THE NOVA HERALD

Volume 10 **www.schoolnova.org/Nova/Herald** **2023**

IN THIS ISSUE

SCHOOLNOVA:
YESTERDAY, TODAY AND TOMORROW

by Marina Polonskaia, Ph.D., SchoolNova Principal, and Executive Director.

Dear SchoolNova Community,

It has been three years since our last issue of Nova Herald, our annual publication traditionally released on the day of the International Math Kangaroo in March. The past few years have been challenging, and due to the COVID-19 pandemic, many events were canceled or moved online, including an International Math Kangaroo competition. I am thrilled that Nova Herald is back after a 3-years break in the publication.
During these years, we published NovaNews, a Newsletter reporting the highlights of school events and information about recent activities. I want to thank Anya Cartwright, who prepared and compiled every Newsletter.

What has happened over these three years? First and foremost, we developed our online learning platform, which has become an integral part of our program. This platform allows students to enroll in different classes and clubs, engage with their peers and instructors, and participate in online discussions and activities. This has enabled us to reach students nationwide and make our programs accessible to a broader community of learners.

We have continued to provide exceptional math and science education to motivated students. Our program has expanded to include new computer science, chemistry, advanced mathematics, and physics courses and clubs. We also started offering foreign languages and visual arts courses for younger children.

In addition to academic programs, we have continued offering various extracurricular activities and events. SchoolNova hosts all major National and NY State math and physics Olympiads, including International Math Kangaroo.

Our students continue participating in the National French contest - Le Grand Concours, even after the American Association of French teachers moved it online.

All of that would be impossible to achieve without help and support from SchoolNova's families, students, and staff. I want to express my gratitude to all who helped make SchoolNova the remarkable program it is today.

THE EVENTS WE MISS:

Many of you probably noticed that some of our extracurricular events have not yet returned after the Covid. We plan to bring back our Science and Math Festival and CaféNova next year.
We also want to bring back our cultural events, particularly the beloved Winter Holiday Party. SchoolNova has many students, staff, and faculty from both Ukraine and Russia, and, therefore, we paused all cultural activities until the end of this inhuman war against Ukraine. Many of us have been providing help and support to the Ukrainian people from the first days of the war, and we hope that the world together will soon find a way to stop the Russian invasion.

• *continue reading on Page 8*

SCHOOLNOVA: EXPERIENCE BEYOND SUNDAYS

By David Frenklakh, Physics Teacher

David Frenklakh
SchoolNova Physics Teacher since 2020

Advanced Physics Club (APC) is now one of the SchoolNova traditions. It was launched in 2018 as a place for students to solve challenging physics problems and prepare for physics competitions while surrounded by peers equally interested in physics. The club went online in 2020, opened its doors to students from any location, and unlike many other activities, it has remained offline since. This allowed us to expand the geography of our participants beyond the vicinity of Stony Brook. Over the years, we have had students joining us from New Jersey, Massachusetts, Virginia, North Carolina, and even Egypt and India (regardless of the time difference!).

Sometimes I ask myself if, during my high school years, I would have been willing to give up an hour and a half in the middle of every Sunday to devote it to a physics club. Of course, I hope the answer would have been "yes" – for what it's worth, I gave up an hour and a half of sleep on Saturday mornings to participate in a similar club, and it was totally worth it. Our goal is to make the students feel the same way about our lessons: less as a sacrifice, but more as a joyful and productive experience.

A fun way to stress test one's knowledge of physics is to participate in a competition, such as "F=ma" or "PhysicsBowl," both of which are coordinated by the American Association of Physics Teachers (AAPT). SchoolNova allows any student to take these tests free of charge on the campus of Stony Brook University. F=ma took place on February 9th, and PhysicsBowl will be offered on March 29th. There are still a few spots left for the PhysicsBowl exam, so if you are interested in participating, write to frenklakh@schoolnova.org before all the spots are taken. APC participants take these tests as well, and this year, some came very close to qualifying for the next stage of F=ma (for which only about the top 250 students nationwide are selected).

The club is run jointly by three instructors: Sasha Abanov, David Frenklakh, and Zohar Komargodski. We all had our share of Physics Olympiads experience in our youth - each of us have been a member of the International Physics Olympiad teams from different countries. Sasha and Zohar are also world-renowned experts in their fields.

APC is sponsored by SchoolNova and the Simons Center for Geometry and Physics to make it entirely free of charge for all its word to those interested in this learning opportunity. More information about the club, including examples of problems we are discussing, can be found on the APC webpage: participants, regardless of whether they take any other classes at SchoolNova.

The club constantly accepts new members, so feel free to spread the word to those interested in this learning opportunity. More information about the club, including examples of problems we are discussing, can be found on the APC webpage:

If you have any questions about the club or want to sign up, don't hesitate to contact the organizers at apc@schoolnova.org.
We look forward to welcoming new enthusiastic students to our club!

By Alexander Kirillov, Ph.D. Professor of Department of Mathematics, SchoolNova Math teacher

American Mathematics Competitions is the oldest (began in 1950) and most prestigious mathematics competition for high schools and middle schools in the US. SchoolNova participates in the competition since 2005.
This year, as usual, SchoolNova, in collaboration with the Department of Mathematics of SBU, hosted American Math Contest (AMC) competitions: AMC 10/12B in November and AMC 8 in January. These competitions were open and free to everyone, not just SchoolNova students (SchoolNova covers all expenses).
We had 20 students taking AMC10/12 and 12 taking AMC 8.
AMC is the first level of math contests run by the Math Association of America; students who perform well in AMC10/12 can advance to the next level, invitational competitions, potentially going all the way to the US team at the International Math Olympiad. Four of the students who took AMC10/12 at Stony Brook advanced to AIME - this is a great result!

Many of the students taking the AMC contest attend math classes and math clubs at SchoolNova, including Advanced Math Problem-Solving, where we solve more challenging problems, but also much more fun, than the standard math curriculum - problems about Fibonacci numbers and graphs theory, about wizards and hats and math games.

Alexander Kirillov
SchoolNova Math Teacher since 2004

MAA AMC
American Mathematics Competitions

Check out some of the problems we do on the class page!

Special thanks to the Simons Center for Geometry and Physics and to the Departments of Physics & Astronomy and Mathematics for providing space for SchoolNova's competitions and special events.

FROM SOMEONE WHO KNOWS

By Andrew Mata, Computer Science Teacher

SchoolNova has been an integral part of my life, going back all the way to my early childhood. Starting in 2006, I followed my sisters' example by starting Math 3 at the enrichment program then named SchoolPlus. My teacher, Andrey Antonenko, who taught me math for the next decade, had a large influence on how I perceive math. His patience and ability to communicate effectively with young students have no comparison. I was an easily distracted (and still am) kid, but he was not only able to keep me engaged, but also foster in me an interest in math. I was able to pursue mathematics as a major in college, in large part to Andrey, for which I am forever thankful. When physics classes were introduced at SchoolNova, I was lucky to be taught by Sergey Suchalkin, who kept us engaged with elaborate experiments.

Whether we used differently shaped inclined surfaces to show the conservation of energy or a Van de Graaff generator to make our hair stand on its end, Sergey showed us the joy of learning how our world works.

When the TA program was introduced in 2015, I was excited to become a TA for Math 8, taught by Helmut Strey then. My responsibilities were small at first, helping out with grading homework or giving hints during math battles. However, a turning point came when Helmut had to miss a particular class and asked if I could substitute. As a 16-year-old, this was a big responsibility, and I was nervous. However, the experience was much more fun than I had expected. I knew from that point forward I wanted to be a teacher in the future.

After I left for college and became busy with school, I couldn't stay involved with SchoolNova for the next few years. This changed, however, when Marina, over the previous summer, asked me if I would be interested in teaching computer science classes for the upcoming year.

Andrew Mata
SchoolNova Computer Science Teacher since 2022

It was especially intriguing to me because I am currently doing my Ph.D. in CS and want to nurture that passion in others. My teaching experiences have so far been great, although, I'm continuously learning. Regardless, I'll always try to emulate my SchoolNova teachers and inspire the next generation of students, who I see aren't very different from myself.

A JOURNEY TO BE PROUD OF

By Marc David Nichitiu, SchoolNova Teaching Assistant

As a first-generation American, I discovered early that we could find a common tongue in mathematics even when language barriers separate us. My mother and grandmother kindled my passion for science and enrolled me in SchoolNova in third grade.

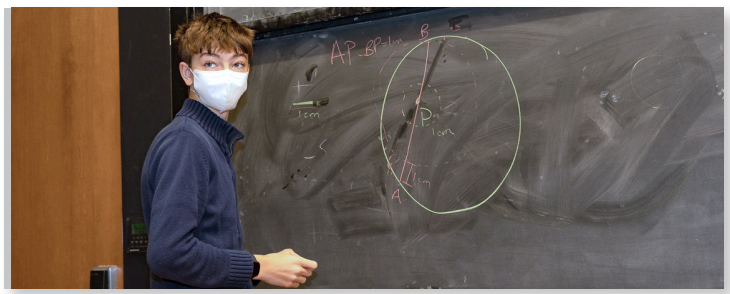
I started with Math 3, working my way up to Math 10 and branching to French, Physics, and Chemistry classes and the Advanced Physics Club, where I worked with Profs. Litvintsev, Suchalkin, and Abanov. Those classes nourished my passion for physics and the mathematics behind it.

Complementary to my own scientific endeavors, I followed in my teachers' footsteps almost ten years later as a volunteer Math 9 and Math 7 teaching assistant at SchoolNova and as a mentor for FLL Robotics Club, giving back to the community that inspired me.

Unexpectedly, being a mentor and TA bettered my knowledge by having to explain seemingly taken-for-granted notions to peers and students.

Working at SchoolNova alongside world-class professors and fellow TAs, I soon realized that I joined a tight-knit community of curious scholars with whom I created long-life bonds and who continuously inspire me to persevere. As an avid stargazer and then a robotics tinkerer, I co-founded my high school's Science Olympiad (SO) Team and joined the school's robotics team. I've earned several medals at Astronomy SO and regional champion titles at FTC Robotics competitions, with a run-up to the World Championship of 2022.

continue reading on pages 4-5



continued from page 3. by Marc David Nichitiu

Through my Physics classes, I got closer to the fundamental principles powering the universe and embarked on a quest to explore high-energy astrophysics. Pushing myself beyond AP classes, I first explored the University of Chicago's course on the Physics of Stars, which taught me about stellar structure and evolution towards extreme phenomena. Next, Vanderbilt University's Primer in Quantum Mechanics introduced me to the probabilistic interpretation of wave-functions and principles of neutron scattering. Eager for hands-on experience, I analyzed star clusters' metallicity and age, and then I self-studied solar dynamics using images of free-electron scattered K-corona light, dust-scattered F-corona light, and background starlight from NASA's STEREO spacecraft.

Looking forward to true immersion in a research laboratory in my junior summer, I applied to Brookhaven National Laboratory's High-School Research Program last summer. Through the program, I was matched to work with Prof. Zaliznyak, who is also a long time SchoolNova math teacher, on a project involving neutron scattering of superfluid Helium-4.

In January 2023, Society for Science (the Society) announced the 300 scholars nationwide in the Regeneron Science Talent Search 2023. The scholars were each awarded $2,000 and also awarded $2,000 for their school.

One of these students is Schoolnova's current TA and former student – Marc David Nichitiu, who was mentored by Igor Zaliznyak, long-time SchoolNova faculty.

Congratulations!

Superfluidity is a special state of matter that results in Helium from cooling below the boiling temperature down to 2.2 K, at which the liquid loses all viscosity and internal friction, enabling astonishing properties such as fountain-like creeping up the walls of containers and powering thermo-mechanical pumps in space.

Collective quantum phenomena such as magnetism, superfluidity, and superconductivity have been pre-eminent themes of condensed-matter physics. Neutrons are impervious to the Coulomb interaction, so they penetrate deeply into most materials, making neutron scattering a tool often used to provide unique insights into the microscopic origin of numerous physics phenomena. Various methods exist; in our setup, neutrons with specific initial energy and momentum are bombarded onto a sample of superfluid Helium at a specific temperature and pressure. The detector housing the sample then measures the intensity of neutrons for each momentum and kinetic energy value.

Feynman, Pitaevskii, and Bogolyubov's theories predict the nature of interactions between the pockets of condensed superfluid and neutrons bombarded have been published since the 1950s. Yet, no detailed experimental evidence for these predictions has been collected and thoroughly analyzed to verify all aspects of the theory. In the 1950s, Feynman considered some of the atoms as effectively moving in cages inside a superfluid and having an increased mass on account of the fluid backflow needed to fill the space an atom left behind. At the same time, Bogolyubov and Pitaevskii provided a mathematical description, which can formalize Feynman's picture. We analyzed the experimental data of neutron scattering from superfluid Helium obtained at the NIST NCNR Disk Chopper Spectrometer (DCS) using Bogolyubov and Pitaevskii's formulas applied to Feynman's physical picture.

HIGH SCHOOL RESEARCH PROJECT: QUASI-PARTICLES IN SUPERFLUID LIQUID HELIUM

By Igor Zaliznyak, Ph.D., Scientist, BNL, SN Math Teacher since 2011

While liquids are much more abundant on Earth than solids (think of an Ocean), their behaviors are much less understood. This is because atoms and molecules in a liquid are in a state of constant motion, all the time changing their positions. As a result, finding their trajectories poses essentially an unsurmountable challenge.

The situation is different in solids, where atomic constituents never move too far away from their average positions, effectuating some sort of vibrations whose energy is a measure of the stored heat, i.e. the temperature of the solid. In a crystalline solid, such vibrations exist in the form of specific modes where atoms throughout the entire crystal move in synchrony, forming a wave called phonon. These phonon waves carry the energy and the momentum of sound in a solid. Like particles in the Universe, phonons are the elementary carriers of energy and momentum quanta in a quasi-Universe inside a crystal, and so are called quasi-particles. Similar to the familiar relation, E = mv 2 /2 = p 2 /2m, which relates energy and momentum of Newtonian particles, quasi-particles also have unique energy-momentum relationship – such as shown in the Figure for the case of superfluid helium (see below), which we studied with Marc Nichitiu: for each momentum on the X-axis, there is a unique energy on the Y-axis. Knowing this relationship, one can predict behaviors of solids – strength, thermal properties, and other things needed for practical uses.

In normal liquids, phonons exist only at sufficiently low energies, E (or sound frequencies, n, related to E through E=hn, where h is the Planck constant) and long wavelength; this is the familiar sound that you might hear in water and which fish and sea animals use to communicate.

In normal liquids, phonons exist only at sufficiently low energies, E (or sound frequencies, n, related to E through E=hn, where h is the Planck constant) and long wavelength; this is the familiar sound that you might hear in water and which fish and sea animals use to communicate.

As frequency increases towards ultrasound and higher and the wavelength decreases towards atomic limit, sound waves begin to get damped and ultimately disappear altogether: chaotic motion of molecules in the liquid prevails. Without well-defined quasiparticles, thermal energy is stored in these chaotic atomic/molecular motions and, consequently, predicting behaviors of liquids is very difficult.

However, there are rare exceptions to the above rule. The situation is very different in the case of a liquid formed by Helium atoms when helium gas, such as used in balloons, is cooled down to the temperature near absolute zero. Below about 2 Kelvin (same as -456 F, or -271 C), helium becomes not only liquid, but superfluid - enters a special state that can only be explained by quantum mechanics, where it can flow entirely without friction. The discovery of this state made in 1937 earned P. Kapitza Nobel Prize in Physics.

In superfluid helium, phonons do exist up to very large energy and momenta and knowledge of their energy-momentum relationship can explain the exotic properties of the ww. This was shown by Landau shortly after Kapitza's discovery and amounted to a triumph of the physical science, revealing how the new at that time science of quantum mechanics governs the properties of matter. What Landau and many other great minds were not able to predict though, is the energy-momentum relationship itself. In fact, Landau famously remarked, that "because the energy-momentum relationship cannot be computed for obvious reasons" he can simply guess how the relation mustlook in order to describe helium properties.

continued from page 4. by Marc David Nichitiu

We found that Bogolyubov-Pitaevskii's theoretical relationships do indeed match well with the data, provided that Feynman's "backflow-dressed" atoms have about 60% larger mass than an isolated He atom.

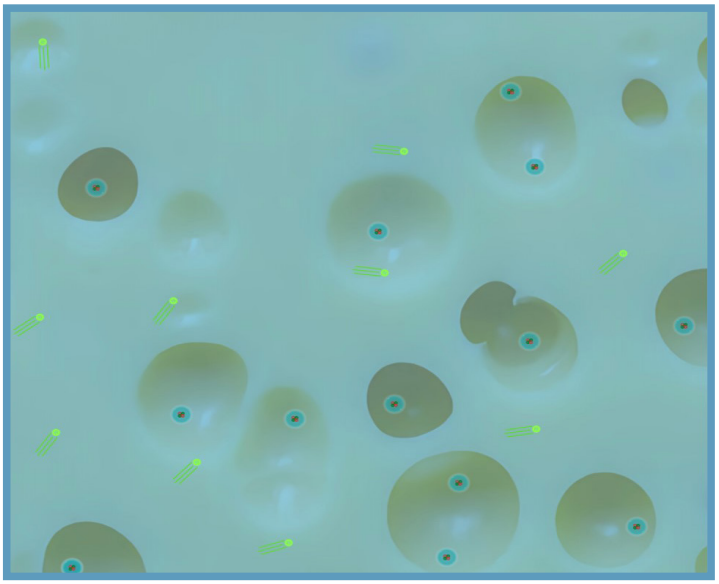


Figure 1. *Diagram of Feynman's model for Helium atoms in cages*

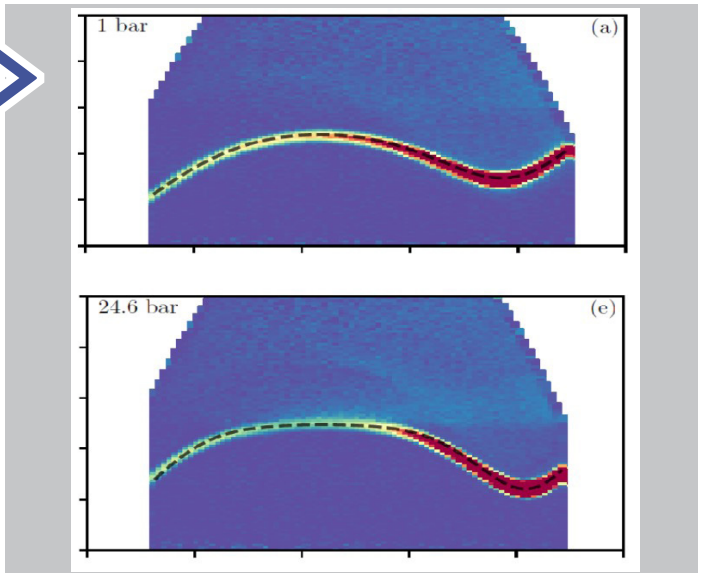
Figure 1. Diagram of Feynman's model for Helium atoms in cages, in this case, similar to the familiar example of Swiss cheese. 1-2 Helium atoms reside in each cage, and neutrons interact with the helium atoms in the cages, imparting momentum/energy to each impacted cage.

Understanding the behaviors of superfluid Helium is at the foundation of our understanding of bulk quantum matter and is needed for a broad range of practical applications in modern science and quantum sensing, from low-temperature refrigeration to the detection of dark matter. Our results established the consistency and practical applicability of the simple physical picture put forward by Feynman decades ago. Checking and confirming this theory placed me among the 300 scholars of the Regeneron Science Talent Search (STS), a program of the Society for Science, our nation's most prestigious pre-college science and mathematics competition.

While most of this research work was completed over the six summer weeks of the BNL HSRP program, I continued to work one day per week at BNL during the fall semester. Pursuing research under the mentorship of Dr. Zaliznyak, delving into quantum physics, deepened my understanding of these complex physics phenomena. As the HSRP program supported a complete immersion into lab research, exchanges with top researchers, and a chance to get weekly feedback, all of these helped me develop a solid foundation for my undergraduate and graduate studies in physics and astronomy— at MIT or Oxford, to which I was accepted.

continued from page 4. by Igor Zaliznyak

Energy-momentum relationship for sound-wave quasi-particles in superfluid helium near the temperature of absolute zero at atmospheric pressure (top) and at pressure near freezing (24.6 bar). Combining the ideas of Bogolyubov, Feynman, and Bohm, we can understand the observed behavior (dashed line).



That Landau's guess turned out to be remarkably accurate was confirmed by scattering neutrons from superfluid helium, a technique that was developed in the second half of the 20-th century and which is continuously perfected. This is what I use to measure the properties of all sorts of materials. By measuring the probability for a neutron passing through superfluid helium (or other material) to loose some of its energy and momentum, one can obtain experimentally the energy-momentum relationship of the quasi-particles tneutrons create (looking for energy and momentum transfers that have highest probability, ie, highest measured neutron intensity). Neutron technologies developed in recent years allow to measure quasi-particles with exceptional precision. Figure shows the measurement that I made more than 10 years ago. Several groups recently reported ever more precise measurements. However, despite remarkable experimental progress, understanding of how to describe the measured relationships was profoundly lagging. I had a lot of data, but in order to understand that data a lot of work and new ideas were needed.

It is at this point that a lucky opportunity arose as Marc Nichitiu, who was first my Math student and then TA at School Nova, reached out to me about applying for a Brookhaven Lab internship and a possible science project. Knowing Marc, I immediately realized that this might be tremendously productive collaboration, with great chance of pushing the helium project to completion and finally figuring out what underlies the energy-momentum relationship, which according to Landau "cannot be computed". This is indeed what happened! Working with Marc, we synthesized ideas of Landau, Feynman, Bogolyubov, and Bohm, to obtain a description of quasi-particles in superfluid helium which can be compared with our data.

Then, Marc put together an extensive suite of Python programs that helped us to serendipitously inspect the data and compare it with theoretical predictions.

And, voila, - it worked! As shown by the dashed lines in the Figure, we can predict the quasi-particle behavior in superfluid helium, and we understand the physics underlying this behavior. Much of the work was carried out when Marc's internship was extended through fall, and even after that, when the internship formally ended, we continued to advance the project and finalize the results.

I must say that the progress of the project and the results we achieved are quite remarkable. In order to achieve these, Marc had to apply all the profound math and physics knowledge he had learned at SchoolNova, and more. He also needed to develop super-proficiency in Python programming, as the project required extensive data mining, fitting, and modeling - which he did! Marc attacked the problem vigorously and developed all necessary mathematical and software tools to analyze, model, and understand the experimental data. The Figure above shows only a small fraction of Marc's results. Thanks to Marc's work, we can finally question Landau's assessment that the energy-momentum relation of superfluid helium "cannot be computed."

A STORY OF AN ASTRONOMICAL SUCCESS

By Alina Aminova, Art teacher

I have taught art to young children (grades 1-3) at SchoolNova for almost two years. I have a background in Architecture, and my area of interest is Motion Graphics and User Experience Design. This allows me to share my love of creativity and design with the next generation and inspire them to express themselves through art.

As a child, I attended art classes for 11 years. This gave me an excellent example of how a child's creativity and imagination should be developed. I believe that art skills and the ability to come up with new creative ideas will be helpful for kids regardless of their future careers.

Teaching young children is not easy sometimes – you don't want them to get bored, so try to include game elements into the learning process. That's why I'm not just telling my students what to do when starting a new project. Instead, they discover it by themselves. And every time, they are pretty excited about making discoveries.

We have a cardboard rocket ship that we are using to "travel" to different planets. At the beginning of each new project, I blindly choose the student in the classroom who becomes our rocket ship captain. The captain goes inside the rocket, pushes the big red button on the dashboard, and sees in the window the planet where we are going to "land."

Alina Aminova

SchoolNova Art teacher since 2021

-"I see a significant change in students coming to my class in September and those leaving my class in May. It is always a joy to watch the growth of their artistic and personal sides. I enjoy working with young children and will happily share my love for art and design with them."

Their task is to guess which planet we are traveling to this time and announce it to other crew members (other students in the classroom). Then, I tell the students a short story about this planet and lead them to the topic of the upcoming art project. For example, recently, we landed on the Pirate Planet. And I told my students that pirates had buried treasures like gemstones and jewels on this planet. But I also heard they forgot about the treasure's location, and we should go on a treasure hunt. All gems and jewels students "find" are theirs to keep. And since they are artists, I want them to draw everything they find. Finally, I show them an example of the upcoming project, "Gemstones," and explained step by step how to do it with a demonstration.

For my class, I choose art projects based on two criteria: kids learn some new/unusual techniques, and the project boosts their imagination.

Last but not least, all students participate in Art exhibitions. I'm organizing two exhibits per year: one is before the winter break in December, and another is at the end of the school year in May. Displaying students' artwork is a very important part of art education. If we want our students to believe they are artists, giving them a venue to show their work is essential. In addition, I like to let them know what they are doing is worth displaying.

JOIN SCHOOLNOVA FOREIGN LANGUAGES PROGRAM

By Marleine Chiofalo, French teacher

At SchoolNova, foreign language classes have their ups and downs with a number of students. Some French, Spanish, and Italian classes have been closed and opened depending on the demand. Students are grouped first according to their level, then age group. Our largest French class was 10 students in 2016. This year, we only offer French and Spanish, with 9 students in the French beginners class and 5 students in the Spanish beginners class. We have 5 French and 3 Spanish classes, all different levels from beginner to advanced.

Marleine Chiofalo

SchoolNova French teacher since 2009

-"We invite you to come and speak the language of your choice in a relaxing setting. There are no grades or serious exams. We play games, sing, and, of course, work on our grammar and vocabulary."

Those who feel confident about their skills participate in the annual national French contest. It is an optional competition where you earn medals and other small prizes. Oh! You also earn le droit de frimer for ranking in the top 10 :)

Le Grand Concours at SchoolNova started in the year 2011.

Since then, we have had four platinum winners (National champions). These are students who scored first (1st!) nationally. The past winners were (in chronological order): Dasha S. (2011), Sophia A. (2013), and Stefano T.-B. (2018). Bravo!

At the FLES (French language elementary school) level, we competed for the first time in 2012. So far, we have been the only school to participate in the French contest at such a young level in the county of Suffolk.

Did I mention that as a teacher, I also have le droit de frimer and get my own award? Merci les élèves! ... I have started une nouvelle collection, bien sûr :) Remember, this contest is not an exam but a fun way to see where you rank amongst other competitors in the nation who like and learn to parler le français.

PS: I was going to translate the French vocabulary, but instead... why don't you join a class and learn these words and more next year?

ACADEMIC COMPETITIONS:

- *In-person or online*
- *Participants from all of the community are welcome!*

- **AMC 8** and **AMC 10/12**
  -MAA American Math Contests
- **PhysicsBowl** and **F=MA**
  -AAPT National Physics Competitions
- **International Math Kangaroo Olympiad**
- **New York State Math League**
- **MathCON**
  -National Math Competition
- **Le Grand Concours** - *AATF National French Contest:*
- **The Scholastic Art & Writing Awards**

Annual community events offered, hosted and sponsored by SchoolNova.

- **Advanced Math Club for High School Students (in-person)**
- **Advanced Physics Club for High School Students (online)**

for the enthusiasts of advanced problem solving

participants do not have to be SchoolNova students to join.

All events are free of charge

ANNOUNCEMENTS

Photo credits to Natalia Ilina, Anya Cartwright, Marina Polonskaia, and Alina Aminova.

TEACHING POSITIONS:

Current openings for September 2023 teaching positions at SchoolNova at Stony Brook:

Enrichment PreK-K Prior experience in working with children is required.
Early Math, grades K-3, ages 4-7 M.Sc. (math or science major) equivalent or higher is required. Prior experience in working with children is required.
Math, grades 4-11, ages 9-17 M.Sc. (math or science major) or Ph.D. is required. Prior experience in working with children is highly desirable.
Chemistry, grades 7-11 M.Sc. equivalent or higher is required. Prior experience in working with children is highly desirable.
Computer Science, grades 7-11 M.Sc. equivalent or higher is required. Prior experience in working with children is highly desirable.
French Language, grades 1-11, A native speaker is preferred. Prior teaching experience is required.
Candidates should demonstrate a high level of interest in working with children. We will look for willingness to learn, creativity and enthusiasm. Prior experience working with children is required.

Please contact Marina Polonskaia at **director@schoolnova.org** if interested in applying. Applications for teaching positions are accepted through **April 15th, 2023.**

A SPECIAL ANNOUNCEMENT:

SchoolNova at Stony Brook will celebrate its 20th anniversary next school year! Almost 2,000 students have benefited from the SchoolNova classes and outreach events since it's "Open House" in April 2004. Over 100 teachers and 40 teaching assistants dedicated their time to provide the best enrichment education to the students. We look forward to celebrating this milestone by organizing special events and activities to mark this occasion. We want to invite the entire SchoolNova community to join us in celebration.

If you would like to help prepare the celebration - share your ideas, help organize the events, or financially support some events and activities, we would love to hear from you!

Send your email to
director@schoolnova.org

OTHER POSITIONS:

Back-end Web Developer/Database Administrator's assistant,
whose responsibilities would be working with SchoolNova database and will include:

- Specialized Data Handling
- Database Backup and Recovery
- Security
- Authentication
- Performance Monitoring
- Database Tuning/Troubleshooting
- Knowledge of PHP and MySQL are required,
- Familiarity with Drupal is a plus.

VOLUNTEERING:

We are looking for parents interested in helping us out throughout the year:

- **Assisting during school hours** - various tasks every Sunday. We are looking for 3–4 people;
- **An event organizer** - someone who will help with organizing the first day of school, the holiday party, and the last day of school. We need 3–4 people. Tuition discount is provided;
- **Parents committee** - we would like to put together a group of parents who will help SchoolNova with various extracurricular activities.

SPECIAL THANK YOU TO SCHOOLNOVA SUPPORTERS

By donating to SchoolNova you are supporting enrichment education.
Please see how you can contribute and be a part of our mission.