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Application Summary

Competition Details

Competition Title: MSFT Applications for 2021-2022

Category: Internal Funding

Award Cycle: 2021-2022

Submission Deadline: 03/16/2021 10:00 AM

Application Information

Submitted By: Jason Isaacs

Application ID: 847

Application Title: Mechatronics Engineering Control Systems Laboratory Equipment

Date Submitted: 03/13/2021 5:33 PM

Personal Details

Applicant First Name: Jason

Applicant Last Name: Isaacs

Applicant Department: Computer Science

Email Address: jason.isaacs@csuci.edu

Phone Number: (805) 437-8991

Who is the Staff Support for Project/Activity?: Stephanie Chavez

Staff Support email: stephanie.chavez@csuci.edu

Application Details

Proposal Title

Mechatronics Engineering Control Systems Laboratory Equipment

Brief Project Description

The Computer Science program seeks funding for the purchase of 7 Quanser Servo-2 Workstations and the required software licenses to be used in the laboratory space in Sierra Hall 1141. This equipment and the associated laboratory curriculum will be used in the teaching of EMEC 463: Control Systems. The Quanser Servo-2 Workstations are modular bench-top experimental platforms that can be configured for teaching several mechatronics and control concepts. The Servo-2 modules ship with courseware curriculum for over thirty hands-on laboratory experiments appropriate for an undergraduate course in control systems such as EMEC 463. The courseware curriculum is aligned with ABET Student Learning Outcomes, thus improving the learning experience for the student and easing the role of assessment for the instructor. In addition to the lab experiments available in the courseware, this equipment could be used for open-ended student projects in classes such as EMEC 499 Capstone or UNIV 498 Undergraduate Research.

The Quanser company is a brand that is synonymous with university control systems laboratories. Eleven other CSU campuses currently use similar or equivalent equipment to the proposed system (See Attachment). Additionally, Prof. Isaacs has experience using Quanser equipment to teach two undergraduate control systems courses while at UCSB. Familiarity with this state-of-the-art and widely used equipment will benefit CSUCI graduates who go on to pursue graduate studies in this area.

Amount of MSFT Funding Requested

36,810.49

Project/Activity Budget Detail

\$31522.50

7 × QUBE-Servo 2 USB (P/N:913)

Fully integrated, modular servomotor experiment for teaching mechatronics and controls. Includes: - QFLEX 2 USB Interface Panel - Built-in Amplifier - Inertia Disk and Pendulum modules - Other QFLEX 2 panels can be purchased separately - User Manual, Quick Start Guide, Instructor and Student Workbooks and pre-designed controllers.

\$4788

7 × QUARC Essentials Software License (P/N:971)

QUARC Essentials Platform provides a flexible hardware interfacing and takes full advantage of Quanser's course resources to rapidly deploy an experiential teaching lab. QUARC is fully integrated with Matlab/Simulink and requires Matlab Coder and Simulink Coder for full operation. Please see the Compatibility Chart for the latest version of Matlab/Simulink supported.

\$500

Shipping and Insurance

Will you receive funds from any other source(s)?

No

Other Funding Sources

Has this project or activity previously received MSFT funding?

No

Acknowledgment

Fiscal Management

Project applicant/sponsor's unit or department may be responsible for incurred over and above what is funded through the MSFT. If support is requested for costs beyond initial award, or for use on activities or materials not included in approved proposals, the project sponsor must seek approval from the MSFT committee. The project applicant/sponsor will be responsible for managing purchases, transfers of funds, and all transactions related to approved projects

Please review MSFT webpage for information about the fund and its objectives before submitting your application.

**CSU Channel Islands
MSFT Proposed Budget
2020-2021**

Please layout in detail when various components of your plan will be complete in order to achieve key milestones. This information will be use to forecast the spending of MSFT within the fiscal year.
PS: all purchases/services need to be received and billed to CI before June 30th to account for the current fiscal year.

SAMPLE

Project or Acitivity Title

**Total Requested
\$\$**

Chemistry Laboratory Instrumataion Refresh

\$452,000

MSFT Planning Budget Calendar 2020-2021

Items or services requested to be funded	July 2020 -Period 1	August 2020-Period 2	September 2020 -Period 3	October 2020 -Period 4	November 2020 -Period 5	December 2020 -Period 6	January 2021 -Period 7	February 2021 -Period 8	March 2021 -Period 9	April 2021 -Period 10	May 2021 -Period 11	June 2021-Period 12	Grand Total
Purchase of UPS Power Conditioner				\$ 9,000.00									\$ 9,000.00
Purchase Glove Box			\$ 42,000.00										\$ 42,000.00
Purchase of Spectrohometer						\$ 156,000.00							\$ 156,000.00
Purchase of Fluorimeter							\$ 39,000.00						\$ 39,000.00
Purchase of Analytical Ultracentrifuge			\$ 198,000.00										\$ 198,000.00
Lab. Student assistant hours to set up equip.								\$ 2,000.00	###	\$ 2,000.00	###		\$ 8,000.00
Total	\$ -	\$ -	\$ 240,000.00	\$ 9,000.00	\$ -	\$ 156,000.00	\$ 39,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ 2,000.00	\$ -	\$ 452,000.00

CSU Channel Islands
MSFT Proposed Budget
2020-2021

Please layout in detail when various components of your plan will be complete in order to achieve key milestones. This information will be use to forecast the spending of MSFT within the fiscal year.
 PS: all purchases/services need to be received and billed to CI before June 30th to account for the current fiscal year.

Project or Activity Title

**Total Requested
 \$\$**

Mechatronics Engineering Control Systems Laboratory Equipment \$36,811

*formulas will calculate totals

MSFT Planning Budget Calendar 2020-2021

Items or services requested to be funded	July 2020 -Period 1	August 2020-Period 2	September 2020 -Period 3	October 2020 -Period 4	November 2020 -Period 5	December 2020 -Period 6	January 2021 -Period 7	February 2021 -Period 8	March 2021 -Period 9	April 2021 -Period 10	May 2021 -Period 11	June 2021-Period 12	Grand Total
Purchase of 7 x QUBE-Servo 2 USB (P/N:913)											\$ 31,522.50		\$ 31,522.50
Purchase of 7 x QUARC Essentials Software License (P/N:971)											\$ 4,788.00		\$ 4,788.00
Shipping and Isurance											\$ 500.00		\$ 500.00
insert your items or service here													\$ -
insert your items or service here													\$ -
insert your items or service here													\$ -
insert your items or service here													\$ -
insert your items or service here													\$ -
insert your items or service here													\$ -
insert your items or service here													\$ -
* you can add lines to your budget by inserting lines here													\$ -
Total	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 36,810.50	\$ -	\$ 36,810.50

Dr. Jason Isaacs

California State University Channel Islands

USA

jason.isaacs@csuci.edu



QUOTATION – 2021-2068
March 10, 2021

SALESPERSON	DOCK DATE	SHIPPING VIA	SHIPPING TERMS	PAYMENT TERMS	CURRENCY
Adam Assaad	45 days	FedEx	FCA	Net 30	USD

PRODUCT	PRICE	EXTENDED
7 × QUBE-SERVO-2-USB Workstation		
7 × QUBE-Servo 2 USB (P/N:913) Fully integrated, modular servomotor experiment for teaching mechatronics and controls. Includes: - QFLEX 2 USB Interface Panel - Built-in Amplifier - Inertia Disk and Pendulum modules - Other QFLEX 2 panels can be purchased separately - User Manual, Quick Start Guide, Instructor and Student Workbooks and pre-designed controllers.	\$5,003.57	\$35,024.99
7 × QUARC Essentials Software License (P/N:971) QUARC Essentials Platform provides a flexible hardware interfacing and takes full advantage of Quanser's course resources to rapidly deploy an experiential teaching lab. QUARC is fully integrated with Matlab/Simulink and requires Matlab Coder and Simulink Coder for full operation. Please see the Compatibility Chart for the latest version of Matlab/Simulink supported.	\$760.00	\$5,320.00
	SUB-TOTAL	\$40,344.99
	DISCOUNT (10.0%)	(\$4,034.50)
	SUB-TOTAL	\$36,310.49
	SHIPPING AND INSURANCE	\$500.00
	TOTAL	\$36,810.49

QUARC Maintenance and Upgrade: QUARC licenses include 1 Year of Free Maintenance and Upgrades. We offer two ways to keep your license up to date: 1) Purchase Licensing Maintenance at a rate of 20% (per year / for up to 5 years) of the current license price. Offer available only at time of license purchase. 2) Purchase an Upgrade at a rate of 50% of the current license price. Offer available anytime after the license purchase.

QUOTATION VALID UNTIL 60 DAYS FROM ISSUE DATE. A NEW QUOTE IS REQUIRED ONCE THE VALIDITY HAS EXPIRED.

Price list does not include customs, duties, taxes, or tariffs. These are the responsibility of the recipient.

Late Payment Penalty: A penalty of 2% per month is applied after the Payment Terms Days indicated in the Quotation, from the issue of the Invoice.

15 MONTH FULL REPLACEMENT WARRANTY ON HARDWARE PRODUCTS

Bank Information: US\$
Canadian Imperial Bank of Commerce (CIBC), Toronto, CA
Quanser Branch Account#: //CC001002242
Swift F57A: SWIFT/BIC - CIBCCATT
Swift F59: Quanser US\$ Account#: 0276618
Intermediary Bank: PNBUS3NNYC - Wells Fargo Bank, N.A. New York, NY, US
Bank of America Branch # 02242
Bank #: 010

Terms & Conditions

1. Payment: Payment terms are as described in the quotation under consideration, time to be of the essence.

2. Entire Agreement: It is agreed that should the Purchaser use its own form of purchase order for ordering items from Quanser, all sales to the Purchaser shall be subject to all provisions of this Agreement and to the trade terms of Quanser then in effect. Any provision of such purchase order which is inconsistent with the provisions of this agreement or such trade terms, or which imposes any greater burden upon Quanser than the obligations set forth in this document, or which confers on the Purchaser additional rights shall be of no effect whatever unless expressly accepted by Quanser in writing specifically referring to the inconsistency, added burden or additional rights and specifically stating that such provision will govern. If any provision herein is deemed unenforceable for any reason, the remainder of these Terms & Conditions shall continue in full force and effect as if the unenforceable provision had not been included.

3. Purchaser Stipulations: Purchaser acknowledges to Quanser that Purchaser has stipulated the specifications for the products to be supplied by Quanser to the Purchaser ("Products") and the Purchaser is not relying on Quanser with respect to the fitness or suitability of the products for the Purchaser's intended purposes. Purchaser specifically agrees to indemnify, defend, and save harmless Quanser, its parents, subsidiaries, and affiliated companies, and their respective officer, directors, employees and agents ("Indemnified Parties") against any claims of any kind or nature, including any claims in contract, by tort or under any statutory provisions, by any person, for any cause or matter in any way referable to Purchaser's use of the Products, including any claims for damages to persons or property or for consequential or economic losses or damages and whether or not such damages are attributable to negligence or gross negligence by Quanser or any other Indemnified Party, or for any other reason.

4. Purchaser Acceptance: Purchaser acknowledges and agrees with Quanser that by accepting delivery of the Products, Purchaser has inspected the Products and confirmed that they meet the Purchaser's specifications in all respects and have been delivered in good order and condition in accordance with the purchase order and the invoice.

5. Proper Use of Products: Purchaser warrants and represents that it: (a) is familiar with the proper operating instructions for the Products, as well as all federal, state, provincial, and local laws and regulations relating to the operation and safe and proper use of the Products; and (b) will comply at all times with all such instructions, laws and regulations. Purchaser acknowledges and agrees that, in the event of any failure to so comply: (a) any warranty on the Products is voided; and (b) Purchaser will indemnify, defend, and hold harmless the Indemnified Parties from and against any and all losses, costs, expenses, or damages, including but not limited to reasonable attorneys' fees, incurred as result of such failure.

6. Software: Purchaser acknowledges and agrees that software obtained from Quanser ("Software") shall be subject to and be governed by a corresponding Quanser End User License Agreement ("EULA"). The QUARC EULA is available [here](#). The QDEX EULA is available [here](#). The Experience Controls EULA is available [here](#). The Quanser Quanser Digital Experiences EULA (includes QLABS) is found here . Each EULA also governs terms of Limited Warranty/Liability for the software it governs. Purchaser further acknowledges and agrees that (i) Purchaser's rights to use the Software (including any restrictions on such use, limitations of liability and the like) are as set forth in the corresponding EULA; and (ii) Purchaser shall be bound by such EULA.

7. Limited Warranty/Liability - Hardware: Quanser warrants its Hardware Products for a period of 1 calendar year from the date of this invoice to be free of defects in workmanship and materials. Quanser's only liability under this warranty shall be to repair, and if necessary, in Quanser's sole discretion, to replace the defective product. All other warranties, express or implied (including any warranty of merchantability, fitness for particular purpose, or non-infringement), or conditions whether statutory or otherwise, are expressly excluded. In any event, the Quanser's liability, and the liability of any other Indemnified Party, for any cause or damage relating in any way to the Products, and regardless of the form of action, whether in contract or in tort including negligence or gross negligence, shall be limited to the LESSER of the Purchaser's direct damages and the amount paid by the Purchaser in respect of the applicable Product. This exclusion of liability and limitation of liability is an essential part of these Terms and Conditions without which Quanser would not be willing to sell Products to Purchaser, and it shall apply regardless whether (a) such damages may be characterized as arising from a breach of a fundamental term or otherwise, or (b) the remedies herein otherwise would be deemed to fail of their essential purpose. In no event shall Quanser be liable for any consequential damages or damages for loss of profits or other economic losses of any kind or nature whatsoever, even if advised of the possibility of such damages or losses.

8 Delay, etc.: The failure to take any action with respect to, nor the waiver of, any default by either Quanser or the Purchaser shall not affect such person's rights nor obligations with respect to such default nor any other default. Quanser shall not be liable for delay or failure in performance resulting from acts beyond the control of Quanser, unless by reason of Quanser's own negligence provided that where Quanser claims to be excused by reason beyond Quanser's control Quanser shall, however, use reasonable diligence to put Quanser again in a position to carry out the Quanser's obligations.

9. Disputes: These Terms and Conditions, along with any disputes of any kind whatsoever between Quanser and Purchaser are governed by the internal laws of the Province of Ontario, Canada, without regard to principles of conflicts of laws, and specifically excluding the United Nations Convention on the International Sale of Goods. Any disputes shall be resolved solely via commercial arbitration to be conducted in Toronto, Ontario, Canada.

Re: List of Institutions

March 10, 2021

MANUFACTURER STATEMENT

To Whom it May Concern,

This Letter is to confirm that Quanser Consulting Inc. has provided the following institutions in the California State University system with Quanser systems similar or equivalent to the systems proposed to CSU Channel Islands:

- San Francisco State University
- CSU San Marcos
- CSU Fullerton
- CSU Long Beach
- San Diego State University
- San Jose State University
- CSU Sacramento
- CSU Los Angeles
- Cal Poly Pomona
- CSU Chico
- CSU Fresno

The proposed Qube-Servo 2 systems are state-of-the-art devices designed to give students an authentic experience in the lab. Quanser's courseware is designed to challenge students to solve real world problems within a lab setting. All our curriculum is ABET aligned and our team is prepared to work with Dr. Isaacs and other faculty at CSUCI to deliver students a fantastic experience. Quanser is the gold standard in controls education and is the go-to solution for the top institutions in California, including the ones listed above from the CSU system.

Sincerely,



Adam Assaad, MAsc.
Territory Manager – USA Southwest
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