

## STU-UNIVPM JOINT ALGAL RESEARCH CENTER 2018 SUMMER SCHOOL (JARC2018)

THE EVOLUTION OF ALGAE IN RELATION TO THE ENVIRONMENT

STU-UNIVPM Joint Algal Research Center (STU-UNIVPM JARC) is happy to announce

### JARC2018

The School will take place on Shantou University Campus, from 16th-25th

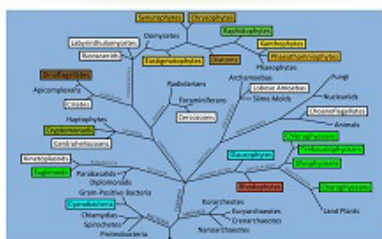
August 2018 and will be held in ENGLISH.

#### Background

SUJARC2018 will comprise theoretical and practical classes, which will allow the participants to learn about the main concepts in the field of algal genomic, transcriptomic and phylogeny and have hands on experience of the main techniques used for the analyses of genomes and transcriptomes, for comparative and phylogenetic studies.

JARC2018 is primarily directed to graduate students majoring in fields related to algal biology and evolution, but everybody is welcome to apply. The organizing committee will operate a section of participants based on their cv. The maximum attendance is of 30 participants.

The theme of JARC2018 is 'Environmental changes and algal evolution'. We aim at providing high quality, interactive teaching and learning experiences (including lectures, student presentation, open scientific forum and practical experiments) to our participants. The summer school will give the opportunity to student and younger scientists to directly interact with world-class lecturers in the field. It will also constitute a valuable opportunity for career advancement, personal enrichment and training to all participants



#### Organizing Committees



Prof. Mario Giordano (Chairman), Università Politecnica delle Marche, Director of STU-UNIVPM JARC

Prof. Hong Du, College of Science, Shantou University, co-director of STU-UNIVPM JARC



#### Secretary

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#### Venue

JARC2018 will take place on the campus of Shantou University, in the coastal city of Shantou, Guangdong, China. Accommodation will be offered on campus as well

#### Course Topics

The evolution of algae in relation to environmental change  
Genomics and algal evolution  
Photosystem and algal evolution

#### Instructors



**Prof. Arthur Robert Grossman:** He has been a Staff Scientist at The Carnegie Institution for Science, Department of Plant Biology since 1982, and holds a courtesy appointment as Professor in the Department of Biology at Stanford University. He has performed research across fields ranging from plant biology, microbiology, marine biology, ecology, genomics, engineering and photosynthesis and initiated large scale algal genomics by leading the Chlamydomonas genome project (sequencing of the genome coupled to transcriptomics).

**Prof. Charles Francis Delwiche:** He works in the Department of Cell Biology & Molecular Genetics, University of Maryland. Director of the Biological Sciences Graduate Program. He study early events in the evolution of plants, particularly the endosymbiotic origin of plastids (chloroplasts), and the origin of land plants (i.e., embryophytes) from green algae, using molecular systematic and genomic methods (phylogenomics).



#### Language

All activities of JARC2018 will be held in English

#### Schedule Overview

16-Aug	- Genomes of algae and cyanobacteria - Next-generation sequencing technologies	21-Aug	- Identifying ORFs via BLAST and HMM - The risk of transitive annotation
17-Aug	- DNA, RNA, and Protein as Information-containing molecules: Description of the contents - Pairwise sequence alignment	22-Aug	- Multiple sequence alignment - Phylogenetic analysis
18-Aug	- BLAST - The problem of contig assembly	23-Aug	- Parsimony - Corrected distance methods
19-Aug	- Genome assembly algorithms - deBruijn assembly algorithms	24-Aug	- Maximum Likelihood - Bayesian analysis
20-Aug	- Estimating expression levels - Description of the contents - Finding Open Reading Frames (ORFs) in genomic data	25-Aug	- Phylogeny and diversity of algae

#### INSTRUCTORS

This year's instructors will be Prof. Charles Delwiche, University of Maryland, USA, and Prof. Arthur Grossman, Carnegie Institution of Washington, USA.

#### Participants

Graduate students and scientist in the area of algal biology and evolution are welcome to attend JARC2018

#### Certificate of Attendance

A certificate of attendance will be given to all participants who attended the entire summer school

#### Registration Information

A complete application form, including a reference letter from advisor / supervisor should be submitted to the Summer School Secretariat by e-mail: run@stu.edu.cn (IMPORTANT: the application deadline is 20 Jun., 2018).

#### Registration Fees

No registration fee is charged for qualified applicants. Fees for lecture, and open scientific forum will be covered by JARC.

#### Financial Supports

5 applicants will have chance to get financial support, which will cover round trip flight and accommodation.

#### Contact Us

Please direct all correspondence and the application forms to run@stu.edu.cn