meetings of the board of trustees within the limits set out by the Board.
- Section 2. Finance Committee. A Finance Committee composed of the Treasurer and two other members shall be appointed by the president promptly after each annual meeting. It shall be the duty of this committee to prepare a budget for the fiscal year beginning the first day of July, and to submit it to the Board of Trustees at its next meeting. The finance committee may from time to time submit supplements to the budget for the current fiscal year as directed by the officers or Board of Trustees.
- Section 3: Financial Review Committee. A Financial Review Committee of three members shall be appointed by the president at the first regular meeting of the Board of Trustees after the annual meeting. The duty of this committee shall be to review the treasurer's books and report the results at the next annual meeting. [amended January 14, 2002]
- Section 4: Such other committees, standing or special, shall be appointed by the president as the members of the Board of Trustees shall from time to time deem necessary to carry on the work of the Foundation.
- Section 5: The president shall be ex-officio a member of all committees.
- Section 6: Membership on committees shall be open to all members of the Organizational members and the Consulting members, subject to the limitation that they can not hold an elected office.

### **ARTICLE VIII - VOTING, ELECTIONS, & PROXIES**

Section 1: Who Is Entitled to Vote. Except as the articles or an amendment or amendments, thereto otherwise provide, each member of this corporation shall, at every meeting of the members, be entitled to one vote in person or by proxy upon each subject properly submitted to vote.

Section 2: Proxies. No proxy shall be deemed operative unless and until signed by the member and filed with the corporation. In the absence of limitation to the contrary contained in the proxy, the same shall extend to all meetings of the members and shall remain in force three years from its date or until sooner revoked.

### **ARTICLE IX - EXECUTION OF INSTRUMENTS**

Section 1: Checks, etc. All checks, drafts, and orders for payment of money shall be signed in the name of the corporation and shall be countersigned by such officers or agents as the Board of Trustees shall from time to time designate for that purpose.

Section 2: Contracts, Conveyances, etc. When the execution of any contract, conveyance, or other instrument has been authorized without specification or the execution officers, the president or any vice-president, and the secretary or assistant secretary, may execute the same in the name and on behalf of this corporation and may affix the corporation seal thereto. The Board of Trustee shall have power to designate the officers and agents who shall have the authority to execute any instrument in behalf of this corporation.

### **ARTICLE X - POWER OF BOARD TO BORROW MONEY**

The Board of Trustees shall have full power and authority to borrow money whenever in the discretion of the Board the exercise of said power is required in the general interests of this corporation and in such case the Board of Trustees may authorize the proper officers of this corporation to make, execute, and deliver in the name and behalf of this corporation such notes, bonds, and other evidence of indebtedness as said Board shall deem proper, and said Board shall have full power to mortgage the property of this corporation, or any part thereof, as security for such

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indebtedness, and no action on the part of the membership of this corporation shall be requisite to the validity of any such note, bond, evidence of indebtedness, or mortgage.

### **ARTICLE XI - PARLIAMENTARY PROCEDURE**

Section 1: Parliamentary Authority. The rules contained in the current edition of ROBERT'S RULES OF ORDER, NEWLY REVISED, shall govern the Foundation in all cases to which they are applicable and in which they are not inconsistent with the ARTICLES OF INCORPORATION or BY-LAWS of this Foundation or with any special rules of order the Foundation may adopt.

### **ARTICLE XII - AMENDMENT OF BY-LAWS**

Section 1: Amendments, How Effected. These by-laws may be amended, altered, changed, added to, or repealed by the affirmative vote of a majority of the members entitled to vote at any regular or special meeting of the members if notice of the proposed amendment, alteration, change, addition, or repeal be contained in the notice of the meeting, or by the affirmative vote of a majority of the Board of Trustees if the amendment, alteration, change, addition or repeal be proposed at a regular or special meeting of the Board and adopted at a subsequent regular meeting; provided, that any by-laws made by the affirmative vote of a majority of the Board of Trustees as provided herein may be amended, altered, changed, added to or repealed by the affirmative vote of a majority of the members entitled to vote at any regular or special meeting of the members; also provided, however, that no change of the date or the annual meeting of members shall be made within thirty days next before the day on which such meeting is to be held, unless consented to in writing, or by resolution adopted at a meeting, by all members entitled to vote at the annual meeting.

### **ARTICLE XIII - GENDER OF MEMBERS**

Section 1: Restrictions. There shall be no restriction to membership in the Foundation based on sex. Whenever the male gender is used in these By-Laws, inclusion of the female gender is also intended.

### **AMENDMENTS:**

Article VII, Section 3 amended January 14, 2002

Major revision and rewrite amendment approved at Quarterly Meeting on April 29, 2004

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## TEF Awards and Grants

### Endowed Scholarships – Entering College Freshman and Upper Classman

The TEF Endowed Scholarship Committee:

Russ Diehl, Jr. [rcdiehljr@aol.com](mailto:rcdiehljr@aol.com), 918-455-9437

Christina Jackson [christina.jackson@honeywell.com](mailto:christina.jackson@honeywell.com) 918-810-7980

Ashley Jorishie [AshleyJorishie@gmail.com](mailto:AshleyJorishie@gmail.com) 918-

Robert Strattan [r.strattan@ieee.org](mailto:r.strattan@ieee.org), 918-663-9484

Barbara Wollmershauser, [wollmersh@aol.com](mailto:wollmersh@aol.com), 918-299-1196

1) Three engineering scholarships have been established in the names of **Karol L. & Dorothy D. Hujsak** and **James W. & Glenda C. Kilmer**. The freshman scholarships are for \$2,000 each for one academic year (\$1,000 per semester). The scholarships are administered by the Tulsa Engineering Foundation.

Applications for the following academic year are due February 1. The awards are announced at the Engineers Week Student Breakfast on Friday. The selection of the recipients of the scholarships is based not only on academic achievement and financial need but also on outside activities and community service.

The application is available on the TulsaEngineer.org web site. A word document version is available by calling (918) 299-1196 or email [info@tulsaengineer.org](mailto:info@tulsaengineer.org).

The Hujsak Scholarship was established by Mary and Ann, daughters of Dorothy and Karol Hujsak, as a memorial to their parents and their late father's dedication and enthusiasm for the engineering profession. Karol, a chemical engineer, was a long-time member of the Engineers' Society of Tulsa. He began his career in Tulsa with Stanolind and retired from Amoco, then founded his own company, HYCO. He retired a second time at the age of 89 prior to his death in 2005.

The two Kilmer Scholarships were established by Jim Kilmer and his wife Glenda, in appreciation for the excellent engineering education he received with the aid of others. Jim, a chemical engineer, is a long-time member of the Engineers' Society of Tulsa and a past President. He is a founding member of the Tulsa Engineering Foundation. His career has included working for Stanolind, Amoco and Williams Natural Gas. Glenda has served in leadership roles in Tulsa City-County Libraries as well as *Friends of Libraries in Oklahoma*.

2) In 2015, a newly endowed **Bridge Builder Scholarship was established for sophomore, junior and seniors in college** who are enrolled as an undergraduate student in an ABET accredited engineering or engineering technology program. Applications for the following academic year are due June 1. The application is available on the TulsaEngineer.org website. A word document version is available by calling (918) 906-7929 or email [info@tulsaengineer.org](mailto:info@tulsaengineer.org).

Eligibility: To be eligible, applicants must meet the following qualifications:

1) Applicant must be enrolled as an undergraduate student in an ABET accredited engineering or engineering technology program (see <http://www.abet.org>) for a list of eligible schools and majors.

2) Applicant must have a grade point of 3.0 or higher.

3) Applicant must be able to accept the scholarship for the academic year starting in the Fall semester and must not already be receiving full funding from other organizations.

The Bridge Builder Fund was established in 2014. It is based on the poem The Bridge Builder by Will Allen Dromgoole.

The Bridge Builder  
*An old man going a lone highway,  
Came, at the evening cold and gray,  
To a chasm vast and deep and wide.  
Through which was flowing a sullen tide,  
The old man crossed in the twilight dim,*

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*The sullen stream had no fears for him;  
But he turned when safe on the other side  
And build a bridge to span the tide.  
"Old man," said a fellow pilgrim near,  
"You are wasting your strength with building here;  
Your journey will end with the ending day,  
You never again will pass this way;  
You have crossed the chasm, deep and wide,  
Why build you this bridge at the evening tide?"  
The builder lifted his old gray head;  
"Good friend, in the path I have come," he said,  
"There followed after me to-day  
A youth whose feet must pass this way.  
This chasm that has been as naught to me  
To that fair-haired youth may a pitfall be;  
He, too, must cross in the twilight dim;  
Good friend, I am building the bridge for him!"*  
by Will Allen Dromgoole

Source: Father: An Anthology of Verse (EP Dutton & Company, 1931)

### Projects Grants

TEF established project grants several years ago. The grants are available for activities that promote STEM activities. Student groups and teacher are encouraged to apply for the project grants. Submission for the grant is limited \$300 per event/project/program per academic/calendar year. The application is available on the TulsaEngineer.org web site under Youth Outreach. It requests subject matter, educational goals, synopsis of the project, project budget as well as contact information. The project grants are approved by the TEF Board.

Contact Bob Strattan, [r.strattan@ieee.org](mailto:r.strattan@ieee.org), 918-663-9484 for more information.

### Tex Richardson Engineering and Science Guidance Award

The Tex Richardson Award Committee:

TEF – Robert Strattan, [r.strattan@ieee.org](mailto:r.strattan@ieee.org), 918-663-9484

Educator – Susan Oliver, [oliver.teach@yahoo.com](mailto:oliver.teach@yahoo.com) 918-605-9591

OEF – Gaylon Pinc, [ggpinc@pmtulsa.com](mailto:ggpinc@pmtulsa.com) 918-344-9400

CSI – Jack Vest, [jvestiii@cs.com](mailto:jvestiii@cs.com)

Barbara Wollmershauser [wollmersh@aol.com](mailto:wollmersh@aol.com), 918-299-1196

This annual Award is jointly sponsored by the Tulsa Engineering Foundation (TEF), the Oklahoma Engineering Foundation (OEF) and with the cooperation of the Construction Specification Institute (CSI). The Award was established in 1992 to recognize teachers and engineers in Oklahoma who demonstrate exceptional service in guidance activities, and is in memory of the late Tex Richardson who inspired so many in his years of guidance service.

Normally two annual awards, one to a teacher and one to an engineer, recognizing outstanding achievement and service in engineering and science guidance activities in the State of Oklahoma, are presented at the Tulsa E-Week Student Breakfast during the National Engineers Week in February. The selections committee welcomes nominations throughout the year for the next years' awards. The nominations may be sent to the permanent address of OEF or TEF or email [info@tulsaengineer.org](mailto:info@tulsaengineer.org). The nomination form is available on the TulsaEngineer.org web site under About TEF tab.

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### Tex Richardson Engineering and Science Guidance Award – Recipients

2015	Teacher: Engineer:	Kent Jones, Roy Clark Elementary, Union, Builders' Club Daniel Moran, Fab Lab Tulsa, Youth Outreach & STEM mentoring
2014	Teacher & Engineer: Engineer:	Mary Jo Othon, Bishop Kelley High School, FIRST Robotics and Tech Challenge Christi Patton Luks, University of Tulsa, Youth Outreach & STEM mentoring
2013	Teachers:  Engineer:	Maemi Dildy, Edison Preparatory School, PLTW and FIRST Stacy Oakley, Latta High School, Ada, FIRST and STEM mentoring Xan Black, Tulsa Alliance for Engineering, Youth Outreach Programs
2012	Teacher: Special Award:	Pamela Diaz, Booker T Washington, FIRST Susan Thompson, Tulsa Alliance for Engineering, Community Outreach
2011	Teacher & Engineer: Engineer: Engineer:	Cheri Sieck, Metro Christian Academy, MATHCOUNTS Chriss Chavez, OU-Tulsa, Tulsa Engineering Challenge Dr. Jack Sellers, P.E. – Retired – FIRST Robotics
2009	Teacher: Engineer:	Ray Snider -- Wells Middle School, Catoosa Public Schools, Tulsa Engineering Challenge Marion and Bob Simmons, P.E. – Retired, MATHCOUNTS, TECh, E-Week for OSPE & EST
2008	Teacher: Engineer:	Marilyn Ann Thomas Howard –TU University School, MATHCOUNTS, Computer Challenge James W. Kilmer, P.E., Retired, Science Enrichment at Eliot School, Endowed Scholarship
2007	Teacher: Engineer:	Patricia Yvette Laughlin - Catoosa Wells Middle School, Tulsa Engineering Challenge Gaylon Pinc, P.E., Program Management Group; MATHCOUNTS, TECh, OSPE State-Wide
2006	Teacher & Engineer: Engineer:	Lane Cardwell Matheson – Engineering Academy Coordinator, Memorial High School Robert D. Strattan, Ph.D., P.E.–Emeritus Prof. of Electrical Eng'g & Mech. Eng'g, Univ.of Tulsa
2003	Teacher: Engineer:	Rodriquez -- Assistant Principal, 7 <sup>th</sup> Grade Center, Union Public Schools Perry Brown, P.E. – Staff Engineering Technologist, AEP/PSO, MATHCOUNTS
2002	Teacher: Engineer:	Glenda Nelson – Mathematics Teacher, Jenks Public Schools, MATHCOUNTS Coach. Todd Hiemer, P.E. – Sr. Research Engineer, bioMerieux, Inc, Future City Comp. Coord.
2001	Teacher: Engineer:	L. Mathieson, Assoc. Prof. of Math. & Physics, Tulsa Community College Dr. Gerald R. Kane, P.E., Prof. & Chair of Electrical Engineering, University of Tulsa
2000	Teacher: Engineer:	Denny Stanford, Science Teacher, Union Public Schools, Tulsa Thomas A. Carlisle, P. E., Phillips Petroleum Company, MATHCOUNTS
1999	Teacher: Engineer:	Cathie Casper, Mathematics Instructor, St. Pius X School, Tulsa Dennis D. Beckmann, P.E., Amoco Corporation, MATHCOUNTS
1998	Teachers:  Engineer:	George E. Abshire, Mathematics Instructor, Jenks Public Schools and John D. Cook, Jr., Academic Principal, Grace Fellowship Christian School, Tulsa Allison Fate, Management Consultant and President, HFK, Inc., Engineering Explorer Scouts
1997	Teacher: Engineer:	Susan Oliver, Science Teacher, Owasso Public Schools Richard W. Mattes, P.E., Willbros Engineers, Inc, Science and Engineering Fair
1996	Teacher: Engineer:	Tenna Whitsel, Academic Dean, Will Rogers High School, Tulsa Edwin "Bud" Averill, P.E. of Public Service Company of Oklahoma, TECh
1995	Teacher: Engineer:	Dr. Indestructo, a.k.a. Dr. Stewart Ryan, University of Oklahoma Physics Department. Barbara Wollmershauser, P.E., Warren Petroleum Company, Discover-E
1994	Teacher: Engineer:	Richard Maule, Science Teacher, Union Intermediate Schools, Tulsa Harlan Dunn, P.E. retired from the Corps of Engineers, Career Guidance Service
1993	Teacher: Engineer:	Gene Thompson, Physics Teacher, Booker T. Washington High School, Tulsa Dr. Eric Bandurski, Science Enrichment Program, Amoco Research Center, Tulsa
1992	Teacher:	Shelley Fischer, Science Teacher, Sand Springs Schools.

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## Outreach Sponsored by TEF

### E-Week Breakfast for High School Students

Held the Friday of National Engineers Week, this event allows students a chance to enjoy a buffet style breakfast while sharing a conversation with the engineer(s) at their table. Following breakfast is a series of presentations on various engineering disciplines. The breakfast is supported by area engineering companies who sponsor tables. It is free to the students and teachers. In the past we have hosted over 200 students and teachers. The event is coordinated by OSPE and SAME.

Contact Sarah Kellert to help with the program at [sarah@kellertconsulting.com](mailto:sarah@kellertconsulting.com), 918-245-9533.

All societies are encouraged to recruit table sponsors from their members' companies. The registration form will be on the TulsaEngineer.org web site home page during February.

### E-Week Engineers Luncheon

Held the Wednesday of National Engineers Week, this event is open to all the engineering societies. It is coordinated by ASCE and TEF. It is held at the Tulsa Country Club. A prominent engineer is featured as the guest speaker. More information on how to register is posted on the TulsaEngineer.org web site.

### Tulsa Engineering Challenge

Tulsa Engineering Challenge - TECh is a hands-on event where students in grades 4-12 compete in activities such as toothpick bridge, rubber-band powered vehicle, ping-pong ball launcher, robot, chemical switch, Wacky Wonder Works, digital poster, electric motor and more.

Tulsa Engineering Challenge has been sponsored by the Tulsa Engineering Foundation (TEF) since 1988. It is a major event to promote and strengthen science, technology, engineering and mathematics (STEM) interest and skills in our youth. This activity encourages youth to study mathematics and science and consider careers in these fields to strengthen our community's future work force talents and quality of life.

The competitions are judged by volunteers from the professional-technical societies. These include (the head judge is listed with their contact information):

TECh 2016 Chairman – Jennifer Butler, [Jennifer.J.Butler@okstate.edu](mailto:Jennifer.J.Butler@okstate.edu)

AIChE – Chemical Switch – Laura Ford & Christi Luks, [laura-ford@utulsa.edu](mailto:laura-ford@utulsa.edu), [luksc@mst.edu](mailto:luksc@mst.edu)

ASCE – Toothpick Bridge – Allen Bates, [abates@breischcs.com](mailto:abates@breischcs.com)

ASME – Rubber Band Powered Vehicle – Jon Liechti, [jon.liechti@willbros.com](mailto:jon.liechti@willbros.com)

IEEE – Electric Motor – Joe Vitali & Allen Williams, [jdvt@tulsa.ci.com](mailto:jdvt@tulsa.ci.com), [awilliams32@cox.net](mailto:awilliams32@cox.net)

OSPE – Aluminum Boats – Gaylon Pinc, [gppinc@pmtulsa.com](mailto:gppinc@pmtulsa.com)

OSPE – Wacky Wonder Works – Stacy Loeffler, [loeffler@bklinc.com](mailto:loeffler@bklinc.com)

SAME – Ping-Pong Ball Launcher – Chris Strunk, [christopheer.b.strunk@usace.army.mil](mailto:christopheer.b.strunk@usace.army.mil)

SME – Mini-Math – Ram Mohan, [ram-mohan@utulsa.edu](mailto:ram-mohan@utulsa.edu)

SPE – Oil Fishing Well – Ashley Jorishie, [AshleyJorishie@gmail.com](mailto:AshleyJorishie@gmail.com)

Flight Safety – Robot – Thomas Kuruvilla, [Thomas.Kuruvilla@flightsafety.com](mailto:Thomas.Kuruvilla@flightsafety.com)

SWE - Chemistry/Physics Show – Suzanne Dodson & Abigail Wendt, [Suzanne.Dodson@magellanlp.com](mailto:Suzanne.Dodson@magellanlp.com),

AEP – Extreme Engineering Challenge – Fred Schell, [fhschell@aep.com](mailto:fhschell@aep.com)

Hilti – Paper Airplane Distance & Duration – Tom Haanen, [Tom.Haanen@hilti.com](mailto:Tom.Haanen@hilti.com), Jim Henderikson, [grandmaann2@att.net](mailto:grandmaann2@att.net), and Al Folske, [jfolske@cox.net](mailto:jfolske@cox.net)

TRSA – Digital Poster – Annie Tyndal, [annie@okinnovation.org](mailto:annie@okinnovation.org)



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TECh depends entirely on donations. The Anne & Henry Zarrow Family Foundation and Google have donated a significant amount the last several years. About 50% of the funds are donated from member societies and other companies.

Key areas needed for the TECh planning committee are:

- Contact potential exhibitors
- Contacting schools and teachers to invite them to bring students
- Coordinate the volunteers
- Fund raising, i.e. send letters to companies and societies. The grant requests for the Zarrow Foundation are already in the works.
- Help with registration Set-up and tear down
- Signs for the competitions and registration

### Engineering Scholarship Golf Tournament

The Annual September Engineering Scholarship Golf Outing, previously hosted by EST and OSPE, has become a fundraiser for scholarships and outreach programs for several TEF organizations. The Tournament is currently hosted by APWA, ASCE, EST, OSPE, and TEF. Each organization uses their share of the proceeds to support scholarship outreach.

In addition to the above Golf Tournament which is usually held on the last Friday in September at White Hawk Golf Course, several other societies host sports tournaments:

CSI Golf Tournament in May at the Battle Creek Golf Course

ASHRAE Golf Tournament on mid September

SPE Sporting Clays Tournament on October at Longshot Ranch, Skiatook, OK

SAME Golf Tournament in early April at Hard Rock Hotels & Casino Cherokee Hills Golf Club

The events are posted on the [TulsaEngineer.org](http://TulsaEngineer.org) website. There are links to more information on the calendar or at the society's web page.

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## Outreach Supported by TEF

### Hardesty Center for Fab Lab Tulsa

The mission of Fab lab Tulsa is to better our community by assuring access to 21st Century tools, equipment, technology and resources. Fab Lab Tulsa provides community access to advanced manufacturing and digital fabrication tools for learning skills, developing inventions, creating businesses and producing personalized products. FabLab Tulsa is located at 706 S Lewis, Tulsa. Their website is [www.fablabtulsa.com](http://www.fablabtulsa.com) Contact Nathan Pritchard, Director, for more information at [nathan@fablabtulsa.com](mailto:nathan@fablabtulsa.com) or 918-779-6025.

The Hardesty Center for Fab Lab Tulsa is an IRS qualified 501 (c) (3) tax exempt, not-for-profit entity located in the Kendall-Whittier neighborhood of Tulsa. Fab Lab Tulsa provides community access to advanced manufacturing and digital fabrication tools for learning skills, developing inventions, creating businesses and producing personalized products. Fab Lab Tulsa is one of over 300 MIT-chartered Fab Labs in more than 50 countries and the first in the southeastern region of the United States. Furthermore, Fab Lab Tulsa is one of the top labs globally in terms of leadership, organization, support, size and capabilities, and an excellent example of the impact a fab lab can make on a community

The Fab Lab concept was developed at MIT by Professor Neil Gershenfeld, founder and head of the Center for Bits and Atoms, who developed a very popular course titled "How to Make Almost Anything." As part of the class, he gave his students access to a fabrication laboratory containing some very basic cutting, milling and electronic tools. And what he found, not surprisingly, is that there was no end to what his students could create when given access to simple tools, equipment and resources. Inspired by the transformative results, Dr. Gershenfeld encouraged others to open similar Fab Lab's in their own communities giving ordinary people the ability to make whatever they want.

*TEF is committed to support the initiative through communication to all our members. We post articles on the web site. We encourage all member societies to host a monthly meeting at Fab Lab.*

### FIRST – For Inspiration and Recognition of Science and Technology.

FIRST's mission is to inspire young people to be science and technology leaders, by engaging them in exciting mentor-based programs that build science, engineering and technology skills, that inspire innovation, and that foster well-rounded life capabilities including self-confidence, communication, and leadership.

*FIRST* was founded in 1989 to inspire young people's interest and participation in science and technology. Based in Manchester, NH, the 501 (c) (3) not-for-profit public charity designs accessible, innovative programs that motivate young people to pursue education and career opportunities in science, technology, engineering, and math, while building self-confidence, knowledge, and life skills.

<b><i>FIRST Programs:</i></b>	<i>JLL – Junior FIRST LEGO League</i>	<i>K – 3 grades</i>
	<i>FLL – FIRST LEGO League</i>	<i>4 – 8 grades</i>
	<i>FTC – FIRST Tech Challenge</i>	<i>7 – 12 grades</i>
	<i>FRC – FIRST Robotics Competition</i>	<i>9 – 12 grades</i>

More information is available at [www.usfirst.org](http://www.usfirst.org)  
Contact Jack Sellers for more information. [sellersj@swbell.net](mailto:sellersj@swbell.net), 918-496-7774 H; 918-691-3285  
TEF members are encouraged to volunteer to coach FIRST teams as well as volunteer for the one-day qualifying competitions for the various divisions.

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### MATHCOUNTS

MATHCOUNTS is a national math enrichment, coaching & competition program that promotes middle school mathematics achievements in every U.S. state and territory. TEF and member societies support the Oklahoma Engineering Foundation and OSPE in offering MATHCOUNTS in northeast Oklahoma. Contact Anand Kilambi, [akilambi@ci.tulsa.ok.us](mailto:akilambi@ci.tulsa.ok.us) to volunteer to help at the regional and state events.

### STARBASE

STARBASE Oklahoma is a youth educational enrichment program originated by the National Guard Bureau in 1993. The program is designed to expose at-risk youth (grades 5-8) to “hands-on, minds-on” science, technology, engineering and mathematics (STEM). Topics of instruction include the scientific method; Newton’s Laws of Motion; fluid mechanics and aerodynamics; building blocks of matter; physical and chemical changes; atmospheric properties; innovations; navigation and mapping; engineering design process; 3-D computer aided design; numbers and number relationships; measurement; geometry; data analysis; STEM Careers; teambuilding; and goal setting. Engineering was added as an emphasis in 2008. In the 5th grade programming, children attend with their school class, one day a week for six weeks. The 6<sup>th</sup>-8th programming provides an afterschool club for 4 hours per month focusing on STEM projects, goal setting and teambuilding.

With the headquarters located at the Tulsa Air National Guard Base STARBASE has served more than 200 classes each year and 4600 students in cooperation with various schools in Tulsa, Northeast Oklahoma, Oklahoma City, Ft. Sill, and Burns Flat. <http://starbasedod.org/> <http://starbaseok.org/>

TEF supports STARBASE through speakers and volunteers. Contact Pamela Kirk at [Pamela@starbaseok.org](mailto:Pamela@starbaseok.org) or 918-833-7757 for more information.

### Tulsa Regional STEM Alliance

*The Tulsa Regional STEM Alliance (TRSA) works as a catalyst to create a collaborative ecosystem that encourages business / industry and the education community to produce innovative pathways resulting in a highly skilled STEM workforce able to drive economic prosperity while meeting the needs of a globally competitive Tulsa region.*

Led by the nationally recognized [Teaching Institute for Excellence in STEM \(TIES\)](#), the effort was funded by the [Tulsa Area United Way](#) and the [Charles and Lynn Schusterman Family Foundation](#) **under the umbrella of Oklahoma Innovation Institute (OII)**. As a result, the Tulsa Regional STEM Alliance (TRSA) was launched in December of 2013, established by the collaborative vision of more than 60 STEM community members from across the state. “Enlightened self-interest” is the glue that allows the TRSA to form and build for the future.

Tulsa Regional STEM Alliance is an intermediary organization that is flexible and inclusive enough to welcome all community members yet includes sufficient structure and organizational support to facilitate and coordinate the work that needs to be done. The goals of TRSA are as follows:

- **Calculate:** Create common performance metrics for members that measure the efficacy of TRSA STEM programs and events.
- **Communicate:** Increase awareness and access to STEM resources and activities through a centralized information sharing network to inform TRSA stakeholders and STEM advocates in the Tulsa region.
- **Collaborate:** Use shared resources of all kinds to broaden the impact of TRSA’s dynamic “mesh network” of STEM community members.
- **Cultivate:** Grow the STEM ecosystem in northeastern Oklahoma through robust support and initiation of STEM education events and activities while securing resources necessary for

## **Tulsa Engineering Foundation Resource Booklet**

TRSA's initiatives: Funding, Programming, Professional Development, Tulsa Resource Area for STEM Educators (TRASE) and Mentorship.

*TEF member organizations are encouraged to volunteer for the myriad of activities TRSA is coordinating. Their website is [www.tulsaSTEM.org](http://www.tulsaSTEM.org) Contact Xan Black, Program Director, at [xan.black@oklahomainnovationinstitute.org](mailto:xan.black@oklahomainnovationinstitute.org) or 918-724-5291.*

### *Historical background*

*Tulsa Alliance for Engineering – this has morphed into Tulsa Regional STEM Alliance*

*The focus of the Tulsa Alliance for Engineering is to increase the awareness of engineering careers and promote engineering programs, activities, and competitions to students in area middle schools and high schools, and challenge students to be "college ready" upon graduation; to develop a 2+2+2 program which would strengthen the educational alliances between the Tulsa Technology Center and Tulsa area High School Pre-Engineering Programs, Tulsa Community College, and the 4 year Tulsa area Engineering schools - Oklahoma State University, Oral Roberts University, the University of Oklahoma, and the University of Tulsa; develop partnerships with businesses to secure speakers and engineering mentors, internships, and scholarships; and ultimately to assist new engineers obtain employment in Tulsa. The Tulsa Alliance for Engineering was created in June 2010 and is coordinated through Tulsa Community College. Susan Thompson was the first Program Coordinator. Xan Black became Program Coordinator in June 2012.*