USA Computing Olympiad Contest

USA Computing Olympiad (usaco.org) is a nonprofit organization supporting computer science education in the USA and worldwide by identifying, motivating, and training high-school students in programming and problem-solving for its Bronze, Silver and Gold levels. Each year it runs 4-6 online programming contests at all levels. With proper guidance, motivated students could pick up basic programming and problem-solving skills to pass the Bronze level in 6 months, and pass the Silver level in an additional 6 months. Students who have passed the Silver level have programming proficiency beyond that of typical computer science freshman, and they have priority for being admitted into top tier universities. Students who have performed well in the Gold level contests are nationally exceptional and have significant advantage in being admitted into top-tier universities, and the top 24 of them (also considering other factors like age) are invited to participate in an intensive summer training camp. The top four of these invited campers will then represent USA in the international programming contest called “International Olympiad in Informatics”.

While USACO has free online resources for preparing students in USACO contests, they are only meaningful to students who have already been engaged in the learning track. Most of the high schools do not have faculty to prepare their students for the advanced programming and problem-solving skills required to perform well in USACO contests. Around the nation there are many weekend and summer programs for training high school students in mathematics, but there are few programs for helping students in computer science problem-solving.

Pace University Computer Science USACO Summer Camp

Pace University Computer Science USACO Summer Camp aims at helping high school students in securing rigorous training in computational thinking applicable to any discipline; advanced programming and problem-solving skills for USACO contests and technology innovation; hands-on overview of current IT technologies including cloud computing, computing virtualization, mobile computing, and information assurance; and practical counselling on university application strategies.

Pace University Computer Science USACO Summer Camp is based on Pace University’s decades of leadership in professional education excellence and the success of Pace University Saturday USACO Programming Workshops. Pace University faculty and PhD students have developed unique strategies and courseware in teaching high school students programming skills and advanced algorithms to excel in USACO contests. Every Saturday, dozens of select high school students from the New York, New Jersey and Connecticut area attend custom-designed lectures and workshops at Pace University Pleasantville campus from 9am to 12pm, and work on USACO challenges together as a learning community. This learning community is also supported by dynamic and instructor-assisted discussion forums assisting students every day. Pace University USACO Skill Sheets (popularly called by high school students as Pace University USACO “cheat sheets”) in C++ and Java are summary of the most important programming skills and algorithms that are critically important in performing well in USACO contests, and they enable students to program in both C++ and Java based on existing advanced data structures in the shortest period of time.

Pace University Computer Science USACO Summer Camp has the following salient features:
• It is backed by the Pace University Computer Science Department faculty and doctorate students who have first-hand experience in teaching high school student programming through its USACO Programming Workshops every weekend.
• It has unique courseware, including USACO Skill Sheets in both C++ and Java, distilled from systematic solution of all available USACO training questions and past USACO contest questions at all levels, and proven effective.
• It takes full advantage of the power of technology abstraction so students learn how to reuse existing powerful data structures and algorithms from the very beginning, and they can write concise and efficient solutions with minimal coding.
• Integrated in the summer camp are hands-on technology overview of current IT technologies including cloud computing, computing virtualization, mobile computing, and information assurance; and practical counselling on university application strategies.
• High school seniors who deliver excellent performance at this summer camp can be admitted into the BS in Computer Science program of select participating universities on and during the camp with significant merit-based scholarship awards, and SAT and TOEFL requirements could be waived for international students.

Pace University Summer Camp Structure

• **Duration:** July 20, 2015 to August 7, 2015 for three weeks.
• **Location:** Pace University Pleasantville campus. Street address: 861 Bedford Road, Pleasantville, NY 10570.
• **Levels:** The summer camp courses are designed for three levels: Bronze classes for students with limited programming experience; Silver classes for students who have passed USACO Bronze contest; and Gold classes for students who have passed USACO Silver contest.
• **Student Types:** The camp supports both local commuter (day) students and residential students out of the county, state or country.
• **Accommodations:** Residential students will live in Pace University dormitories, with 2-3 students per room. Lodging and all meals are included in the residence fee.
• **Camp Counsellors:** Camp counsellors will guide and protect the students all day long, organize sports and weekend activities, help the students in both study and living, and live with the students.
• **Schedule:** 9am-12pm includes three 45-minute study and problem-solving workshops; 12pm-1:30pm for lunch and break; 1:30pm-4:30pm includes three 45-minute study and problem-solving workshops; 4:30pm-6:30pm for sports; 6:30pm-7pm for dinner, and 7pm-9pm for free activities.
• **Registration:** Interested students should first indicate their interest by submitting the registration form at [http://community.seidenberg.pace.edu/innovation/summer-camp](http://community.seidenberg.pace.edu/innovation/summer-camp) (http://tiny.cc/usaco-camp). A confirmation email will be sent with further instructions including alternative payment methods for deposit, tuition and residence fee.
• **Deposit:** Each student needs to pay $250 non-refundable deposit by March 31, 2015 to reserve space for this summer camp. The deposit will be deducted from your tuition. Registering and paying deposit after March 31, 2015 will be accepted until the spaces are full. Please check space availability after March 31, 2015 by email to Dr. Lixin Tao at ltao@pace.edu.
• **Tuition:** $2,800. This tuition covers all lectures, workshops and courseware for each commuter student.
• **Residence Fee:** $2,500. This residence fee covers lodging and 3 meals per day. The total cost for a residence student is tuition + residence fee or $5,300.
• **Discount:** Students who pay off tuition and residence fee, if applicable, by March 31, 2015 will enjoy a 10% discount ($2,520 for a commuter student, and $4,770 for a residence student).
• **Healthcare Insurance:** Each international student attending this summer camp must be properly covered by a healthcare insurance plan with unlimited medical/accident coverage. Each international student should email the scan of his/her healthcare insurance policy to Dr. Lixin Tao at ltao@pace.edu before July 20, 2015.
• **Parent/Guardian Authorization Form:** Each student needs to email the scan of a signed parent/guardian authorization form to Dr. Lixin Tao at ltao@pace.edu before July 20, 2015.
• **Payment Methods**: For deposit, tuition and residence fee, you can mail a check or money order, to the order of “USACO Education”, to “Dr. Lixin Tao, Seidenberg School, Pace University, 861 Bedford Road, Pleasantville, NY 10570, USA”. Please mark student name on the check or money order. Additional payment methods will be available upon request after you register for this summer camp.

• **Courseware**: All resources and courseware used by the camp, including the Pace University USACO Virtual Machine supporting both Java and C++ programming and mobile development, are included in the tuition.

• **USA B-2 Visa**: Pace University will issue paper work to help international students who have paid the summer camp deposit to apply for USA B-2 visiting visa.

• **Group Registration**: Please contact Dr. Lixin Tao at ltao@pace.edu for group registration.

**Important Dates**

- **Now**: Complete online registration at [http://tiny.cc/usaco-camp](http://tiny.cc/usaco-camp) to indicate your interest as soon as possible to receive further instructions. There is no payment requirement or commitment for this online registration.

- **March 31, 2015**: Deadline for paying $250 deposit to reserve space for this summer camp. Also deadline for receiving 10% discount if full fees are paid by this date ($2,520 for a commuter student, and $4,770 for a residence student, deducting your paid deposit).

- **After March 31, 2015**, registration and payments are accepted if summer camp space is available ($2,800 for a commuter student, and $5,300 for a residence student).

**Pace University and Seidenberg School of Computer Science and Information Systems**

Pace University is nationally recognized for excellence of professional education. The Seidenberg School of Computer Science and Information Systems is among the few and earliest universities that offer computer science programs in a school dedicated to computing. In 2013 US News & World Report ranked Pace University #1 for Best Online Bachelor’s Programs out of a field of 237 colleges/universities, and Pace University’s MS in Internet Technology #13 for Best Online Graduate Computer Information Technology Programs (Boston University #14, John Hopkins #16). Since 2004 Pace University has been designated as a National Center of Academic Excellence (CAE) in Information Assurance Education (IAE) by the National Security Agency (NSA) and the Department of Homeland Security (DHS).

**Main Contact**: Dr. Lixin Tao, Chairperson of the Computer Science Department, Seidenberg School, Pace University, 861 Bedford Road, Pleasantville, NY 10570, USA; ltao@pace.edu

**Summer Camp Web**: [http://community.seidenberg.pace.edu/innovation/summer-camp](http://community.seidenberg.pace.edu/innovation/summer-camp) or [http://tiny.cc/usaco-camp](http://tiny.cc/usaco-camp)

佩斯大学 USACO 夏令营中文手册：[http://community.seidenberg.pace.edu/files/Pace-USACO-Summer-Camp-2015-cn.pdf](http://community.seidenberg.pace.edu/files/Pace-USACO-Summer-Camp-2015-cn.pdf)
Pace University Computer Science USACO Summer Camp

PARENT/GUARDIAN PERMISSION FORM

As parent/guardian of ______________________________ __, I give him/her permission to register for and participate in Pace University Computer Science USACO Summer Camp on Pace University Pleasantville campus on July 20 through August 7, 2015.

1. Contact Information

Parent/Guardian Name: _____________________________________________________

Address: _______________________________________________________________________________________________

Phone: Home (      ) ___________________ Work (      ) _____________________ CELL (       ) _____________________

Parent/Guardian Email: _____________________________________________________

Relationship to the Student: Father____         Mother____         Guardian____

2. In the event of any injury or illness to the above named minor, I the undersigned Parent or Legal Guardian, hereby authorize any Pace University advisor/counsellor in attendance to secure, and any physician in attendance to provide, such emergency medical treatment as shall be deemed necessary by those present; including but not limited to hospitalization, injections, anesthesia, surgery, x-ray, blood, and medications. I understand that every reasonable effort shall be made to contact me prior to medical treatment.

3. The above named minor is subject to the following medical problems, and/or is receiving treatment under the supervision of proper medical authorities as follows: (State on the line below. If none, state NONE.)

____________________________________________________________________________________________________

4. WE HEREBY AGREE TO RELEASE AND HOLD HARMLESS PACE UNIVERSITY, USACO SUMMER CAMP AND THEIR INSTRUCTORS, ADVISORS, COUNSELLORS, STAFF AND ANYONE ACTING UPON THEIR BEHALF, FROM ANY AND ALL CLAIMS OR CAUSE OF ACTION WHICH THE UNDERSIGNED HAS OR MAY HAVE. THIS SPECIFICALLY INCLUDES ANY AND ALL PLANS WHICH ARRIVE OUT OF THE ATTENDANCE AT ANY ACTIVITIES OR EVENTS CONDUCTED AT PACE USACO SUMMER CAMP, INCLUDING TRANSPORTATION TO AND FROM SAID EVENT.

Please write initials here:             ____________ (父母签名)

Initials

(Parent or Legal Guardian)

5. IN THE EVENT OF AN EMERGENCY, AND THE UNDERSIGNED PARENT OR GUARDIAN CANNOT BE REACHED, THE UNDERSIGNED PARENT OR GUARDIAN HEREBY AUTHORIZES DR. LIXIN TAO TO ACT ON THEIR BEHALF.

Signature:

Date: ____________________________

Note: Please email the scan of a signed copy of this form to Dr. Lixin Tao at ltao@pace.edu by May 31, 2015.

Event Registration Site: http://community.seidenberg.pace.edu/innovation/summer-camp or http://tiny.cc/usaco-camp

Event Description and Parent/Guardian Permission Form: http://community.seidenberg.pace.edu/files/Pace-USACO-Summer-Camp-2015.pdf

佩斯大学 USACO 夏令营中文手册：http://community.seidenberg.pace.edu/files/Pace-USACO-Summer-Camp-2015-cn.pdf