

## **KAWSE Postdoctoral Researcher Travel Funds Application Form**

**Name:** Your name

**Email Address:** [youremail@ksu.edu](mailto:youremail@ksu.edu)

**Department:** Your department

**Office Address:** Your address

**Faculty Advisor's Name:** Advisor's name

**Year at K-State as Postdoctoral Researcher:** Second year

**Expected end of Postdoctoral Research position at K-State:** November 2016

**Meeting Name:** 24<sup>th</sup> Biennial Meeting of the American Quaternary Association

**Meeting web address:** <http://biology.unm.edu/fasmith/2016AMQUA/>

**Meeting Location:** Sante Fe Community Convention Center, Santa Fe, New Mexico (USA)

**Dates of Meeting:** June 29-July 1, 2016

**Dates of Travel:** June 28-July 2, 2016

**Meeting Format:** Please describe the format of the meeting in one paragraph (number of participants, talks running in parallel or serial, and anything else that is unique about the meeting).

The 24th Biennial Meeting of the American Quaternary Association (AMQUA) will address challenging questions, and methodological techniques to assess the Quaternary dynamics of vegetation, fire, climate, and geomorphology. The meeting will start with a keynote speaker and we continue over two and a half days with 26 invited plenary speakers in serial sessions. The remaining presentations will be contributed posters, which will remain up for the entirety of meeting, with 3-hour poster sessions each afternoon. All posters will be featured in one-minute lightning talks at strategic times. The AMQUA meeting constitute the only meeting in the US focused on the Quaternary, which is my research specialty. AMQUA has a reputation for being a focused, friendly meeting where new connections are made inside and outside of the formal meeting agenda. The unique format of plenary talks about challenging questions and methods allows for open discussion during the lunch and dinner breaks. Moreover, the relatively small size of this meeting (~200 participants) promotes new collaborations, and facilitates the creation of new networks. The final unique aspect of the 2016 AMQUA meeting is a focus by the committee organizer on broad communication of science, with science journalist Andy Revkin providing a talk and feedback to participants.

**Purpose:** Please include a copy of your accepted abstract below.

Regarding the organization of the meeting, the poster session will be presented in one-minute lighting talks. This unique opportunity of presentation will help me to interest more researchers about my topics, and incite them to provide me their feedbacks and insights during the poster sessions. I am currently turning my research from forested systems to grasslands, focusing notably on nutrient cycling. These approach and system are new for me, and despite a literature review, I stress the need of talking to researchers in this specific area of expertise. That includes having the opportunity to talk more deeply with researchers I already contacted by phone, or corresponding by emails. Finally, because my postdoctoral contract will end soon, I plan to build collaborations, and networks, which can help me find another postdoctoral position, and be informed about opening job positions.

The abstract submission will close April 20, and the notification acceptance will be delivered on March 1, 2016. Thus I am not able to include a copy of my accepted abstract at this time. However, I included the abstract I submitted to AMQUA at the end of this application.

### **Anticipated Expenses:**

Transportation type and cost: Car, expected gas cost: \$140

Lodging Expenses: 4 nights - \$280

Meeting Registration: \$345 (paid by my department)

Meals not covered as part of registration: 6 meals - \$80

Total Funds Requested (max is \$500): \$500

**Other Travel Support:** Please describe the source and amount of funding. (Are travel grant opportunities available from the meeting/event? If so, do you plan to apply? Will any of your travel costs be covered by your advisor, department or any other scholarships? If yes, please attach a letter of commitment from your faculty advisor to what extent travel costs will be covered.)

My supervisor hired me on a RCN-NSF grant that allows to afford my meeting registration. However, I don't have any other source of financial support, and I can't apply to other travel grants, from the University, or from the AMQUA (because these are either reserved to faculty members, or students).

**Networking Plans:** In one paragraph explain what plans you have to participate in informal and formal networking opportunities.

The plenary sessions allow me to attend all of the talks, without thinking that you can miss a good presentation, or running from one session to another without the time to stay and talk to presenters. I will take this unique occasion to ask questions during the session, and encourage researchers to come to see my poster. During the three-hours poster sessions, I plan to talk about my research interests, and discuss about possible future projects. This meeting is composed by researchers working at the same time-scale, and with the same tools, which facilitate the exchange, and promote more collaborations. I plan to take advantage of that to have an elevator speech more straightforward, and thus having the opportunity to talk to more people, and construct solid thinking of future projects. Finally, collaboration opportunities can be concretized, and network can be consolidated during dinner time, when I plan to invite researchers interested in collaborate with me, and work on the same projects. Finally, there is scheduled informal time, where meals and refreshments are included as part of the meeting.

**Activities relevant to Enriching Women's Lives:** In one paragraph explain what professional development opportunities you will participate in that are relevant to enriching the lives of women in STEM disciplines.

This meeting is currently set with 7 women over the 26 talks and the keynote speaker (25% of female). More generally, geosciences, and Quaternary scientists are mostly composed by males, and even if women are encouraged to work in those disciplines, few of them succeed at the level of professors. Giving me the opportunity to participate to this meeting will help me as a woman to be represented, and to enhance mixed- gender collaborations. Regarding my current career stage, I am seeking for a tenure track position, and I will encourage current and future female graduate and undergraduate students to work in these areas, and show them that we can succeed.

**Career Chat Plans:** Please explain your plans for hosting a KAWSE Career Chat upon your return from the conference.

I will be pleased to set up a webinar open to all (e.g. webikeo), and prepare a small presentation on making the most out of a conference, including (1) set up your goals for the conference, (2) to do and not to do list, and (3) set up new collaborations and networks. I don't think women have to be prepared differently than men, but we unfortunately experienced different situations, and questions that men will never have. I will then include in my presentation some tips based on my experience as a woman in a conference. To make it the more efficient, I plan to have a live chat session to answer questions. I also plan to make both my poster, and this presentation available to those who are interested, and give a copy to KAWSE if they would like to display it.

Abstract submitted to the AMQUA committee:

**Title:** FIRE HISTORY RECONSTRUCTION IN GRASSLAND ECOSYSTEMS: CHARCOAL AMOUNT REFLECTS THE LOCAL AREA BURNED

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**Abstract:**

Fire is one of the most important disturbances acting on vegetation structure, composition and dynamics, especially in grassland ecosystems where management must consider historic fire regimes. Past fire regimes are reconstructed using charcoal particles preserved in depositional environments. Although it is well known that fires produce charcoal particles, the quantity of charcoal pieces is difficult to interpret and the relationship between quantity of charcoal pieces and characteristics of the source fire remains poorly understood.

In this study, we used a unique four-year dataset of fire history from a native tallgrass prairie in mid-North America to test which environmental factors were linked to charcoal measurements at three spatial scales. We investigated charcoal morphotypes that represent fuel source and quantities of small and large charcoal particles reflecting fires at different scales. Explanatory variables included climate, vegetation and landscape variables, and fire parameters.

We found that small and large particles of charcoal are well-correlated and likely reflect the same spatial scale of fire activity. There was no significant relationship linking charcoal pieces and fire parameters <500m from the site. However, total charcoal amount was well predicted by the area burned <5 km, and regional burning explained the ratio of non-arboreal to total charcoal pieces (NA/T ratio). Charcoal variables, including total charcoal count and NA/T ratio, were not correlated with other fire parameters as well as vegetation cover, landscape or climate variables.

Thus, in long-term studies, total amount of charcoal particles could be used as an indicator of local area burned.