

Business Unit & Req. # 1902 150087343

ECCN: \_\_\_\_\_

Total Amount: 137,210.00

Note: This Sole Source Certification will become a public document, open to public inspection; therefore, you should be certain all material facts are true, relevant and clearly understandable.

### SOLE SOURCE CERTIFICATION

Under the requirement of University of Florida Rule No. 6C1-3.020(5)(e)(2), the following is submitted in support of this request for authority to purchase, without bidding, the items available from only one source.

Note: Sole Source means that the item/service is unique and that the vendor is the only one from whom the item/service can be provided. Best Price alone cannot be used for sole source. If the item/service is available from more than one source of supply, best price must be determined through the competitive bid process.

A. Sole Source Vendor Company Name: Correlated Solutions, Inc.  
Contact Person: Bluejay Robinson  
Address: 121 Dutchman Blvd  
Telephone: 803-926-7272 xt 24 Fax: 803-749-7569 Email: robinson@correlatedsolutions.com

B. Describe in lay language, what the item/service is and how it is to be used in your area of research. (cont. P2)  
This Stereo DIC system allows high-speed measurement of objects moving and deforming in 3D over time. This system will be used by the Fluids & Adaptive Structures (FAST) Lab at the University of Florida to develop novel underwater robotic systems and investigate the fundamental processes of how deforming objects interact with the water around them. (cont'd)

C. What feature or special condition of this commodity/service is unique and cannot be obtained from any other source? Why are these features or special conditions important to the research? (cont. P2)  
The Stereo DIC system consists of both hardware and software. Correlated Solutions Inc., (CSI) is being chosen as the sole source because their software has more capabilities than the other vendors. The total system that we want to purchase from CSI is unique to my lab. The specific subcomponents we are purchasing (software, hardware, accessories) are all standard CSI products; however, the combination of subcomponents is unique since it addresses my lab's specific experimental needs. (cont'd)

D. Is this product being purchased directly from the manufacturer?  Yes  No  
If No, is it available from more than one dealer?  Yes  No  
If Yes, it is available from more than one dealer, why can this item not be bid? (cont. P2)

Correlated Solutions is the sole source supplier and manufacturer of the VIC-3D Digital Image Correlation System.

E. Prior to submitting this requisition, did you investigate other possible sources?  Yes  No  
If Yes: 1) Did you obtain quotes from the other sources?  Yes  No If Yes, attach copies.  
2) Is this Vendor's price lower than the other sources?  Yes  No If No, justify the additional cost below.

The other vendors did not provide features (accurate calibration in water and reduced data processing time) needed to support my research

F. What efforts have been made to obtain the best price possible? Why do you feel this price is fair and reasonable? (cont. P2)  
The vendor provided a sizeable academic discount on multiple components of the system.

I / We, the undersigned, certify the above to be true and correct to the best of my / our knowledge and belief and the user and / or undersigned does not have a financial interest in the above named vendor.

DEPARTMENT APPROVAL	PURCHASING APPROVAL
I hereby certify the validity of the information and feel confident the Sole Source Certification will meet University criteria and would withstand any audit or vendor protest.  Patrick F Musgrave <small>Digitally signed by Patrick F Musgrave Date: 2021.10.18 14:04:24 -04'00'</small> <u>10/18/2021</u> Principal Investigator's Signature Date	This acquisition is approved as a non-competitive purchase.  <u>Ana Wright</u> <u>10/19/21</u> Purchasing Coordinator Signature Date
<small>FAILURE TO FILE A PROTEST IN ACCORDANCE WITH BOARD OF GOVERNORS (BOG) REGULATION 18.002 OR FAILURE TO POST THE BOND OR OTHER SECURITY AS REQUIRED IN THE BOG REGULATION 18.002 AND 18.003(3) SHALL CONSTITUTE A WAIVER OF PROTEST PROCEEDING.</small>	<u>[Signature]</u> <u>10/19/21</u> Purchasing Authorized Signature Date

## Sole Source Certification (Continued)

Please use the following sections to continue documentation if needed.

### B. continued

As a specific example, this Stereo DIC system will aid in the development of artificial fish to improve the performance (endurance, peak thrust, maneuverability) of Unmanned Underwater Vehicles (UUVs) currently in use by the US Navy and other US governmental agencies. Improving the performance of these UUVs will 1) support the US Navy's mission for persistent maritime awareness and 2) support US government efforts to safeguard sensitive marine ecosystems. Towards the development of artificial fish, this Stereo DIC system will be used to measure the swimming motions of the artificial fish with high accuracy and in high-speed. These high accuracy swimming motions (provided by the DIC system) can be correlated with the artificial fish's performance (e.g. propulsive thrust and energy efficiency) to evaluate the viability of a given design and understand the fundamental swimming mechanism.

### C. continued

The CSI software is unique in 2 areas that are relevant to my research.

1. CSI's software has higher accuracy calibration for underwater objects resulting in accurate 3D deformation measurements

- A calibration procedure is necessary to correct for optical distortions caused by the index of refraction of water
- CSI's calibration procedure (VRO calibration) corrects for the changes in refractive index due to the water and removes any bias without required extra equipment
- My research into artificial fish requires accurate measurement of the 3D deformation of the fish surface. CSI's underwater calibration procedure enables accurate measurement of the deformation (e.g. a fish deforming 1in is measured as 1in), whereas other vendor's calibration procedures may result in inaccurate deformation measurements (e.g. a fish deforming 1in is measured as 0.9in)

2. CSI's software is more than 10x faster at processing data than other commercially available 3D DIC analysis software

- CSI's software reduces the amount time needed to process data (If it takes CSI's software 1hr to process a data set, other vendor's software will take >10hrs)
- My research requires the faster processing speed provided by CSI's software, since I will be capturing large data sets and need to reduce the amount of processing time. As an example, I will measure how an artificial fish swims when flapping at many different frequencies: 1.0, 1.1, 1.2, .... 49.9, 50.0Hz. This results in 100's to 1000's of individual tests, and CSI's software reduces the total time to process these tests from days to hours.

### D. continued

### E. continued

### F. continued