Summer Programs for Undergraduate Students

IMMERSE

"Nebraska IMMERSE is the centerpiece of the department's MCTP program. IMMERSE has two interweaving components: one that strengthens the preparation of students who are about to enter their first year of graduate study in mathematics (these students are referred to as "pre-grads") and one that develops the teaching, research and mentoring skills of graduate students and early-career faculty."
Deadline for undergraduates is usually mid March
http://www.math.unl.edu/programs/mctp/immerse/

REUs

"NSF funds a large number of research opportunities for undergraduate students through its REU Sites program. An REU Site consists of a group of ten or so undergraduates who work in the research programs of the host institution. Each student is associated with a specific research project, where he/she works closely with the faculty and other researchers. Students are granted stipends and, in many cases, assistance with housing and travel. Undergraduate students supported with NSF funds must be citizens or permanent residents of the United States or its possessions. An REU Site may be at either a US or foreign location."
http://www.nsf.gov/crssprgm/reu/list_result.cfm?umitid=5044

NSA Internships and Scholarships

"Nothing looks better to future employers than real world experience. As a college undergrad, you can gain the experience you need while working toward your degree. And you'll get to experience first hand what life at NSA is really like. NSA offers internships, a co-op program, and scholarships for a wide variety of majors."
http://www.nsa.gov/careers/opportunities_4_u/students/undergraduate/index.shtml

CIA Internships

"Are you looking for an exciting and challenging internship or cooperative education experience? Consider employment with the Central Intelligence Agency (CIA) as an undergraduate student. Applications for Summer 2014 employment will be accepted until 15 October 2013. Applications for winter, spring, and fall employment should be sent nine to twelve months before the desired start date."
https://www.cia.gov/careers/student-opportunities/index.html#undergradint

Center for Communications Research Summer Programs

"Summer Program in Mathematical Cryptology
Each summer, CCR-P runs an intensive ten-week summer conference on applied mathematical problems (SCAMP). The conference concentrates on a problem area in cryptology. Some 20-25 academic mathematicians are invited to join with our research staff for these conferences.

The visitors are a very strong group of research mathematicians ranging in age from undergraduates to emeritus professors. In recent years, we have made a particular effort to include some undergraduate and/or graduate students who have demonstrated outstanding talent.

Typically, we have a mix of new and returning participants, depending upon individual proclivity for and interest in the particular problem set. Those having an outstanding talent for our problems may also be invited to join our permanent research staff.

The format of the program is rather relaxed. The first two weeks are spent attending lectures where the problems are described, the remaining eight weeks permanent research and program participants spend working on whatever problem, or piece thereof, is of interest to them. Joint work is encouraged and informal bull sessions or lectures are used to present partial results or even half baked ideas which often stimulate better ideas."

http://www.idaccr.org/info.html

Park City Mathematics Institute

"The IAS/Park City Mathematics Program (PCMI) is an outreach program of the Institute for Advanced Study (IAS), Princeton, NJ. PCMI is designed for mathematics educators at the secondary and post-secondary level, as well as mathematics researchers and students at the post-secondary level.

At PCMI, these groups find an intensive mathematical experience geared to their individual needs. The interaction among groups with different backgrounds and professional needs also increases each participant's appreciation of the mathematical community as a whole as well as the work of participants in different areas.

The flagship program of PCMI is the three-week residential Summer Session program for:
- school teachers
- undergraduate college faculty
- undergraduate students
- graduate students
- mathematics researchers

At the annual Summer Session, all five of PCMI's groups meet simultaneously, pursuing individual courses of study. The rich mathematical experience combined with interaction among all participants results in greatly increased understanding and awareness of the issues confronting mathematics and mathematics education today."

http://pcmi.ias.edu

Summer Internships at National Labs

Research Alliance in Math and Science (Oak Ridge)

"The Research Alliance in Math and Science (RAMS) Program is based on the belief that national laboratories and universities, working hand in hand, offer the best opportunity to make a positive impact on the quality of a diverse workforce."

Deadline is usually at the beginning of March

http://computing.ornl.gov/internships/rams/

Argonne National Lab

Two programs

Deadlines at the beginning of the year

http://www.dep.anl.gov/p_undergrad/summer.htm

Livermore National Lab
https://scholars.llnl.gov/ (Livermore)

Summer Programs Exclusively for Women

George Washington University Summer Math Program for Women Undergraduates
" is a five-week intensive program for mathematically- talented undergraduate women who are completing their junior year and may be contemplating graduate study in the mathematical sciences. Goals of this program are to communicate an enthusiasm for mathematics, to develop research skills, to cultivate mathematical self-confidence and independence, and to promote success in graduate school."
Deadline is usually end of February
http://www.gwu.edu/~spwm/

EDGE for Women between Undergraduate and Graduate School
"Strengthening the ability of women students to successfully complete graduate programs in the mathematical sciences"
Deadline is usually beginning of March
http://www.edgeforwomen.org

Carleton College Summer Mathematics Program for Women Undergraduates
"NSF-funded program to encourage and support women in their study of mathematics.
The goals of the program include:

- introducing students to new areas of mathematics;

- honing students' mathematical reasoning, proof writing, problem solving, and presentation skills;
- building self-confidence, encouraging enthusiasm for mathematics, and increasing awareness of opportunities for continued study in the mathematical sciences;
- connecting students into a supportive network of other female college math majors, graduates and professionals to support them through their graduate studies in mathematics."

Well-suited for freshmen and sophomores
Deadline is usually mid February
http://www.math.carleton.edu/smp/

NSA Internships and Scholarships

"If you are working toward your M.S. or Ph.D. in a field critical to NSA's mission, we can help you gain the practical experience you need. Come work on extraordinary challenges along side some of the top innovators in their fields."

http://www.nsa.gov/careers/opportunities_4_u/students/graduate/index.shtml

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https://www.cia.gov/careers/student-opportunities/graduate-students.html

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http://pcmi.ias.edu

Internships

Livermore National Lab

https://scholars.llnl.gov/ (Livermore)

NASA

Has also some internships for students, however

"Due to the lapse in federal government funding, this website is not available.

We sincerely regret this inconvenience."

Check postings at the departmental bulletin boards!

Interesting Websites

AWM
Association for Women in Mathematics
https://sites.google.com/site/awmmath/home

AAUW
American Association of University Women
www.aauw.org

Women in Math Project
http://pages.uoregon.edu/wmnmath/

AMS
American Mathematical Society
www.ams.org

MAA
Mathematical Association of America
www.maa.org

SIAM
Society of Industrial and Applied Mathematics
www.siam.org

ASA
American Statistical Association
www.amstat.org

IMS
Institute of Mathematical Statistics
www.imstat.org

Conferences, Every Year

Nebraska Conference for Undergraduate Women in Mathematics
http://www.math.unl.edu/~ncuwm/

Joint Mathematics Meetings and other AMS Meetings
http://www.ams.org/amsmtgs

SIAM Meetings
http://www.siam.org/meetings/

Pi Mu Epsilon Conferences
http://www.pme-math.org

Sectional MAA Meetings
http://www.maa.org/sections/schedule.html

Regional Undergraduate Math Conferences (RUMCs)
http://www.maa.org/rumc/upcoming.html

IMS Meetings
www.imstat.org/meetings/2013.htm

ASA Meetings
http://www.amstat.org/meetings/index.cfm

Southwest Local Algebra Meeting (SLAM)
Regional algebra conference, rotates between TTU, UT Arlington, NMSU, Texas A&M, U Arizon Tucson; takes place once a year in February or March
http://www.math.ttu.edu/~lchriste/slam2014.html

Texas Topology and Geometry Conference (TGTC)
Regional topology and geometry conference, rotates between TTU, TCU, Texas A&M, UT Austin, Rice U, U of Houston, takes place once a semester
http://www.math.tamu.edu/conferences/tgtc/

The Red Raider Mini-Symposium
Changing topics, takes place every year in October at TTU
http://www.math.ttu.edu/Department/Calendar/Conferences/redraider/rr2013/

AWM Workshops for Women Graduate Students and Recent PhDs
Held at the annual Joint Mathematics Meetings in January and at the SIAM annual Meetings; you can and should apply if you want to present your work at the national level!
https://sites.google.com/site/awmmath/programs/workshops

AMS Spring 2014 Central Sectional Meeting, April 11-13, 2014 at TTU
Many interesting sessions (in particular a session for undergraduate research) and book exhibits
No deadline
http://www.math.ttu.edu/ams/

Spring Opportunities Workshop for Women in the Mathematical Sciences, April 9-11, 2014 at the University of Tennessee, Knoxville

"This workshop will familiarize women in the mathematical sciences with professional opportunities in academics, industry and government labs and help them thrive in mathematics-related fields. Graduate students and PhD's in the early stages of their post-graduate careers are invited to apply to attend. Support is available for travel and lodging to the workshop, and registration is free. The workshop is expected to start at 3 p.m. on April 9 and end in the afternoon of April 11."

Deadline: January 20 2014

http://www.nimbios.org/education/WS_opportunities

Southwest Local Algebra Meeting (SLAM)
Regional algebra conference, rotates between TTU, UT Arlington, NMSU, Texas A&M, U Arizon Tucson; takes place once a year in February or March
NB: March 1-2, 2014 at Texas A&M
http://www.math.ttu.edu/~lchriste/slam2014.html

Texas Topology and Geometry Conference (TGTC)
Regional topology and geometry conference, rotates between TTU, TCU, Texas A&M, UT Austin, Rice U, U of Houston, takes place once a semester
NB: October 11-13, 2013 at Texas A&M
    February 14-16, 2014 at TTU
http://www.math.tamu.edu/conferences/tgtc/

The Fourth International Conference on Mathematical Modeling and Analysis of Populations in Biological Systems: Mathematical Modeling of Complex Dynamics from Cells to Ecosystems
October 4-6, 2013 at TTU
http://www.math.ttu.edu/icma/

Aspects of Fluid Dynamics, The 13th Annual Red Raider Mini-Symposium
October 25-26, 2013 at TTU
http://www.math.ttu.edu/Department/Calendar/Conferences/redraider/rr2013/

Ninth Annual Texas Undergraduate Mathematics Conference
October 25-26, 2013 at St. Mary's University, San Antonio TX
http://www2.sfasu.edu/math/tumc/

MAA 2014 Texas Section Meeting
April 3-5, 2014 at Texas A&M International University in Laredo
http://sections.maa.org/texas/

2014 IMS Annual Meeting
July 7-11, 2014 in Sydney Australia
http://www.ims-asc2014.com/

2014 Joint Statistical Meetings
August 2-7, 2014, Boston MA, Convention Center
http://www.amstat.org/meetings/jsm.cfm

ICM 2014 (International Congress of Mathematicians)
August 13-21, 2014, Seoul, Korea
http://www.icm2014.org/

SIAM 2014 Annual Meeting
July 7-11, 2014, Chicago Illinois
http://www.siam.org/meetings/an14/

Please check also the departmental bulletin boards!

Awards and Fellowships

Awards and Fellowships for Undergraduate Students

For departmental/college/university awards see:

http://www.math.ttu.edu/Undergraduate/Resources/undergrad_scholarships.shtml

Awards and Fellowships for Graduate Students

For departmental/college/university awards see:

http://www.math.ttu.edu/Graduate/Resources/grad_scholarship_support.shtml

SIAM Student Paper Prize

"The SIAM Student Paper Prizes are awarded every year to the student author(s) of the most outstanding paper(s) submitted to the SIAM Student Paper Competition. This award is based solely on the merit and content of the student's contribution to the submitted paper. The purpose of the Student Paper Prizes is to recognize outstanding scholarship by students in applied mathematics or computing."
http://www.siam.org/prizes/sponsored/student_paper.php
(Even so it is not mentioned explicitly anywhere I am assuming this award is mainly for graduate students.)

Graduate Research Fellowship Program (GRFP)

"The purpose of the NSF Graduate Research Fellowship Program (GRFP) is to help ensure the vitality and diversity of the scientific and engineering workforce in the United States. The program recognizes and supports outstanding graduate students who are pursuing research-based master's and doctoral degrees in fields within NSF's mission. The GRFP provides three years of support for the graduate education of individuals who have demonstrated their potential for significant achievements in science and engineering research.
Undergraduate *seniors* planning to pursue graduate study and *beginning graduate students* are eligible to apply. See

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=6201&org=DMS

for details, and please encourage all eligible students to apply.
Full Proposal Deadline Date: November 5, 2013 for mathematical sciences applications"

Awards and Fellowships Exclusively for Women Students
Alice T. Schafer Mathematics Prize for Excellence in Mathematics by an Undergraduate Woman
You need to be nominated! Deadline is every year September 15. See
https://sites.google.com/site/awmmath/programs/schafer-prize

Where to ask for Money for Travel

Department of Mathematics and Statistics:
At the digression of the department head.

Graduate School, TTU:
Supports graduate students, find all the details and application form at
http://www.depts.ttu.edu/gradschool/students/current/index.php

Local SIAM Chapter:
Supports graduate students, ask the president

Local MAA Chapter:
Supports undergraduate students, ask the president

Honors College, TTU:
Supports undergraduate students, must be members of the Honors URF program
Ask URF Coordinator Lori Lightfoot

Center for Active Learning and Undergraduate Engagement, TTU:
Supports undergraduate students, who give a talk. See
http://www.depts.ttu.edu/calue/travelfundingdetails.php
for more details.

West Texas Association for Women in Science
Supports student members, who give a talk. See
www.ciser.ttu.edu/wis

National Organizations:

- **AMS** supports students to attend AMS conferences, see
  http://www.ams.org/programs/travel-grants/grad-students/emp-student-JMM
- **SIAM** supports students to attend SIAM conferences, see
  http://www.siam.org/prizes/sponsored/travel.php

- **AWM** has travel grants for women researchers to attend conferences as well as mentoring travel grants, see https://sites.google.com/site/awmmath/programs/travel-grants

Ask the conference organizers: a lot of conferences provide travel reimbursement for students!

Keep in mind that most likely nobody will fund the entire trip. So, you should expect to get, say, $200 from X and $250 from Y, etc. This means you need to apply to several sources. (Also, note that if someone turns you down that could just mean that they run out of money!)

<h2 align="center">Study Abroad and Semester/Year-Long Programs</h2>

Budapest Semesters in Mathematics

"Budapest Semesters in Mathematics (BSM) is an academic program held in Budapest, Hungary for American and Canadian undergraduates. All courses are taught in English. From modest beginnings in 1985, *BSM* has come to be viewed as one of the most prestigious and essential study-abroad programs for undergraduate students of Mathematics."
www.budapestsemesters.com

Math in Moscow

"This is a special scholarship program primarily for undergraduate mathematics or computer science majors to cover some of the costs associated with attendance for one semester of study in the Math in Moscow program at the Independent University of Moscow (IUM). Funding for these scholarships is provided by the National Science Foundation (NSF) and are administered by the American Mathematical Society (AMS)."
www.ams.org/programs/travel-grants/mimoscow

Penn State MASS

"The Mathematics Advanced Study Semesters (MASS) program started in the Fall of 1996 and is held during the Fall semester of each year. The program combines advanced learning with research initiation and provides a highly charged interactive environment among a critical mass of talented and motivated students and a committed group of strong research faculty and top graduate students. For most of its participants, the MASS program serves as a spring board to graduate schools in mathematics.**"**
www.math.psu.edu/mass/

Smith College Center for Women in Mathematics

"The Center for Women in Mathematics is part of the Department of Mathematics and Statistics. It provides a community and resources for women at all stages interested in the mathematical sciences. The post-baccalaureate program is for women considering continuing to graduate school in the mathematical sciences but who lack the preparation. The WiMiN Conference and weekly talks are opportunities for women to get together around mathematical activities."
www.math.smith.edu/center/

Study Abroad Program at TTU

http://www.studyabroad.ttu.edu/

Get Involved

Putnam Exam:
Contact Dr. Razvan Gelca

Grading/Tutoring: earn money, help others, do math, learn
Contact Magdalena Toda for a grader position, Michael Williams for a position as a tutor

Local MAA Chapter: for undergraduate students
http://www.math.ttu.edu/Undergraduate/Resources/maa/Welcome.html

Local SIAM Chapter: for graduate students

Independent Study/Research for undergraduate students:
Center for Undergraduate Research at TTU, see http://www.depts.ttu.edu/calue/
Honors College, see http://www.depts.ttu.edu/honors/urf/index.php

Honors College: for undergraduate students
Become a member!
http://www.depts.ttu.edu/honors/

SIAM Award in the Mathematical Contest in Modeling:
"The SIAM Award in the Mathematical Contest in Modeling (MCM), established in 1988, is awarded to two of the teams judged "Outstanding" in the Mathematical Contest in Modeling (MCM), administered annually by the Consortium for Mathematics and Its Applications (COMAP). One winning team is chosen for each of the two problems (continuous and discrete) posed in the MCM."
http://www.siam.org/prizes/sponsored/modeling.php