

## Instructionally Related Activities Funds Request Spring 2017

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## IRA Funds Request for CI DaDAR: Drone Data and Art Race

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## Instructionally Related Activities Funds Request Summary

Project Sponsor	Sean Anderson
Activity Title	CI DaDAR: Drone Data and Art Race
Activity/Event Date	April 21-23, 2017
Date Funding Needed By	January 10
Previously Funded?	No
Semester/Year	—
Proposal #	—
Report submitted for previously Funded Activity?	—
Report submitted for previously Funded Activity	—
Additional Report #1	—
Additional Report #2	—
Additional Report #3	—
Additional Proposers	—
Academic Program(s) / Center Name(s)	ESRM
Estimated total Course Fee revenue	0
Amount Requested from IRA	\$6,350
Estimated Number of Students Participating	50
Conditions and Considerations	Large Event, Risk Management Consultation, Space/Facilities Services Requirements
Brief Activity Description	<p>We seek to create and host our first-ever drone race on the campus of CSUCI over Earth Day Weekend 2017. Drone racing is a growing international sport wherein participants remotely pilot unmanned aerial vehicles (UAVs, aka drones) around a defined course, often for prize money. Analogous to a bike or car race, these contests typically feature small quadcopters (typically the size of a tablet, weighing about 500g) designed to go very fast and be highly maneuverable.</p> <p>We seek to create a new kind of drone race that focuses both on speed AND producing elegant data products. Generating elegant and useable data products from drone to support decision-making (e.g. how much fertilizer to apply to which section of a farm, where to direct firefighting efforts, etc.) is a key skill we hope to foster in our students and across our wider community. A fun, competitive event is the perfect venue to argue for the importance of both piloting/technical skills and creativity.</p> <p>This multi-day event will be open to all CI students and members of the public. Saturday will be the primary race day wherein students will race around a course. Our race will be built around a simulated oil spill wherein racers will be tasked to not only complete the course as quickly as possible, but also to photograph and count the number of barrels of leaking "oil" at a distant point along the race route. A second component of the event will take place on Sunday wherein racers will be asked to create the most elegant, data-rich single-page display of their data (e.g. estimate the total volume of spilled "oil." We have arranged to make available to all participants temporary licenses for proprietary photo stitching software (we will offer a free software "how to" workshop on the Friday before the race for all CI students interested in participating, but unfamiliar with the photo stitching software and its capabilities). Contestants can win the race itself, the data product component, or the overall contest. Prizes will be furnished by both industry and the entry fee each participant will ante up to participate (\$75).</p> <p>We seek IRA support for a subset of the costs of this event, including bringing experts to campus to speak in free sessions leading up and during the event, our free workshop for CI students seeking to participate, some logistics set-up (in order to offer space/tables to nonprofits without budgets to pay for tabling costs), and multimedia documenting of the race for use in subsequent classes.</p>
Learning Outcomes and Relation to IRA to Course Offerings	<p>ESRM 428: Intermediate Geographical Information Systems This class will benefit from seeing how others present their digital elevation models and other data products. It will also give students in this class a chance to demonstrate their mapping skills when provided with (likely) imperfect data.</p> <p>ESRM 372: Introduction to Remotely Piloted Systems If funded, we will direct a significant amount of the course to preparing for and facilitating this event. This will give students a chance to work on safety and responsible operation and the procedures for holding such drone operations in proximity to people/structures. In addition, our students conduct our annual, national survey of the public's attitudes towards drones and this venue will serve as a perfect opportunity to both collect data and share our results to date with a wider audience. As the entirety of this class is built around learning how to use and operate drones, this course will benefit the most from this event with students spending several weeks on the preparation of this event and giving the primary person power to staff the event during raceways.</p> <p>ESRM 499: Senior Capstone A subset of our students this year have been crafting drone-related projects and will benefit from the opportunity to network and discuss their issues of concern with other drone experts.</p> <p>COMP 462: Embedded Systems</p>

	Students will have an opportunity to operate units they have created or modified in class under a more real world setting of the competition.
<b>Description of Assessment Process</b>	This event will be assessed by 1) the number of attendees, 2) the number of groups participating/registering for the race, and 3) the number of final entries submitted by event's end on Sunday.  In addition, we will survey a subset of participants to determine what, if anything, they learned from this event and if this event changed their minds about the possible use of drones in natural disasters or other environmental catastrophes.
<b>Activity Budget</b>	<a href="#">DroneRaceIRABudgetSpring2017.xlsx</a>
<b>CIA Budget</b>	—
<b>CIA Proposal</b>	—
<b>Course Syllabus</b>	—
<b>CIA Certification</b>	—
<b>Other Sources of Funding</b>	Industry donations, etc. Currently totaling ~\$5,000. We have no course fees associated with this event.
<b>Target Audience/Student Marketing</b>	The general public and CI undergraduates. This event will be held on campus.
<b>Bring Benefit to Campus</b>	This event will promote the use of new technologies to foster sustainability across campus and our wider community.
<b>Sustainability</b>	This event will be an Earth Day event and highlight how drones can help foster sustainability and improved environmental assessments.
<b>Program Chair/Director</b>	donald.rodriquez
<b>Dean</b>	james.meriwether
<b>Acknowledgement</b>	I acknowledge that I have reviewed and accepted the Conditions and Considerations herein. Please check off boxes as appropriate.

**Program Chair/Director Review**

<b>Recommendation</b>	I recommend approval of the IRA Funds Request described on this page
<b>Name</b>	Donald Rodriguez
<b>Date/Time</b>	10/8/2016 7:50:11 AM
<b>Validation</b>	myCI-signin-0K-1669
<b>Comments</b>	—

**Dean Review**

<b>Recommendation</b>	I recommend approval of the IRA Funds Request described on this page
<b>Name</b>	James Meriwether
<b>Date/Time</b>	10/8/2016 9:52:58 AM
<b>Validation</b>	myCI-signin-90-3073
<b>Comments</b>	—

**IRA Committee Decision**

<b>Decision</b>	—
<b>Comments</b>	—

**Current Tasks**

Task	Time Assigned	Assigned To
IRA Committee Decision	10/8/2016 9:52:58 AM	<a href="#">David Daniels</a>

**Completed Tasks**

Task	Time Assigned	Time Completed	Completed By
Review from james.meriwether, Dean	10/8/2016 7:50:11 AM	10/8/2016 9:52:58 AM	<a href="#">James Meriwether</a>
Review from donald.rodriquez, Program Chair/Director	10/8/2016 12:00:01 AM	10/8/2016 7:50:11 AM	<a href="#">Donald Rodriguez</a>
Edit Request	10/8/2016 12:00:01 AM	10/8/2016 12:19:29 AM	<a href="#">Sean Anderson</a>
Fill out Request	10/7/2016 11:51:51 PM	10/8/2016 12:00:01 AM	<a href="#">Sean Anderson</a>

**Actions**

- [IRA Committee Decision](#)
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