



ASTI-FM 03-10  
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**DOST-ASTI Bids and Awards Committee**  
**Notice of Negotiated Procurement -Two Failed Biddings**

RFQ No.: 19-03-2322	Date: May-31-2019
PR No.: GAA-19-02-7308	Date: Feb-18-2019

The Advanced Science and Technology Institute (ASTI) , through its Bids and Awards Committee, will undertake **Negotiated Procurement:Two-failed Biddings** for the item/s listed below. Interested proponents are invited to attend **Negotiated Conference** at ASTI Building, Ground Flr. ASTI Bldg, C. P. Garcia Ave, U.P.Campus Diliman, Quezon City on: **June 4,2019 , 2:00 PM.**

For inquiries, you may call the BAC Secretariat at **+63 2 426-9759/60 local 1206/1212** and look for Ms. Katherine B. Ramos.

Respectfully,

  
**PEDRITO B. MANGAHAS**  
Chairperson, BAC-1

ITEM NO.	TECHNICAL SPECIFICATIONS	QTY	UNIT	UNIT PRICE	TOTAL PRICE
1	<p><b>Mathematical Computing Software subscription</b></p> <p>1. Three (3) annual concurrent license-based subscription of a mathematical computing software with the following intrinsic capabilities (i.e. does not require third-party software/platform):</p> <p>1.1. Able to solve computationally and data-intensive problems using multicore processors, GPUs, and computer clusters with high-level constructs such as parallel for-loops, special array types and parallelized numerical algorithms to parallelize applications without CUDA or MPI programming.</p> <p>1.2. Able to provide functions and applications to describe, analyze and model data; and is able to utilize descriptive statistics and plots for exploratory data analysis, fit probability distributions to data, etc.</p> <p>1.3. Able to provide tools for machine learning algorithms (supervised and unsupervised) such as but not limited to support vector machines, k-nearest neighbors, Gaussian mixture model, decision trees, hierarchical clustering.</p> <p>1.4. Provides tools for classification, regression, cluster, dimensionality reduction, time-series forecasting; algorithms, pretrained models and applications to perform neural network simulation.</p> <p>1.5. Has support for convolutional neural network, long short-term memory (LSTM), directed acyclic graph network topologies, autoencoders for image classification.</p> <p>1.6. Provides a comprehensive set of</p>	1	lot	5700000.00	5,700,000.00

reference-standard algorithms and workflow apps for image processing, analysis, visualization, and algorithm development.

1.7. Has tools for image segmentation and enhancement, noise reduction, geometric transformations, image registration and 3D image processing, automation of common image processing workflows and enable interactive image segmentation, image registration technique comparison and batch processing of large datasets. Must contain visualization functions for exploration of images, 3D volumes and videos.

1.8. Provides functions and applications to analyze, preprocess, and extract features from uniformly and nonuniformly sampled signals. Must include tools for filter design and analysis, resampling, smoothing, detrending and power estimation. Must also contain tools for signal feature extraction.

1.9. The code should run within the software to be procured without additional coding in another software platform or programming language such as python.

2. One (1) annual individual license-based subscription of a mathematical computing software capable of the following:

2.1. Able to solve computationally and data-intensive problems using multicore processors, GPUs, and computer clusters with high-level constructs such as parallel for-loops, special array types and parallelized numerical algorithms to parallelize applications without CUDA or MPI programming.

2.2. Able to provide functions and applications to describe, analyze and model data; and is able to utilize descriptive statistics and plots for exploratory data analysis, fit probability distributions to data, etc.

2.3. Able to provide tools for machine learning algorithms (supervised and unsupervised) such as but not limited to support vector machines, k-nearest neighbors, Gaussian mixture model, decision trees, hierarchical clustering.

2.4. Provides tools for classification, regression, cluster, dimensionality reduction, time-series forecasting, algorithms, pretrained models and applications to perform neural network simulation.

2.5. Has support for convolutional neural network, long short-term memory (LSTM), directed acyclic graph network topologies, autoencoders for image classification.

2.6. Provides algorithms and visualizations for preprocessing, analyzing, and modeling text data coming from various sources (e.g. logs, news feeds, social media) with various well known formats.

2.7. Provides the ability to compile code into standalone applications.

2.8. Provides the ability to build C/C++ libraries, Microsoft® .NET assemblies, Java® classes, and Python® packages for deployment on desktop, web, and enterprise systems.

2.9. Compatible with item no. 5

2.10. The code should run within the software to be

procured without additional coding in another software platform or programming language such as python.

3. One (1) annual individual license-based subscription of a mathematical computing software capable of the following:

3.1. Able to solve computationally and data-intensive problems using multicore processors, GPUs, and computer clusters with high-level constructs such as parallel for-loops, special array types and parallelized numerical algorithms to parallelize applications without CUDA or MPI programming.

3.2. Able to provide functions and applications to describe, analyze and model data; and is able to utilize descriptive statistics and plots for exploratory data analysis, fit probability distributions to data, etc.

3.3. Able to provide tools for machine learning algorithms (supervised and unsupervised) such as but not limited to support vector machines, k-nearest neighbors, Gaussian mixture model, decision trees, hierarchical clustering.

3.4. Provides tools for classification, regression, cluster, dimensionality reduction, time-series forecasting; algorithms, pretrained models and applications to perform neural network simulation.

3.5. Has support for convolutional neural network, long short-term memory (LSTM), directed acyclic graph network topologies, autoencoders for image classification.

3.6. Provides a comprehensive set of reference-standard algorithms and workflow apps for image processing, analysis, visualization, and algorithm development.

3.7. Has tools for image segmentation and enhancement, noise reduction, geometric transformations, image registration and 3D image processing, automation of common image processing workflows and enable interactive image segmentation, image registration technique comparison and batch processing of large datasets. Must contain visualization functions for exploration of images, 3D volumes and videos.

3.8. Provides algorithms and visualizations for preprocessing, analyzing, and modeling text data coming from various sources (e.g. logs, news feeds, social media) with various well-known formats.

3.9. Provides algorithms, functions, and apps for designing and simulating computer vision and video processing systems. This includes feature detection, extraction, and matching, as well as object detection and tracking, among others.

3.10. Supports single, stereo, and fisheye camera calibration; stereo vision; 3D reconstruction; and 3D point cloud processing.

3.11. Compatible with item no.5

3.12. The code should run within the software to be procured without additional coding in another software platform or programming language such as python.

4. One (1) annual individual license-based subscription of a mathematical computing software

capable of the following:

4.1. Able to solve computationally and data-intensive problems using multicore processors, GPUs, and computer clusters with high-level constructs such as parallel for-loops, special array types and parallelized numerical algorithms to parallelize applications without CUDA or MPI programming.

4.2. Able to provide functions and applications to describe, analyze and model data; and is able to utilize descriptive statistics and plots for exploratory data analysis, fit probability distributions to data, etc.

4.3. Able to provide tools for machine learning algorithms (supervised and unsupervised) such as but not limited to support vector machines, k-nearest neighbors, Gaussian mixture model, decision trees, hierarchical clustering.

4.4. Provides tools for classification, regression, cluster, dimensionality reduction, time-series forecasting; algorithms, pretrained models and applications to perform neural network simulation.

4.5. Has support for convolutional neural network, long short-term memory (LSTM), directed acyclic graph network topologies, autoencoders for image classification.

4.6. Provides a comprehensive set of reference standard algorithms and workflow apps for image processing, analysis, visualization, and algorithm development.

4.7. Has tools for image segmentation and enhancement, noise reduction, geometric transformations, image registration and 3D image processing, automation of common image processing workflows and enable interactive image segmentation, image registration technique comparison and batch processing of large datasets. Must contain visualization functions for exploration of images, 3D volumes and videos.

4.8. Provides functions and apps to analyze, preprocess, and extract features from uniformly and nonuniformly sampled signals.

4.9. Includes tools for filter design and analysis, resampling, smoothing, detrending, and power spectrum estimation. The toolbox also provides functionality for extracting features like changepoints and envelopes, finding peaks and signal patterns, quantifying signal similarities, and performing measurements such as SNR and distortion.

4.10. Provides algorithms, apps, and scopes for designing, simulating, and analyzing signal processing systems. has support for designing and analyzing FIR, IIR, multirate, multistage, and adaptive filters, streaming signals from variables, data files, and network devices for system development and verification.

4.11. Provides algorithms and apps for the analysis, design, end-to-end simulation, and verification of communications systems.

4.12. Includes channel coding, modulation, MIMO, and OFDM enable you to compose and simulate a physical layer model of your standard-based or custom-designed wireless communications system.

4.13. Provides a waveform generator app, constellation and eye diagrams, bit-error-rate, and other analysis tools and scopes for design validation.

4.14. Compatible with item no. 5

4.15. The code should run within the software to be procured without additional coding in another software platform or programming language such as python.

Others:

a. Specifications listed for each item above are implicitly implied to be minimum specifications. Bidders are encouraged to propose better specifications in their bids so long as it does not deviate too much for the intent of the original specifications.

b. The winning bidder must provide the necessary technical support during the installation and testing of items no. 1, 2, 3, & 4.

c. The winning bidder is required to deliver the items within fifteen (15) calendar days upon issuance of Notice to Proceed (NTP).

#### 5. Distributed Computing Server Annual Subscription

5.1. Allows computationally-intensive codes to run in a multi-node server.

5.2. Facilitates the development of prototype codes on a local machine (desktop) and scale to a compute cluster without the need for recording;

5.3. Contains the following capabilities/features:

5.3.1. Supports batch jobs, parallel computations, and distributed large data;

5.3.2. Includes built-in job manager/scheduling and supports SLURM SCHEDULER;

5.3.3. Can execute GPU-enabled functions on distributed computing resources;

5.3.4. Execution of parallel computations from applications and software components generated;

5.3.5. Compatible with items no. 1, 2, 3 & 4; and

5.3.6. Provides license for all toolboxes and block sets to enable running codes on the cluster without having to separately acquire additional product specific licenses for each computer in the cluster.

#### 6. Others

6.1. Specifications listed for each item above are implicitly implied to be minimum specifications. Bidders are encouraged to propose better specifications in their bids so long as it does not deviate too much for the intent of the original specifications.

6.2. The winning bidder must provide the necessary technical support during the installation and testing of item no. 5.

6.3. The winning bidder is required conduct a workshop/training about the operation and provide the corresponding documentation. The workshop should include but not limited to the scope and limitation of the software, its integration with Slurm (current job scheduler of CoARE HPC cluster), executing workloads with the GPU processes, etc.

6.3.1. Participants: COARE technical team, at most ten (10) people



**For procurement of infrastructure:**

1. The requirements for goods.
2. Valid PCAB License.

**For procurement of consulting services:**

1. The requirements for goods.
2. Valid PRC License or Curriculum Vitae.

**NOTE:** For new suppliers, submit a BIR Certificate of Registration for accounting purposes.

**C. Terms and Conditions**

1. Additional requirements, if necessary, may be requested by the BAC depending on the item to be bid.
2. For all kinds of procurement, the bidder who passed the bid evaluation, shall submit a duly notarized Omnibus Sworn Statement upon issuance of NOA, unless otherwise provided;
3. All transactions are subject to creditable withholding tax and final Value Added Tax or percentage tax per revenue regulation/s of the BIR;
4. A penalty of one-tenth of one percent (0.001) of the total value of the undelivered goods/services shall be charged as liquidated damages for every day of delay of the delivery; and
5. The DOST-ASTI reserves the right to accept or reject any proposal, to annul the bidding process, and to reject all proposals at any time prior to contract award, without thereby incurring any liability to the affected proponent or proponents.