GENERATION STEM

CONVOCATION 2018 Special Issue



Newsletter



NEWS

p. 9 STEM Cookbook

p. 11 Public Private Partnership

STORIES

p. 13 Summer Research Program

p. 15 New STEM Building at ISU

STUDENT ACHIEVEMENTS

p. 19 Associated Students Board

p. 20-21 Hackathons



Georgia

San Diego State University Georgia (SDSU Georgia), through funding from the Millennium Challenge Corporation (MCC) and Millennium Challenge Account Georgia (MCA Georgia), offers students an exciting educational opportunity to study in Tbilisi, Georgia. Here, in the heart of the Caucasus, students are able to earn a professionally accredited, internationally recognized U.S. bachelor's degree. San Diego State University (SDSU) along with three top Georgian universities: Georgian Technical University (GTU), Ilia State University (ISU), and Tbilisi State University (TSU) offers courses leading to science, technology, engineering, and mathematics (STEM) internationally accredited bachelor's degrees. Programs offered by the university support the development of engineering, science and technology fields, as well as Georgia's human capital capacity for economic growth.

SDSU Georgia offers six bachelor's degree programs:

Chemistry/Biochemistry

Civil Engineering

Computer Engineering

Computer Science

Construction Engineering

Electrical Engineering

These American-style programs include a well-rounded liberal arts education and feature Western Association of Schools and Colleges accreditation, and Accreditation Board for Engineering and Technology (ABET) or American Chemical Society (ACS) accreditation. SDSU Georgia graduates will leave with a broad base of knowledge and the critical thinking skills necessary to succeed in a STEM career locally, regionally, or internationally.

Members of the SDSU Georgia community form a unique and special cohort of individuals who will earn regionally and nationally accredited, and internationally recognized, high-quality STEM bachelor's degrees. Additionally, SDSU Georgia students will be exposed to the same academic benefits available to their peers at SDSU's main campus in California, including state-of-the-art technology and laboratories. The San Diego State University Aztecs alumni family includes over 300,000 national and international leaders. At SDSU Georgia, we empower our students to achieve academic, professional and personal goals.

The Newsletter of San Diego State
University Georgia is published by the
Community Relations and Development
and Student Services departments and
distributed to SDSU Georgia
stakeholders, faculty, students and
friends.

SAN DIEGO STATE UNIVERSITY

Adela de la Torre President

SAN DIEGO STATE UNIVERSITY GEORGIA

Halil Güven

Newsletter created by

SDSU Georgia Community Relations and Development

Elene Aladashvili Ana Nizharadze

SDSU Georgia Student Services

Konstantin Samoilov Daniel Williams

Design

Giorgi Akhuashvili Giorgi Goguadze Irina Kacharava iStudio Ltd



Table of Contents

About SDSU Georgia 2

President Adela de la Torre 3

Message from the Dean 4

News 5-11

Stories 12-18

Student Achievements 19-22

Student Life 23-26

ADELA DE LA TORRE, PH.D.

Message From the President

It's been a busy few months since I was announced as SDSU's 9th permanent president. I've been humbled and honored to meet with students, faculty, staff, donors, and leaders in San Diego who are excited to support the new chapter and trajectory of this wonderful university.

In the midst of a busy calendar, my husband, Steve, our three dogs, and I arrived to San Diego. And while unpacking the precious Mexican art pieces and mementos I've collected over my years as a citizen and scholar, I was struck with the thought that new trajectories rarely take us far from our foundational roots.

In my case, I am still amazed that my Mexican heritage and my work as a binational economist have led me to SDSU, home of the Aztecs, and that I get to help strengthen binational and international bridges to further the power of education. To that end, I'm thrilled that I will be at SDSU Georgia in just a few days to meet with staff, faculty, and students.

As we move forward, student success will continue to be a foundational force in what we do across the university. This approach will yield impressive global citizens, compassionate leaders, and ethical innovators who will impact their local community and the world at large.

This is an exciting time to be part of SDSU Georgia and the larger SDSU family.

I also hope that as you examine your own trajectory as a family member and friend of SDSU Georgia you will be inspired by the stories highlighted in these pages and to stay involved in many ways.

I look forward to meeting many of you when I am in Georgia and hearing about the trajectory that brought YOU to where you are today.

Here's to a year of great partnerships and fruitful collaboration!

Adela de la Torre,

President



Biography

Adela de la Torre became the 9th permanent president of San Diego State University on June 28, 2018, the first woman to serve in the role. She is committed to building on the exceptional academic and research legacy of SDSU and to guiding the next chapter of the university's transformation into one of the nation's leading public research universities—an institution that combines the highest levels of academic, entrepreneurship, and research distinction, as well as maximum impact to the San Diego community and the world at large.

Under her direction, the university will pursue the highest levels of teaching, research, innovative, and collaborative distinction, focusing on graduating exceptional global citizens, compassionate leaders, and ethical innovators who impact the San Diego community and the world at large.

She is committed to championing local, binational, and global relationships, transparent communication, productive collaboration, sustainable infrastructure, and expansion to Mission Valley in order to expand the university's impact for the next 121 years.

Dr. de la Torre brings to SDSU nearly 30 years of service in leadership roles within institutions of higher education, including the California State University system, the University of Arizona and the University of California, Davis. In all of her various leadership and teaching positions throughout her career, Dr. Adela de la Torre has endeavored to provide equal access to health and educational opportunities for all students, with a particular focus in improving outreach, recruitment, and retention of highly qualified students from underserved communities.

Dr. de la Torre is a values-driven leader committed to helping create a more balanced and integrated environment for both undergraduate and graduate students, linking their approach to academic success, personal well-being, and societal impact.



Message From the Dean

DR. HALIL GÜVEN

DEAN, SAN DIEGO STATE UNIVERSITY GEORGIA

stakeholders and donors, enables us to create and maintain close ties with the demands of the job market, and pass on expertise to partners in Georgian academia to enhance the quality of education for our next generation. SDSU Georgia has formed a Public Private Partnership Fund (PPPF) to generate resources that make internationally accredited STEM programs affordable for successful and socially vulnerable students in the country. The PPPF was launched at the end of 2016 and has generated more than \$3 million USD to support need-based tuition for SDSU Georgia students.

We pride ourselves in building the most welcoming and friendly environment where students integrate in society, achieve their goals, and thrive in their academic life and career after graduation.

Leadership starts here!



New SDSU Georgia Vice Dean Nugzar Davitashvili at SDSU with students



Dr. Güven with SDSU Associate Dean Asfaw Beyene, Dean Walter Oechel and Distinguished Professor Bill Tong visiting facilities in Tbilisi

In the modern world, where the fastest growing occupations depend on STEM knowledge and skills, increasing the number of high quality scientists and STEM professionals is monumental to economic growth. SDSU came to Georgia four years ago with an objective to provide an American university education in Georgia, focused on STEM disciplines that would improve human capital in the Georgian labor force. This is intended to enhance employment in companies requiring market-driven skills, and to battle the critical shortage of STEM professionals educated to current international standards.

Since 2014, when SDSU Georgia first introduced its STEM programs, interest in STEM fields has grown dramatically among high school graduates. Through nationwide interactions with high school students and the public, SDSU Georgia has successfully communicated the importance of STEM education and increased the awareness of career paths in STEM. We are proud to say that SDSU Georgia programs attract more and more qualified, bright Georgian students each year. This year we will welcome the fourth cohort of students to our internationally accredited, American degree programs in STEM fields.

At SDSU Georgia, we ensure student success by providing students with access to a quality education, state-of-the-art technology and cutting-edge research, as well as various opportunities to visit SDSU home campus for a research or exchange semester. SDSU Georgia strives to make student life an engaging experience by listening to students' needs through the SDSU Georgia Associated Students Board, and by offering the opportunity to form clubs that diversify students' activities beyond academics.

In June 2019, SDSU Georgia will have its first graduates. By joining forces with the local business sector, governments of Georgia and the U.S., and SDSU home campus, we create job and internship opportunities for SDSU Georgia students. In addition, through our new career development center project, we help our students realize their strengths, fine-tune their professional skills and prepare them to serve Georgia and the STEM economy.

SDSU Georgia's Advisory Board, consisting of representatives from private and public organizations,

SDSU GEORGIA ADVISORY BOARD



At the opening and closing of the 2017-2018 academic year, SDSU Georgia held Advisory Board meetings composed of SDSU Georgia and partner university leadership, MCC and MCA representatives, public and private sector partners, and industry leaders.

At the meetings, Advisory Board members advise the SDSU Georgia dean on matters of curriculum, workforce needs, student recruiting and demand, and social and gender equality issues. Board members also advocate for academic programs and serve as partners for providing employment, internship, project mentorship, and guest speaker opportunities for our students.

On September 11, 2017, the Advisory Board meeting was attended by the SDSU Provost and SDSU deans. Members of the Advisory Board met SDSU Georgia students and listened to their presentations on innovative projects.

On May 1, 2018, the Advisory Board meeting was attended by a delegation of deans from SDSU main campus. In addition to the meeting, SDSU Georgia Dean Halil Güven and Executive Director of Civil Development Agency Salome Zurabishvili signed a partnership agreement between SDSU Georgia and UN Global Compact.

sdsu.edu.ge

TOWN HALL MEETINGS

In September 2017 and April 2018 at TSU I Auditorium, SDSU Georgia hosted Student Town Hall meetings with a panel of deans representing SDSU colleges of Arts & Letters, Engineering, and Science, and Chairs representing SDSU departments of Civil, Construction and Environmental Engineering, Electrical and Computer Engineering, and Chemistry and Biochemistry.

The SDSU Georgia Student Town Hall meetings invite the University's student body to submit questions to the panel and listen to comments from the deans about research opportunities for students, the vision behind general education courses, and what to expect from the curriculum at SDSU Georgia. The Town Hall sets the tone for students' academic endeavors at the University.



Women's

Empowerment Discussion

On October 12, 2017, SDSU Georgia students met with Member of the Parliament of Georgia Dimitry Tskitishvili and National Democracy Institute (NDI) Georgia Program Officer Teona Kupunia to discuss gender equality issues and commemorate the International Day of the Girl Child. The discussion was initiated by SDSU Georgia student club "Empower Women" and MCA Georgia. Students discussed women's political and economic empowerment in Georgia, gender-equal legislation and other related issues.





Teona Kupunia and Dimitry Tskitishvili addressing the audience

SDSU GEORGIA

a1

International Education Fair 2018

For the 4th year in a row, SDSU Georgia was on display at International Education Fair Georgia, held at ExpoGeorgia on February 23-24, 2018. SDSU Georgia staff and students engaged with visitors and provided info about academic programs and Aztecs university life. The event, which attracts several thousand attendees annually, is one of the most instructive ways for the public to receive information about educational programs in Georgia and abroad.

SDSU Georgia's participation in the event further strengthens its position as a highly desired commodity on the Georgian education market and also continues its tradition of attracting Georgia's highest performing students.



SDSU Georgia student representatives at the Fair

Chemistry Lab Tour

In March 2018, SDSU Georgia continued its series of laboratory tours for prospective and interested high school students. During the tours, students were introduced to the University's state-of-the-art lab equipment, STEM-based experiments and modern teaching methodologies. The tours, hosted at SDSU Georgia's newly renovated Chemistry/Biochemistry labs, were conducted by members of the American Chemistry Society (ACS) SDSU Georgia Student Chapter.

Chemistry Mini-Symposium

On May 4-5, 2018 at TSU, SDSU Georgia and the American Chemical Society SDSU Georgia Student Chapter co-organized the international minisymposium IMS-2018, titled "Bioactive Compounds, Antimicrobial & Biomedical Products and Materials for Protection of Human and Environment," dedicated to the 100th anniversary of TSU.

The mini-symposium offered professors, researchers and students the opportunity to present reports about their chemistry based research. TSU Rector Giorgi Sharvashidze, SDSU College of Sciences Dean Walter Oechel and SDSU Georgia Chemistry/Biochemistry Department Chair Dr. William Tong opened the minisymposium. Chemical Society of Georgia, chaired by Nodar Lekishvili, and TSU co-organized the minisymposium.

Dr. Tong, SDSU Georgia Dean Dr. Halil Güven, SDSU Georgia Administrative Assistant Salome Kilanava and ACS SDSU Georgia Student Chapter Chair Ani Shalamberidze served on the Local Advisory Board of the mini-symposium. SDSU Georgia professor Dr. Nino Kokiashvili served on the Scientific and Program Committee of the mini-symposium.

In the afternoon of May 5, IMS-2018 was reserved for scientific reports by students of SDSU Georgia. Students Elguja Gojiashvili, Paata Burnadze, Tamar Kupadadze, Levan Lobjanidze, Nika Makasarashvili, Magda Aptsiauri, Dimitri Lashkhi, Giorgi Meshvildishvili, Elene Aslanikashvili, Sandro Mestvirishvili and Ani Rukhadze were selected to present 10 different chemistry based reports for 10 minutes each.



High school students tour the organic chemistry lab



Tamar Maisuradze performs an experiment for students

Scholarship Presentation at

Millennium Innovation Award



On April 12, 2018, SDSU Georgia awarded 12th grade student finalists of the Millennium Innovation Award (MIA) with 50% scholarships to study in the University's internationally accredited STEM programs. The MIA is an annual event conducted by Millenium Challenge Account Georgia that allows young, innovative thinkers to compete with their peers in STEM fields. Teams of students are challenged to develop innovative products which address global and local priorities while simultaneously promoting global sustainability. SDSU Georgia continues to attract the nation's brightest and most talented students through engagement in such events, and regularly seeks to financially support students who plan to continue their educational endeavors at the University.

ABET SYMPOSIUM DELEGATION

In April 2018, a delegation of faculty from SDSU Georgia's partner universities spent ten days in San Diego attending a hands-on ABET training on SDSU campus, and an intensive ABET Symposium and pre-symposium workshop. Their participation was significant for the sustainability aspect of the SDSU program in Georgia, and a vital component of partner universities' advancement toward ABET accreditation, which will allow the institutions to offer internationally accredited degrees in the future. At the close of the training on April 13, the faculty received certificates noting their participation and newly obtained knowledge and skills.

2018 Tbilisi Day in San Diego

On April 25, 2018, a special reception was held at SDSU main campus to celebrate Tbilisi Day in San Diego. At the event, SDSU Georgia student Luka Lomtadze and students participating in the exchange program presented SDSU Georgia achievements, as well as Georgia's culture, tourism potential and history of Tbilisi.

2018 Tbilisi Day, chaired by SDSU Georgia Associate Dean Asfaw Beyene, was the most recent celebration of the deep Tbilisi-San Diego relationship. In April 2017, SDSU hosted a three-day Georgia Days event, focused on raising awareness about Georgia's culture and favorable investment climate, connecting Georgian and American businesses and giving our public and private partners the opportunity to meet with San Diego's leading public and private organizations. In San Diego, every April 25 is Tbilisi Day. Likewise, in Tbilisi, every September 12 is San Diego Day.



2018 Tbilisi Day in San Diego



SDSU Georgia faculty delegation in San Diego

TSU Rector Giorgi Sharvashidze (left), MCC Vice President Cynthia Huger (center) and SDSU Georgia Computer Engineering student Dati Soselia (right) surveying new labs

SDSU Georgia's New Electrical Engineering Labs Visited by High-Level Delegations

In spring of 2018, San Diego State University Georgia, in partnership with Tbilisi State University (TSU), officially opened fully equipped, state-of-the-art electrical engineering facilities at TSU building 11. The 1,700 square meter space includes classrooms, labs for computer and electrical engineering, and work spaces, which are all equipped with latest electrical engineering instruction technology. SDSU Georgia has renovated lab spaces at the TSU building. The design and components of all equipment, classrooms and labs are based on learning space criteria set by SDSU, providing students with the highest quality materials and better preparing them for a successful career in the electrical engineering sphere.

The facilities officially opened on March 6, 2018 and visited by high-level delegations in March and August. MCA Managing Director for Sector Operations Katerina Ntep, MCC Vice President of Administration and Finance and Chief Financial Officer Cynthia Huger, TSU Rector Giorgi Sharvashidze, MCC Country Director Jenner Edelman, MCA CEO Magda Magradze, Deputy Minister of Education and Science of Georgia Aleksandre Tevzadze and other distinguished guests toured the facilities and examined the new electrical engineering equipment, guided by SDSU Georgia students. "These labs are important for both universities because it's necessary that students put theoretical knowledge into practical use," said Ntep.



NEWS

STEM COOKBOOK

On May 24, 2018, SDSU Georgia students Tako Basiashvili and Ani Shalamberidze presented the STEM Cookbook, a U.S. Embassy funded science education publication.

STEM Cookbook explains everyday cooking processes scientifically. From egg sandwiches to chocolate chip cookies to nigiri sushi to fruit tea, STEM Cookbook describes chemical formulas and molecular structures behind 23 different foods, and it provides recipes to make them yourself. STEM Cookbook also contains ten fun and safe experiments for readers to try at home. The book fosters a deeper and broader understanding of science behind our everyday tasks.

Tako and Ani, the project managers of STEM Cookbook, presented the book to attendees from the U.S. Embassy, MCC, MCA, SDSU Georgia and members of the public, and distributed signed copies of the publication. Notable contributors to the STEM Cookbook include NASA astronaut Heidi Piper and MCC Resident Country Director Jenner Edelman, who provided recipes for fruit jam and chocolate chip cookies respectively. SDSU Georgia students designed the STEM Cookbook, and in September 2018, the the book is due to be published in English.

On June 15, 2018 at Knowledge Cafe in Tsnori, Ani and Tako led a day of fun cooking with the STEM Cookbook. The students taught local kids and their grandparents about the chemical processes that happen to various food substances while making sweets. With Ani and Tako's help, children prepared delicious banana ice lollies and chocolate chip cookies, and they gave each child a copy of STEM Cookbook.



Tako Basiashvili presents STEM Cookbook



Children at Tsnori's Knowledge Café cook with STEM Cookbook

SDSU ISCOR students @ SDSU Georgia

SDSU GEORGIA

2018 Job and Internship Fair

On June 7, 2018, SDSU Georgia held its third annual Job and Internship Fair. The key purpose of this event is to connect qualified employers with skilled SDSU Georgia students through job and internship opportunities. Over 65 leading public and private organizations took part in the Fair, and approximately 40% of students found internships and jobs through the Fair.

Next year, the Job and Internship Fair will be organized in alignment with the new SDSU Georgia Career Development Center. "Our goal is to help bridge the gap between student and employee, and help students feel comfortable for their next step after graduation," said Communication lecturer Brianna Quintero, who will head the Center. Opening in the fall of 2018, the Career Development Center will equip SDSU Georgia students with necessary resources to expertly promote themselves as viable employees for the job market.



A student learns about working with Deloitte



Vakho Donadze speaks with Bank of Georgia representative



On June 27, 2018, 27 students of the SDSU International Security and Conflict Resolution (ISCOR) program, and the Women's Studies department, headed by Dr. Huma Ahmed-Ghosh, met with SDSU Georgia Dean Dr. Halil Güven at the SDSU Georgia office. This was the third time ISCOR has visited SDSU Georgia.

In the annual two-week faculty-led summer study abroad program hosted by TSU, ISCOR students attended lectures and seminars conducted by renowned Georgian political scientists and experts. Students also experienced a cultural-educational program, traveling to different regions of Georgia and acquainting themselves with the country's historical and cultural heritage. On May 23, 2018, Dr. Güven also met with a group of students and faculty from Clarkson University as part of their summer study program. This was the second time Clarkson University has visited SDSU Georgia.



PPPF SUCCESS

Over the course of the past academic year, SDSU Georgia continued its cooperation with members of public and private sectors, bolstering support for students of the University's academic programs. A tangible representation of this cooperation is the Public Private Partnership Fund (PPPF), which was formed to provide academic opportunities for students, including those from disadvantaged and socially vulnerable backgrounds.

SDSU Georgia consistently focuses on bridging the gap between students and employment opportunities by creating partnerships with local businesses and organizations. In the past academic year, SDSU Georgia signed memorandums of understanding (MoUs) with a number of new local partners:

Georgian Water and Power (October 13, 2017) Georgian Industrial Group (November 16, 2017) International Education Center (May 4, 2018) Anaklia Development Consortium (June 1, 2018) Gudavadze-Patarkatsishvili Foundation (July 19, 2018)

These MoU's enable the University to provide scholarships, financial support, and student research and other student development opportunities.



Anaklia Development Consortium MoU stakeholders



International Education Center MoU stakeholders exchange signed agreements

Guest Speaker Series

Throughout the past academic year, SDSU Georgia provided students with opportunities to connect with prominent individuals in the public, private and academic sectors.

On December 1, 2017, Mr. Mikheil Nibladze, Head of Energy at Schulze Global Investments in Georgia, met with students to speak about the company's work in Georgia and potential opportunities and internships in the energy sector.

On May 2, 2018, at the Georgian National Museum, SDSU Distinguished Professor of Biology Dr. Walter Oechel presented the lecture, "Ecosystem feedbacks on climate change: From the Arctic to the South Pacific." Dr. Oechel highlighted how climate change and human activity can affect greenhouse gas fluxes from terrestrial and aquatic ecosystems, and thereby impact atmospheric feedback on warming. Dr. Oechel introduced current and recent research in Arctic Alaska, the California chaparral, Indonesia, and coastal waters of California and American Samoa. The lecture was widely attended by students, staff, MCC/MCA representatives and members of the public.

On June 20, 2018, at ISU's Ligamus book house, SDSU Political Science lecturer Dr. James Ingram delivered the lecture, "Is There a Logic to Politics?" The lecture brought together Max Weber's famous "Science as a Vocation" and "Politics as a Vocation" lectures into one synthesis. "The lecture will contend that politics are logical, and that they can thus be subjected to the scientific method, enabling us to ensure that politics works toward the goals that humanity needs to accomplish", noted Dr. Ingram. The lecture was widely attended by students, staff, MCC/MCA representatives and members of the public.



Dr. Walter Oechel presents his research to SDSU Georgia

SDSU Georgia's Luka Lomtadze at



"I believe that this all started in fifth grade, when I wrote my first code. I will never forget the emotion of realizing that I had invented something that would perform tasks much better than a human being," says Luka Lomtadze, referring to his background in computer engineering. The past year has been guite an exciting period for the Kutaisi native and student of SDSU Georgia's Computer Engineering program.

In the fall of 2017, Lomtadze participated in SDSU Georgia's student exchange program, which provides students the opportunity to study for a semester, or a full academic year, in San Diego, at SDSU's main campus. Shortly after arriving in California, Lomtadze decided to apply for Facebook's challenging Software Engineer internship program. "I started programming in fifth grade and instantly fell in love with it. Since then, my utmost goal was to get a job in the world's biggest software companies, and I did my best to bring my skills to the needed level. One of my goals was to work at Facebook, a company that connects the entire world, unites tens of thousands of projects and is a dream workplace for many professional software developers," said Lomtadze.

The internship program is extremely competitive, with a very small percentage of applicants hired. In the rigorous application process, the company tested Lomtadze's technical skills. "I participated in two technical interviews, conducted by Facebook, to test my abilities in finding optimal solutions for software issues. I was asked various technical questions in order for the company to explore the details of my work experience. I finished both interviews before the allocated time was up, and after this step, the only thing remaining was for me to be patient and wait for the results," said Lomtadze.

Lomtadze proved his competency and was invited to intern at Facebook's headquarters in California's Silicon Valley region. Lomtadze is the first SDSU student to hold a position with Facebook, paving the way and setting an example for his peers at SDSU. During the internship, Lomtadze worked alongside some of the most talented software engineers in the field and developed a clearer focus for his future career. "The internship was one of the biggest milestones in my career, and I met lots of smart and amazing people," Lomtadze said. "Working at Facebook gave me great experience in software engineering and increased my motivation to further pursue my goals."



Summer Research Session 2018

Student Dati Soselia at his work desk in San Diego



One of SDSU Georgia's priorities is to provide students with ample practical experience, equipping them with skills to become capable professionals in the job market. This summer, SDSU Georgia financed 12 students to conduct research in a sphere of their professional interest alongside professors at SDSU's main campus.

Vakhtang Donadze and Shota Amashukeli, working with SDSU assistant professor Dr. Baris Aksanli, researched animal activity detection in a natural environment using IoT. "We studied the process of group formation in chimpanzees. A number of chimpanzees will be selected and placed in a new environment - in this case, an island. We want to observe how these chimpanzees interact, socialize and form groups," Donadze and Amashukeli said. "From our side, the team of Dr. Aksanli is responsible for designing a portable tracker that will be equipped on every chimpanzee. We will be able to know when chimpanzees interact with each other and know the specific chimpanzees who interact with each other. This research will give scientists an idea about how groups and collectives are formed in nature."

Ana Lomashvili worked with Dr. Calvin Johnson to analyze nuclear many-body wave functions using group theoretical Casimirs. Lomashvili constructed phase-deformed Casimirs to use them in decomposition of different wave functions. "Usually, wave functions are fragmented, but if the same pattern of fragmentation runs through several different states, then we have quasidynamical symmetries. After decomposition of wave functions, I was using the BIGSTICK shell model to test whether I had quasidynamical symmetries in different states," Lomashvili said. "My five-week session ended with interesting results, and as Dr. Johnson is a truly



supportive professor and the research is computational, I will continue my research from Georgia."

Lana Gaspariani spent the summer working in a computer lab at SDSU on some of Dr. Xiaobai Liu's object detection system projects with his Ph.D students. Gaspariani helped to find the best model for real-time video data processing - adeptly identifying and framing vehicles in conditions of limited processing memory. "I started helping the team in the beginning of May by preparing a group of videos for further processing. The videos, labeled with vehicles and pedestrians, give computers a base to organize real-time video into labeled streaming. Afterwards, two different teams started using the data for training systems," Gaspariani said. "In my case, I had to modify the structure of the data I had, and after that, use it as a foundation for training a Yolo v3, Yolo v2 and Yolo v2 tiny object detection algorithms. This process has shown noticeably different outcomes, and in cases where we needed fast, but not ideally precise outcomes, the Yolo v2 tiny algorithm proved to be pretty much enough."



2018 Summer Research Session participants



The September 2018 San Diego State University Georgia Convocation ceremony marks the fourth year since the establishment of our University. Every year, a new cohort of students, their families, university faculty and staff, representatives of the U.S. and Georgian governments, and representatives of our partner universities gather to celebrate the beginning of newly admitted students' university career.

Convocation serves as a way to instill the University's core institutional values of scholarship, citizenship and leadership. At Convocation, University deans, students and other guests give speeches about the mission and vision of SDSU Georgia and use the opportunity to define what it means to be part of the SDSU Georgia family.

Convocation comes from the word "convocare", which is Latin for "calling together." Convocation is a ritual that signifies the beginning of a university career, bringing new students and their families together with faculty and staff to mark a new beginning. The 2018 San Diego State University Georgia Convocation will be an especially exciting time as the new San Diego State University President, Adela de la Torre, will attend and call the SDSU Georgia community together.



SDSU Georgia 2017 Convocation ceremony (September 11, 2017)



SDSU President Adela de la Torre addresses the SDSU Georgia 2018 Convocation ceremony (August 25, 2018)



New Building at ISU

On August 7, 2017, representatives of SDSU Georgia, Ilia State University, Ministry of Education and Science of Georgia, MCC and MCA came together to hold the groundbreaking ceremony of a new academic building on the campus of ISU. The four-story, 4,890 square meter building, located in Tbilisi's Vake district, is an important component of the partnership between SDSU Georgia and Ilia State University, and is funded within the framework of MCC's Georgia Compact II.

The state-of-the-art facilities will host electrical and civil engineering labs, classrooms and common areas. Though the space will predominantly serve SDSU Georgia and ISU students studying in the Electrical Engineering and Civil Engineering faculties, SDSU Georgia also plans to designate an area for a future academic advising department. "I am sure that this novel project will be very important to our students, and I am also sure that it will be useful for the development of the Georgian economy," said ISU Rector Dr. Giga Zedania.

On January 29, 2018, SDSU Georgia held the building's "topping out ceremony," a common feature of the American construction industry, which indicates a building attaining its highest structural reach. Former Minister of Education of Georgia Mikheil Chkhenkeli, MCC Deputy Vice President for Sector Operations Lona Stoll, ISU Rector Dr. Giga Zedania, Tbilisi State University Rector Dr. Gia Sharvashidze and Georgia Technical University Rector Dr. Archil Prangishvili

attended the event. The topping out ceremony is characterized by a component of the top of the building being raised up with a crane and decorated with flags, to symbolize the building becoming an official entity. In this case, SDSU Georgia decorated a structural steel beam with Georgian and American flags in recognition of the cooperative nature of the project. Construction is ongoing and the building will begin operations in the spring semester of the 2018-2019 academic year.



ISU Rector Dr. Giga Zedania speaks about the benefits of the new educational spaces and labs

NMR Machine Comes to SDSU Georgia

Starting in fall 2018, SDSU Georgia Chemistry/Biochemistry students will have exclusive access to a unique technology: the Nuclear Magnetic Resonance (NMR) magnet system. Delivered to SDSU Georgia from Switzerland and housed at TSU Building II, the machine was customized specifically for the SDSU Georgia Chemistry/Biochemistry program. This technology is just one of around 40 of its type in the world and the only one in the Caucasus region.

NMR is a unique spectroscopic machine that is used to study the structure of molecules, the kinetics and dynamics of molecules and the composition of biological and synthetic solutions or composites. The size of the molecules analyzed can range from a small organic molecule or metabolite, all the way up to proteins of tens of kilodaltons in molecular weight. No other technique gives such a detailed spectrum of carbon material data.

So why NMR at SDSU Georgia? Given the many variations of its application in chemistry and biochemistry research, it is highly advantageous for SDSU Georgia students to gain practical experience with the machine, uniquely in Georgia. Prior to the arrival of NMR, all such analytical molecular studies were not possible in university laboratories, and no such technology was available in the country. With the installation of NMR in Georgia, SDSU Georgia students can analyze substances right in their own labs, without relying on external resources.

Information gained from NMR readings is important for every step of any chemical synthesis or biological analysis. One practical use of the machine is to assess data in the development of pharmaceutical drugs. Testing with NMR is crucial to every step of the drug development process, to ensure that chemical reactions are carried out as desired. The magnet system is also used to better study intermolecular forces in biological chemistry. Outside of formal university instruction, NMR has a range of practical uses related to chemistry/biochemistry, including forensic science, food technology, soil science and medicine.

Through the installation of NMR, SDSU Georgia continues to provide students with access to the latest STEM technology, supporting the mission of offering the highest quality STEM education in Georgia.







About ABET and ACS

What is ABET?

ABET (Accreditation Board for Engineering and Technology) is a form of quality assurance for programs in the areas of applied and natural science, computing, engineering, and engineering technology, according to the organization. ABET accreditation is recognized globally as evidence that a program meets the standards set by its technical profession. ABET accreditation applies to programs and requires compliance with the criteria, policies, and procedures determined by the Board.

What role does ABET play in SDSU Georgia programs?

All ABET associated SDSU Georgia programs are ABET accredited. Accreditation is proof that an academic program has met essential standards to produce graduates ready to enter the STEM workforce. Graduates from SDSU Georgia's ABET-accredited programs have a solid educational foundation and will be leading the way in emerging technologies and ensuring the welfare of the public. SDSU Georgia works closely with its partner universities to facilitate the accreditation of selected independent STEM Bachelor of Science programs at these institutions. In addition, ABET accreditation opens SDSU Georgia to increased participation in student exchange programs. SDSU Georgia Dean Güven said: "U.S. engineering students are often unable to participate in exchange programs, because not all engineering and technology programs abroad are ABET accredited. SDSU Georgia's ABET accredited Civil/Construction Engineering, Computer Engineering, Electrical Engineering and Computer Science programs allow students a unique cultural experience in Tbilisi while keeping them on track with their required curricula."



SDSU Georgia Associate Dean Asfaw Beyene awards participation certificate to Alexander Bagration-Davitashvili of GTU

Why did SDSU Georgia faculty attend the 2018 ABET Symposium?

On April 12-13, the 2018 ABET Symposium, held in San Diego, hosted sessions about accreditation, assessment and the global exchange of best practices in STEM education. 15 representatives of SDSU Georgia partner institutions attended the symposium to be trained in ABET and WASC (Western Association of Schools and Colleges) accreditation. SDSU Georgia faculty participants became familiar with ABET long and short-term action items and the process of ABET review and continuous improvement. The faculty also toured SDSU main campus facilities and met with SDSU faculty.



What is the American Chemical Society?

The American Chemical Society (ACS) is the world's largest scientific society with a mission to advance the broader chemistry enterprise and its practitioners for the benefit of the public, according to the organization. ACS promotes excellence in chemistry education for undergraduate students through approval of baccalaureate chemistry programs. ACS-approved programs offer a broad-based and rigorous chemistry education that gives students intellectual, experimental, and communication skills to become effective scientific professionals. The Chemistry/Biochemistry SDSU Georgia program is ACS certified.

What is the relationship between ACS and SDSU Georgia?

The SDSU Georgia chapter of ACS was established in December 2015 with the assistance of San Diego State University main campus. Since its establishment, officers of the ACS SDSU Georgia chapter have actively promoted chemistry and biochemistry in Georgia. This year, the chapter traveled to New Orleans to attend the ACS annual meeting. SDSU Georgia is also helping TSU to acquire ACS certification for an English language Chemistry/Biochemistry program, expected by 2021. Within the framework of the certification, faculty members at partner universities will become members of the ACS SDSU Georgia chapter.









ACADEMIES

First impressions shape perspective of a subject for the future. For many Georgian pupils, their first contact with STEM subjects is strictly theoretical. Often, these young people lose interest in STEM fields because it is difficult to attain practical experience in those subjects at school. San Diego State University's presence in Georgia is met with a unique opportunity to shape young people's minds by building interest around STEM fields and provide a hands-on and interactive approach. SDSU Georgia recruits students in a unique way: every year, SDSU Georgia staff travel to the regions of Georgia to conduct the University's STEM Academies. STEM Academies are day-long workshops for curious pupils to learn more about SDSU Georgia's academic programs, take part in entertaining practical experiments and learn about future career opportunities in STEM fields.

In fall and winter 2017, SDSU Georgia went to community centers in Akhaltsikhe, Batumi, Kutaisi, Tbilisi and Zugdidi to talk to interested, soon-to-graduate high school students. SDSU Georgia deans and staff gave presentations, raised pupils' awareness about STEM subjects and prepared them for success at university. SDSU Georgia students from various programs conducted chemistry experiments and competitive STEM based games for pupils. Professors from SDSU main campus delivered lectures to prospective school students. All STEM Academies participants received a special certificate from SDSU Georgia. The December 2017 STEM Academy at Tech Park Georgia, held in cooperation with Georgia's Innovation and Technology Agency (GITA), featured a lecture by former NASA astronaut Heide Piper.









AMERICAN CHEMICAL SOCIETY STUDENT CHAPTER

The American Chemical Society (ACS) SDSU Georgia Student Chapter was established in December 2015 with the aim of promoting chemistry in Georgian educational institutions and the community at large. Since its founding, ACS members have been actively engaged in science and education fairs as well as U.S. Embassy, U.S. Chamber of Commerce and American Corner events in Georgia. The Chapter works with the general public and youth to increase awareness of the benefits of a career in chemistry and biochemistry. The Chapter also focuses on building interest in STEM by hosting chemistry lab tours for interested high school students, introducing them to state-of-the-art lab equipment, handson experiments and modern teaching methodology.

ACS SDSU Georgia Student Chapter members have gained useful presentation and leadership skills through promoting chemistry and biochemistry, and have also enhanced their academic experience by participating in conferences abroad. On March 18-22, 2018, Chapter members Nini Shatirishvili, Ani Shalamberidze and Elguja Gojiashvili attended an ACS National Meeting in New Orleans, Louisiana. At the event, the students took part in workshops about career development and toured exhibitions of graduate schools and companies in the chemistry field.



Ani Shalamberidze and Nini Shatirishvili at the ACS National Meeting



Ani Shalamberidze enjoying New Orleans

ASSOCIATED STUDENTS BOARD CREATED

San Diego State University Georgia's student body voted in its first ever Associated Students Board of Directors on December 13, 2017. SDSU Georgia formed the Board to better advocate for student interests and to build a stronger line of communication between students and University faculty.

In addition, Associated Students helps to create and promote social, recreational and educational programs, build academic integrity and provide leadership opportunities for students. "I truly believe that AS Board is an absolutely necessary group who will make significant improvements and changes in SDSU Georgia student life," said AS SDSU Georgia President Vakho Donadze. "We are the ones who make student voices heard."

In its first semester of operations, the Board prioritized providing extracurricular educational opportunities for students, specifically in the sphere of research. As a result, students from various academic programs learned about research opportunities from visiting SDSU professors, which will enable them to pursue valuable practical experiences in the future. For the 2018-2019 academic year, the Board is formulating additional priorities to engage students in University life, promote academic integrity and increase students' motivation for developing innovative projects.

SDSU Georgia's AS Board of Directors is composed of: Vakho Donadze, President Mariam Basilaia, Vice President Sandro Gogia, Secretary Luka Tatarashvili, Dean's Office Representative Tamar Maisuradze, Program Rep for Chemistry/Biochemistry Dachi Gogitidze, Program Rep for Computer Engineering Lela Tvaliashvili, Program Rep for Computer Science Erekle Jmukhadze, Program Rep for Electrical Engineering



The inaugural SDSU Georgia Associated Students Board

STUDENT ACHIEVEMENTS

HACKATHONS

A student hackathon is a competitive event in which teams of students work together for one to three days to create a hardware or software invention based on the given concept or theme. At the end of a hackathon, often winners are decided and awarded. Over the past academic year, SDSU Georgia students organized several hackathons for students of all Georgian universities. SDSU Georgia students also participated in hackathons and many of them won and received prizes for their creations.

Space Hackathon

The "Space Hackathon" on December 1-3, 2017, hosted at Fabrika and organized by Democracy Lab and the U.S. Embassy, offered our students the chance to create an innovative project in 30 hours to simplify humanity's potential inhabitation of Mars. Former NASA astronaut Heide Piper attended the Hackathon and awarded the winners. 15 teams participated in the Space Hackathon, and teams with SDSU Georgia students won 1st, 2nd and 3rd place. Davit Khutsishvili won 1st place with project "Cyano Circulation", Nika Alavidze and Kesi Katsitadze took 2nd place with project "SP Charge", and Sandro Begiashvili took 3rd place with project "Marc Dam."



SDSU Georgia student Davit Khutsishvili at work on his project



Students Nika Alavidze and Kesi Katsitadze present their innovation

Hackathon for Kristen

Kristen Hockel is a California resident who suffers from myelopathy, a rare weakness of both legs caused by hyperextension of the back. At the time of the hackathon, Kristen was expecting a child and needed a stroller, but because of her wheelchair, it was very difficult to use ordinary strollers. On January 17-19, 2018, SDSU Georgia students organized a hackathon to design a special stroller for Kristen and other women who have similar needs.

Students came up with innovative ideas to support Kristen and presented projects to her and members of an evaluation committee. The winners, Nika Alavidze and Kesi Katsitadze, designed "IZI Chair," a carbon-composite wheelchair with a modular baby basket with safety straps. All suitable mechanisms designed at this hackathon are possibly lifechanging for Kristen and other future moms in a wheelchair.



STUDENT ACHIEVEMENTS

HACKATHONS

Intellectual Property Rights Hackathon

On December 15-17, 2017, National Intellectual Property Center of Georgia Sakpatenti organized the "I Respect Intellectual Property Rights" hackathon, in which participants developed innovative projects to protect intellectual property rights in Georgia. Mamuka Anjaparidze, Giorgi Basiashvili and Luka Chkhetiani took 2nd place with project "IP Bot." The bot utilizes artificial intelligence to respond to individuals' questions on behalf of Sakpatenti about the process of securing intellectual property. Nika Alavidze, Giorgi Kviria and Lasha Rukhadze took 3rd place with a mobile application that enables customers to assess the capacity of their product's intellectual property.

Earth Day Hackathon

On April 21-22, 2018 at American Corner Tbilisi, SDSU Georgia students organized a special hackathon in celebration of Earth Day, with support from the U.S. Embassy. The hackathon was open for participants in 10th, 11th and 12th grades, many of whom are interested in computer programming and engineering careers. Participants had eight hours to come up with innovative solutions to air pollution problems and greenhouse gas emissions. Winning teams were awarded with special prizes - professional air quality meters.

SDSU Georgia signs United Nations Global Compact



In the spirit of Earth Day, SDSU Georgia signed the UN Global Compact, implementing environmental and other corporate sustainability principles into its operations (May 1, 2018)

Google Hash Code 2018

On March 1, 2018, at the National Science Library of Georgia, SDSU Georgia students on team "SYSTEMCorp" organized a hub of Google Hash Code, an international team programming competition for students and professionals. SDSU Georgia students have supervised the Georgia hub of the contest for three years in a row. This year, the Google Hash Code qualifying round required teams to write a program that assigns self-driving cars to requested rides as efficiently as possible, so that riders start and end their rides on time. Each team could submit as many solutions as they liked, and a live scoreboard let them know how they compared with the competition. Over the span of 4 hours, students calculated the provided engineering case scenario. This year, among the students who registered in the Georgia hub, 50% of the participants were female.



Earth Day Hackathon competitors design innovative solutions



STUDENT ACHIEVEMENTS

SDSU Georgia International and Exchange Students

Since its inception, SDSU Georgia has created a welcoming and fruitful academic environment for international and exchange students. Today, the University has 16 international students who hail from Azerbaijan, Iran, Israel, Kazakhstan, Turkey, Ukraine and the United States.

Hanieh Moein, a third-year Computer Engineering student, grew up in Shiraz, Iran and moved to Tbilisi five years ago with her family. "While studying in high school, I was introduced to SDSU Georgia through a friend who is also an international student at the university," says Moein. "Staying in Georgia while studying for a U.S. degree felt like a golden opportunity, and today I definitely feel that I made the right choice."

For the fall 2018 semester, the University will also host 9 exchange students from SDSU's main campus. Studying abroad in Tbilisi provides SDSU students a unique cultural opportunity and ability to continue the same curriculum as in San Diego. "As an Engineering student, I'm excited about staying on track with my education in Georgia," said SDSU student Daniel Murillo. "I will be able to take the classes I need in Tbilisi, and I am looking forward to a semester immersed in a new culture and life experiences."

SDSU Georgia looks to continue welcoming SDSU exchange students in the future and offer valuable external education opportunities.



Fall 2018 SDSU exchange students at SDSU Georgia

2018 WiSci Camp

On August 12-25, 2018, the Women in Science ("WiSci") camp was held in Georgia for the first time. 100 high school girls from Georgia, Armenia, Azerbaijan and the United States came together to enhance their science, technology, engineering, arts, and mathematics (STEAM) skills, develop leadership potential and build camaraderie and networks, with the goal of propelling them to new opportunities. WiSci camp aims to bridge the gender gap within STEAM by providing access to educational tools, mentorship opportunities and leadership training. During the two-week camp, participants learned about mobile application development, coding, microbiology and a variety of other STEAM related fields, and were able to put theoretical knowledge into practice through team projects.

The camp was hosted by the U.S. Department of State's Office of Global Partnerships, Millennium Challenge Corporation, Millennium Challenge Account Georgia and Girl Up initiative. Seven SDSU Georgia students were selected as counselors to help with camp organization and share their experience with campers. "I will never forget the emotions when I entered WiSci camp. I've worked among the best of the best, top companies like Intel, Google and Microsoft," said Nina Mikadze, fourth-year student and WiSci camp counselor. "I was convinced that participation in the camp would change me as a person and expand my views, and that is exactly what it did for me," said Mikadze. Third-year student Tako Kerdikoshvili also served as a camp counselor. "Within the project we had access to a huge modern technology base," said Kerdikoshvili. For me, simulations conducted with the representatives of the American microbiology community were the most exciting experiences."



2018 WiSci camp participants developing a presentation



MONTEZUMA TREASURE HUNT



Fun at SDSU Georgia continues! In September 2017, SDSU Georgia sophomore and junior students welcomed freshmen with a special game at the TSU library building. Newly admitted students had to find Montezuma's legendary treasure to make the world believe that "Aztec spirit" has found its place in the modern day era. The event increased awareness of Aztec culture and its connection to San Diego State University.









To celebrate the beginning of the past academic year, SDSU Georgia students, faculty and staff gathered at Lisi Lake Lounge for Aztec Night. An evening of music, games, food and networking brought excitement and energy to students beginning their studies for the year.











A student shows off Christmas stage decorations

In December 2017, SDSU Georgia students Kesi Katsitadze and Ana Tomash organized our annual Christmas Concert. Members of the SDSU Georgia Art Club performed pop, rock and classical music, along with a live art performance. Students created a positive mood for their peers and prepared for final exams with a holiday spirit!



Mariam Kantaria paints a tree branch while Luka Vadachkoriya plays a setlist on the piano





Public Speaking Showcase

On May 22, 2018 at Rooms Hotel Tbilisi, SDSU Georgia held its third annual Public Speaking Showcase. The evening of presentations showcased selected students' research, public speaking, and professional presentation skills. The event began with remarks by SDSU Georgia Dean Halil Güven and representatives of MCA/MCC. The showcase opened with a presentation by SDSU communication lecturer Brianna Quintero, titled "Diversity in STEM", which highlighted the benefits of inclusiveness in STEM fields.

Speeches presented by SDSU Georgia communication course students were:

Nikoloz Gabunia – GMO Debate Davit Khutsishvili – Cyber Security Sonia Goetschius – Women in STEM Guga Kupradze – Campaign Promises Natia Inadze – Inclusive Education

Mariam Kantaria – Monologue as Mexican painter Frida Kahlo





Student participants engaged in a peer's presentation



Student Nikoloz Gabunia speaks to the audience about GMO's



SDSU Georgia Communication lecturers and students display their certificates

Science and Innovation Festival + ISU Science Picnic

Students preparing a chemical reaction for the festival



On September 24, 2017, SDSU Georgia students participated in a Science and Innovation Festival initiated by the Ministry of Education and Science. SDSU Georgia students performed cool science experiments for kids and presented innovative projects that they developed.



Bananas transformed into piano keys!

Flood Site Field Trip + GWP Tour

On April 14, 2018, SDSU Georgia professor Michael Saunders guided a student tour along the Vere River ravine, the site of the 2015 Tbilisi flooding that caused numerous casualties and extensive damage in city territories that are now under reconstruction. The trip showed SDSU Georgia students a first-hand application of how construction engineering is utilized to alleviate environmental issues.

On July 6, 2018, Georgian Water and Power (GWP) organized a special tour for SDSU Georgia students to the company's facilities and study center. Students listened to a special presentation from GWP employees about the company and learned more about their student internship program and employment opportunities. The event was organized within the framework of the Memorandum of Understanding signed between GWP and SDSU Georgia.



An official explains the cause of the Vere River flood



Students look over a new barrier at the flood site



A GWP rep shows students the company's facilities

Science and Innovation Festival + ISU Science Picnic

On September 30, 2017, SDSU Georgia students' knowledge and talent were again on display at Ilia State University's annual Science Picnic, held at Vake Park. Students creatively and energetically represented the university's programs by demonstrating various technologies and chemical reactions for event participants.



Student Givi Kalandia explains a chemical reaction



A boy controls a Sphero toy through a mobile app

HELLO FROM THE SDSU GEORGIA TEAM!



Back row, left to right:

Ilia Khazaradze, Lado Kiknadze, Giorgi Aleksidze, Daniel Williams

Middle row, left to right:

Michael Saunders, Nugzar Davitashvili, Halil Güven, Irakli Vachinadze, Giga Gotsiridze, Asmati Naskidashvili, Anna Shakhnazarova, Gvantsa Kheladze, Nini Pantsulaia, Sandro Tsirekidze

Front row, left to right:

Ana Nizharadze, Konstantin Samoilov, Ketevan Chubabria, Elene Aladashvili, Salome Kilanava, Anna Tonikyan, Brianna Quintero

Not pictured:

Giorgi Chaduneli, Jim Frankenfield, Julie Kapanadze, Marina Purtskhvanidze, Gary Usanetashvili











5 Kostava Str, Tbilisi, 0108, Georgia sdsu.edu.ge | +995 (32) 2 311 611

f SDSU.georgia osdsu_georgia

 ${ \begin{tabular}{l} \end{tabular} in fogeorgia@mail.sdsu.edu \end{tabular} }$