

2016 project FIBONACCI

TECHNOLOGY ART
STEAM
SCIENCE ENGINEERING MATHEMATICS

Conference



The Beeches Conference Center

7900 Turin Rd.

Rome, NY 13440

315.336.1700



Welcome

Download our Mobile App!

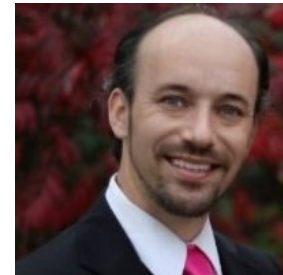


Mission Statement

“The ultimate goal of the Project Fibonacci is to promote the next wave of young scholars, scientists, artists and productive citizens through a journey of self-discovery by positively motivating and enlightening them. Through this educational program, we will enable our youth to deal more effectively with the challenges of our ever-increasingly complex and diverse world.”

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Daniel Kostelec
2016 Conference Chair

On behalf of the Project Fibonacci Steering Committee and everyone who has worked so very hard to make this week a reality, welcome to the 2016 Project Fibonacci STEAM Conference, and congratulations on being a part of our inaugural class of STEAM Scholars!

Project Fibonacci started as a dream: a dream that we can do a better job in preparing our young people for the world, that we can help teach them that you don't just have to be *one* thing – that you can be *many* things: a scientist, an author, an artist, a musician, a physicist, a mathematician. The old binary way of looking at the world – “This *OR* that” – no longer applies; you can be “This *AND* that”!

Our hope is that you will take everything that we give you this week – keynote celebrity speeches, workshops and lectures with experts, tours of amazing facilities, and the chance to build lasting networks and relationships with your peers – and apply it all in ways that have never before been seen. It's my hope that you'll take that to heart and do something amazing that can benefit the *next next* generation.

Project Fibonacci started as a dream. You are that dream come to life.

Full STEAM Ahead!

A Message from the Project Fibonacci Founder

Welcome from Andrew L. Drozd



It is my sincere honor and pleasure to welcome all scholars, educators and special guests to the 1st Annual Project Fibonacci STEAM Conference. I envision one day soon seeing Rome as a vibrant hub for STEAM activities and the formation of a Project Fibonacci STEAM Campus at the Beeches. The year 2016 marks the beginning of realizing this vision and you are a major part of this!

Why have this in Rome? My answer is, *why not have it in Rome?* As they say, *"Rome wasn't built in a day"*, and as I say *"It takes a village to make a STEAM campus"*. We want to make Rome the home of our STEAM vision of the future. Our "village" is the City of Rome and its surroundings along with the many sponsors, supporters and contributors of our first ever STEAM event! I am grateful to our various supporters who held the same vision and forged a bond to work together with ANDRO, SUNY

Poly and our steering committee members to make this conference a reality. They are listed throughout this program.

If you are from the area, you know what Rome and our environs have to offer. We are a city of rich history, sports achievements, scientific accomplishments, and artistic pursuits of all kinds. We have a thriving scientific and technical community that is serving the nation in nanotechnology, unmanned air systems, cyber security, communications and other technical disciplines. A big thanks goes to the Air Force Research Laboratory and its high-tech contractor base for being an anchor for business growth and economic development in the area. We also have a burgeoning arts community that in addition to local museums and art centers such as the Munson-Williams Proctor Arts Institute and the Rome Arts Community Center, is strong in music, photography, and most recently in film production. These communities form the core of our science and arts *spirit* that underpins the theme of our conference. Our core values focus on education, community and the future. I want to thank our local schools in particular the Rome City School District and Rome Free Academy, Oriskany Central, Vernon-Verona-Sherrill, multi-county BOCES centers as well as our institutions of higher learning which are some of the best in the nation. It is our collective goal to make you, the first generation of STEAM scholars, aware of the opportunities to help make your own path in the arts and sciences and know that our companies, agencies and organizations are behind you and will work for your success.

It is our goal to make this a life changing, thought provoking, and highly memorable event that will assist you on your journey of awareness and self-discovery. Furthermore, it is my hope that you will pursue an academic and a career path that is rewarding, and one that will keep you more rooted to the greater Mohawk Valley, Central and Upstate New York region. We all hope that you will be enterprising and create new businesses and additional opportunities for the generation that follows you for the growth, prosperity, and good will of the region...for all of us!

During the course of the next week, you will be exposed to experts and some very famous people who will act as mentors in helping you to choose your path wisely. You will experience new ideas and perspectives on the cosmos, medicine and the human body, the arts including music, nature, engineering and our world. One of the goals of this conference is to emphasize the importance of math as the glue that binds the arts and sciences together in a way you may have never thought of before, and to make this a part of your life to help you compete effectively on the word stage and to excel in all things possible.

We also didn't forsake on the fun part of this event. We intentionally crafted a program that will not drill you with constant speakers and speeches. Instead, we have one or two celebrity speakers per day, followed by choices of mini workshops and a good amount of reflection and discussion time with your group facilitators (i.e., *STEAM mentors*). This will be supplemented by a number of tours and field trips to expose you to many of the "jewels" of our area. We have built in recreation time to help you absorb the energy and decompress to relax and learn more along the way. Friday's schedule culminates in a party on the Beeches outdoor green where you will have a memorable time, be entertained, and will have a chance to strengthen new friendships. Saturday leads to a STEAM Fair where you will present the results of a week-long project that will be guided by your facilitators.

All this does not happen without the help of an exceptional committee and team of supporters. I personally want to thank each and every member of the steering committee, our sponsors and supporters who are listed throughout this program, for without their help, the dream could not have been realized.

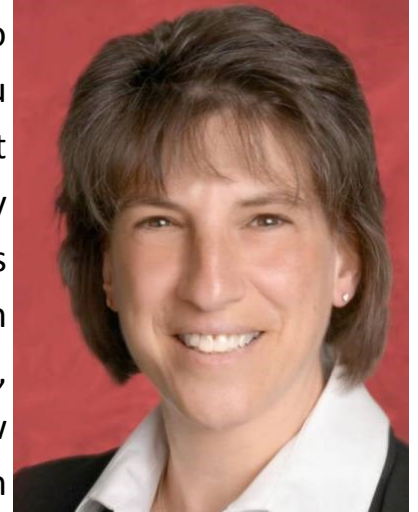
So good luck and good learning STEAM scholars and educators! Enjoy and become the next generation of leaders. I have faith in you! You will be changed....

A handwritten signature in black ink, appearing to read "Andrew L. Drozd". The signature is stylized and fluid.

Rome is Home...

live. work. play.

On behalf of the citizens of the City of Rome, I would like to welcome you to the “Copper City”. We are hoping that you will have a wonderful experience at the first ever “Project Fibonacci” conference. You are truly pioneers leading the way to a better understanding of how STEAM related initiatives will integrate into our society for decades to come. With students from all over the country attending the conference, we hope Rome will be a place for you to make new acquaintances and share innovative ideas through collaboration with the presenters, hands on projects and the world class speakers that “Project Fibonacci” will offer.



Rome is known as the “Copper City” for its long association with the copper wire industry and is the original home of Revereware, pots and pans. Additionally, Francis Bellamy, author of the “Pledge of Allegiance” is buried here in Rome Cemetery. Rome is the birthplace of the Erie Canal, with John Bloomfield Jervis, civil engineer, and Benjamin Wright, surveyor, both having lived in Rome who are best known for this engineering marvel. Rome is also home to the world class Air Force Research Laboratory, Rome Lab, where John Dove was employed as a scientist who developed the compact disc and disc drive.

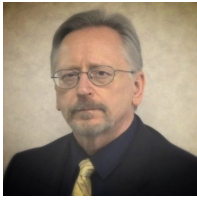
We sincerely hope you enjoy your stay with us in the City of Rome and will explore some of our wonderful city attractions such as Fort Stanwix National Monument, the Rome Historical Society and the Rome Sand Plains which has an incredible diversity of habitats and presents a fascinating experience of viewing sand dunes, peat bogs and rare species. Full STEAM ahead and enjoy your stay!

-Mayor Jackie Izzo



Steering Committee Members

Meet the Team Behind the Conference!



Project Fibonacci Founder & Sr. Advisor

Andrew L. Drozd

ANDRO Computational Solutions, LLC



STEAM Outreach Coordinator & Chair

Daniel Kostelec

ANDRO Computational Solutions, LLC



Vice Chair

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Amanda Miller

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Maria Smith

Rome City School District



Ramona Smith

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Bryant Wysocki

*Jeffrey Dematteis, Sarah Foster, Brian Hartnett,
Nathan McDonald, Cory Merkel, Deborah A. Ouderkirk*



Steering Committee Members

It takes a village to build a STEAM community!



Conference Advisor

John Vanella
Conference Direct



Exhibits Chair

Pamela Mandryck
ANDRO



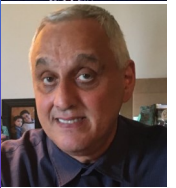
Entertainment Coordinator

Corey Colmey



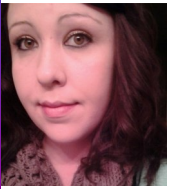
Local Arrangements

Elizabeth Palumbo
ANDRO



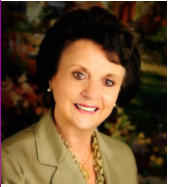
Local Transportation & Logistics

Orlando Destito
The Beeches



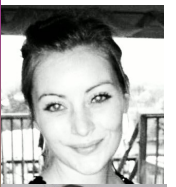
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Amy Singletary
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Political Outreach

Ramona Smith
ANDRO



Publications Chair

Jessica Griffin
ANDRO



Registration Chair

Tammy Willson
ANDRO



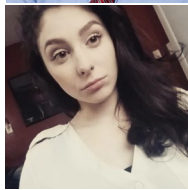
Registration Co-Chair

Tammy White
iPlanit



Secretary

Stephen Benson
ANDRO



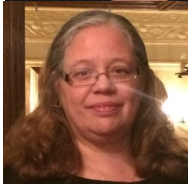
Social Media

Bridget Talerico
ANDRO



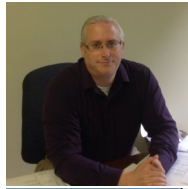
Special Sessions

Julia Pilny
Booz Allen Hamilton



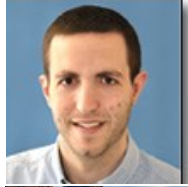
Tickets & Special Events

Barbara Welch-Drozd



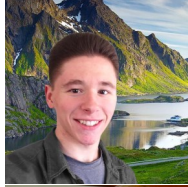
Treasury & Finance

Edward Talerico
ANDRO



Treasury & Finance

Nick Grimmer
SUNY Polytechnic Institute



Volunteer Coordinator

Evan Drozd
ANDRO

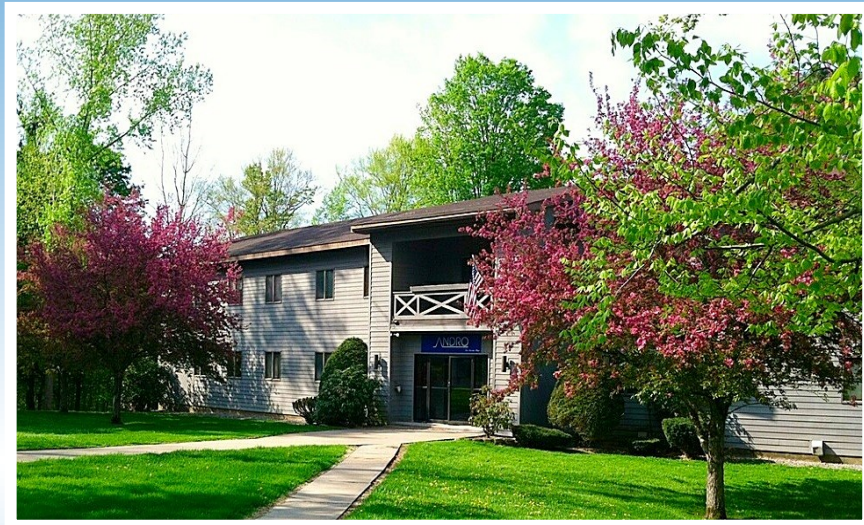


Website Design

Kelly Scott-Olsen
ATG Productions

ANDRO

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Founder & Presenting Sponsor of

project FIBONACCI
2016 Annual STEAM Youth Conference

Full STEAM Ahead!



Campus Map

Welcome to the Beeches Professional Campus!

On-Site Security: Cosnett & Associates Investigations

On-Site Medic: Scott Matus, Event Medic



Pool is only open when a lifeguard is on duty!

Media Center Hours Vary Daily

Check the Schedule for Hours & Details

Emergency Contacts

Andrew L. Drozd: 315.335.1238

Daniel Kostelec: 570.604.7299

The Beeches: 315.336.1700



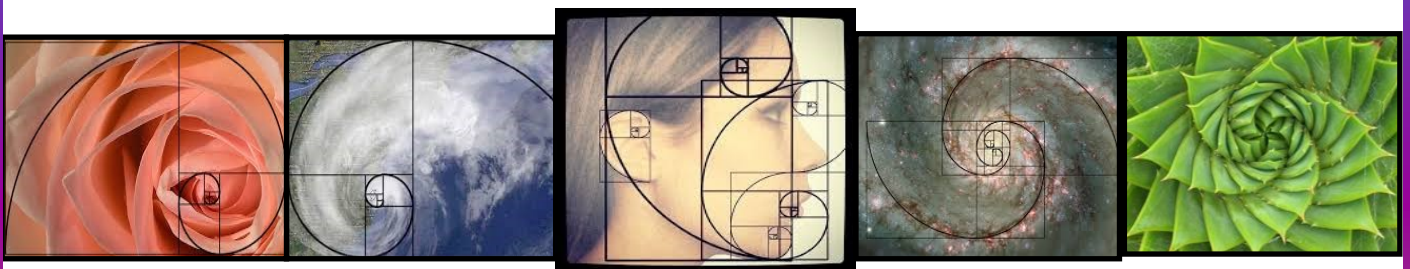
Who was Fibonacci?

Each day will be influenced by Fibonacci's sequence

Project Fibonacci has been inspired by the renowned mathematician, Leonardo Bonnaci, later nicknamed "Fibonacci" by contemporaries and historians.



During the 13th Century, Fibonacci "discovered" a branch of mathematics that neatly describes emergent patterns we often encounter in science, engineering, nature, art, music, and elsewhere throughout the cosmos.



The Fibonacci sequence is a series of numbers in which a number is found by adding the two numbers before. Starting with 0 and 1, the sequence will then be 0, 1, 1, 2, 3, 5, 8, 13, 21, 34 and so forth.

Final Project



Projects for the STEAM Multi-Media Fair

Each Fibonacci team (Blue, Red, Purple, Yellow, Green) will work together to create five (5) pieces that both inform a target audience about the value of STEAM and will persuade their target audience to individually or collectively take a desired action in support of a STEAM initiative. ***Every STEAM Scholar is expected to play a role in their teams project.***

Examples of “desired actions”:

- Promote STEAM education
- Encourage STEAM learning by community members
- Fund or support funding for a school or community STEAM activity
- Attend the 2017 Project Fibonacci STEAM Conference
- Author or vote in favor of STEAM legislation
- Hire a Project Fibonacci STEAM Scholar

Examples of “informative & persuasive” pieces:

- Video
- Commercial
- Public Service Announcement (Audio Recording)
- Storyboard
- Photo Essay
- Print Brochure
- Cartoon Strip
- PowerPoint with Audio
- Essay (read aloud on video or audio file)

Target Audiences

- Educators
- The Public
- Students
- Politicians
- Philanthropic Organizations



#PROJECTFIBONACCI

In order to complete your projects, STEAM Scholars are encouraged to:

- Take notes at each keynote and learning session
- Take photographs and video footage each day of the conference
- Interview keynote presenters, speakers, workshop presenters and each other
- Participate in one or more Video Diaries in response to prompts provided
- Create or record music for video or digital still image pieces
- Work daily on collecting content (images, interviews, notes, etc.)
- Work nightly with their Project Fibonacci team

Morning Routines

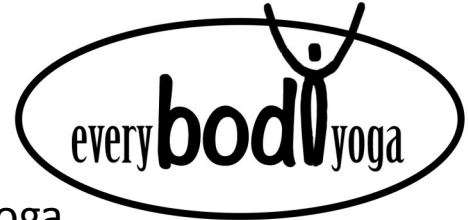


STEAM Scholars, Rise and Shine!

Choose your daily exercise:

MONDAY

- Walk/Jog around campus
- Yoga with drums provided by everyBODY Yoga



TUESDAY

- Walk/Jog around campus
- Bailey's Karate routine

WEDNESDAY

- Walk/Jog around campus
- Yoga provided by everyBODY Yoga



THURSDAY

- Walk/Jog around campus
- Yoga with drums provided by everyBODY Yoga

FRIDAY

- Walk/Jog around campus
- Yoga provided by everyBODY Yoga

Did You Know....

Morning exercise has been proven to boost your mood and increase productivity, focus and your metabolic rate!

Breakfast each day will be available from 7:00-8:00 AM at the Beeches Conference Center.



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**NYSTEC is proud to support
the next wave of
young scholars and the
2016 STEAM Youth Conference!**

Helping clients plan and manage:

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To Complex Technology Projects**



Speakers Series: Monday, August 1

Fibonacci and the Cosmos

Dr. Alex Filippenko

AM: *The Birth and Early Evolution of the Universe*

PM: *Dark Energy and the Runaway Universe**

**In cooperation with the Rome Academy of Sciences and the Mohawk Valley Astronomical Society*



Alex Filippenko is one of the world's most highly cited astronomers and is an elected member of the *National Academy of Sciences* as well as the *American Academy of Arts and Sciences*. He has appeared in more than 100 TV documentaries and is the author of *The Cosmos: Astronomy in the New Millennium*.

Presented By:





Speakers Series: Tuesday, August 2

Fibonacci, the Brain and Human Physiology

Dr. David Eagleman

The Brain: The Story of You



Dr. David Eagleman is Adjunct Professor in the Department of Psychology and Behavioral Sciences at Stanford University. Dr. Eagleman is the author of many books, including *The Brain: The Story of You*, as a companion to the PBS television series, *The Brain with David Eagleman*.

Presented By:





Speakers Series: Wednesday, August 3

Fibonacci in Arts, Graphics, Photography

Alan Bean

My Experience as an Artist on the Moon



Alan Bean is a former naval officer, aviator, engineer test pilot and NASA astronaut who was the fourth person to walk on the moon. Bean also pursued his interest in painting to depict his various space-related scenes to document his experiences.

Presented By:





Speakers Series: Wednesday, August 3

Fibonacci in Arts, Graphics,
Photography and Nature

Alan Alda

Getting Beyond a Blind Date with Science: The Art of Communicating Science



Alan Alda is an actor, director, screenwriter and author well-known for his roles in the television series *M*A*S*H* and *The West Wing*. Alda is also a science communicator and founder of Stony Brook University's *Alan Alda Center for Communicating Science*.

Presented By:



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ROME
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Speakers Series: Thursday, August 4

Fibonacci in Music and the Science of Sound

Chris Hadfield

The Art of Science



“Good morning, Earth!” That is how Colonel Chris Hadfield—writing on Twitter—woke up the world every day while living for five months aboard the International Space Station. Through his 21-years as an astronaut, three spaceflights and 2600 orbits of Earth, Colonel Hadfield has become a worldwide sensation, harnessing the power of social media to make outer space accessible to millions and infusing a sense of wonder into our collective consciousness not felt since humanity first walked on the Moon. Called “the most famous astronaut since Neil Armstrong,” Colonel Hadfield continues to bring the marvels of science and space travel to everyone he encounters. During his multi-faceted career, Colonel Hadfield has intercepted Soviet bombers in Canadian airspace, lived on the ocean floor, been NASA’s Director of Operations in Russia, and recorded science and music videos seen by hundreds of millions.

Presented By:





Speakers Series: Friday, August 5

Fibonacci in Science, Computing, Engineering
Mathematics and Our World

Dr. Brian Greene

Beyond Einstein: Space, Time and Reality



Dr. Brian Greene is the Professor of Physics and Mathematics at Columbia University. He is a theoretical physicist and string theorist and is also the chairman and co-founder of the World Science Festival. Dr. Greene has had many television appearances including the *Big Bang Theory* and the *Colbert Report*.

Presented By:





Workshops & Breakout Sessions

Special Topic STEAM Professionals



Jeanette Epps: NASA
Women in STEM & the NASA Space Program: to Mars and Beyond; and the Importance of Mathematics



Father George Coyne, S.J.: Le Moyne College
The Dance of Fertile Universe; Chance and Destiny Embrace



Dr. John Norgard: NASA Johnson Space Center
Humans, Space Travel and Mathematics



Daniel Buckingham, Pratt MWP Professor of Sculpture
Fibonacci in Art



Michael Fanto
Nature Photography



Mark Casadei: Awesome Monkey Productions
Script to Screen: How Technology is in Every Step of the Way



Frank Page: Professional Cartoonist
The Science Behind the Art of Cartooning with Natural Elements



John Marsh: SUNY Poly Computer & Information Sciences
Cyber Security 101



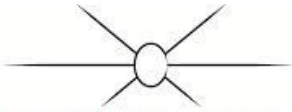
Dr. Zora Thomova, Interim Dean of SUNY Poly Arts and Sciences
Symmetries-from Nature to Math, from Mirrors to Lie Groups

Don't forget your notebooks!
Workshops will involve hands-on learning as well as intentional listening.



Off-Site Tours

STEAM Facilities of the Mohawk Valley



MAKING FUTURE SKIES SAFER

NUAIR

The NUAIR Alliance is a New York based not-for-profit coalition of more than 90 private and public entities and academic institutions working together to operate and oversee Unmanned Aircraft System (UAS) test ranges in New York, Massachusetts and Michigan.

The Masonic Medical Research Laboratory (MMRL) is an internationally recognized biomedical research institute founded by the Grand Lodge of Free & Accepted Masons in the New York State in 1958.



The Griffiss Sculpture Garden is a unique outdoor sculpture garden located on the grounds of The Griffiss Business & Technology Park in Rome, NY.

SculptureSpace

As a unique cultural resource, Sculpture Space promotes interaction between national and international visiting artists and the local community throughout Utica, NY and the surrounding region.



Off-Site Tours

STEAM Facilities of the Mohawk Valley

MUNSON WILLIAMS PROCTOR ARTS INSTITUTE

Museum. School.
Performing Arts.

Munson Williams Proctor Arts Institute is a fine arts center dedicated to serving diverse audiences by advancing the appreciation, understanding, and enjoyment of the arts. The art institute aims to promote interest and participation in the arts & stimulate artistic self-expression and personal creativity.



AFRL

The Air Force Research Lab (AFRL) is a global technical enterprise, boasting some of the best and brightest leaders

in the world. AFRL defends America by unleashing the unconquerable power of scientific and technical innovation. Their mission is leading the discovery, development, and integration of affordable warfighting technologies for our air, space and cyberspace force.

Must bring identification

SUNY's Computer Chip Commercialization Center (Quad C) is a \$125 million, 253,000 square ft. complex with 56,000 sq. ft. of Class 100 and Class 1000 capable cleanroom space. Quad C is all about making the next generation of electronics, like your smart phone, faster and more efficient. Quad C & Nano Utica are in the forefront of the global technology shift.



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<https://www.ieee.org/go/mohawkvalley>

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Schedule Overview

Schedule is Subject to Change

SUNDAY JULY 31

7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
						STEAM Scholar Arrival & Registration				Rome Chamber Welcome Reception		BREAK: Dinner		Project Overview & Development		
						Ice Breakers & Team Introductions										

MONDAY AUGUST 1

7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Excercise Breakfast			REFLECTIONS		BREAK Lunch				SHUTTLE			KEYNOTE: Dr. Alex Filippenko	SHUTTLE	BREAK: Dinner	REFLECTIONS Project Development	Stargazing Sessions
	KEYNOTE: Dr. Alex Filippenko			SPECIAL TOPIC		PANEL		REFLECTIONS	WORKSHOPS ROTATE AT 2:45	TOUR: NUAIR						

TUESDAY AUGUST 2

7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Excercise Breakfast	SHUTTLE			REFLECTIONS	SHUTTLE	BREAK Lunch (Rotation)		SHUTTLE	BREAK Snacks Project Development	REFLECTIONS	BREAK Dinner		DEMO: Bailey's Karate	REFLECTIONS Project Development Town Hall	Personal Time	
		KEYNOTE: Dr. David Eagleman				Tour: MMRL			College and Career Expo							

WEDNESDAY AUGUST 3

7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM		
Excercise Breakfast			REFLECTIONS		LUNCH & EXPO		SHUTTLE	TOUR Griffiss Sculpture Garden	SHUTTLE	TOUR Sculpture Space	SHUTTLE	TOUR MWPAL	SHUTTLE	BREAK Dinner		KEYNOTE: Alan Alda	SHUTTLE	REFLECTIONS Project Development
		KEYNOTE: Alan Bean			WORKSHOPS													

THURSDAY AUGUST 4

7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Excercise Breakfast	SHUTTLE	Virtual Tour Big Blue North Recording Studio	REFLECTIONS	PRIMER Overview & Introduction		KEYNOTE: Chris Hadfield		LUNCH		SHUTTLE	REFLECTIONS College & Career Expo		WORKSHOP Project Development	BREAK Dinner	REFLECTIONS Project Development Town Hall	Pool Social Personal Time
								WORKSHOPS								

FRIDAY AUGUST 5

7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Excercise Breakfast	SHUTTLE	HACKING DEMO-AIS, INC. (at RFA)		SHUTTLE		KEYNOTE: Dr. Brian Greene	LUNCH	SPECIAL TALK	Tour: SUNY Quad-C	SHUTTLE	SPECIAL WORKSHOP	Maad About Science Presentation	SHUTTLE	REFLECTIONS Project Development		Special Event!
		TOUR: AFRL														Party on the Green!

SATURDAY AUGUST 6

7:00 AM	8:00 AM	9:00 AM	10:00 AM	11:00 AM	12:00 PM	1:00 PM	2:00 PM	3:00 PM	4:00 PM	5:00 PM	6:00 PM	7:00 PM	8:00 PM	9:00 PM	10:00 PM	11:00 PM
Breakfast Check-Out	SHUTTLE	Project Set-Up	STEAM Multi-Media Fair		Closing Ceremonies	SHUTTLE Departure										
			SPECIAL TALK													



Sunday, July 31

Welcoming Day: Registration and Opening

1:00-5:00 PM	STEAM Scholar Arrival & Registration
1:30-5:00 PM	Ice Breakers & Team Introductions
5:00-5:45 PM	Rome Chamber Welcome Reception <ul style="list-style-type: none">• <i>Opening Ceremonies</i>- Andrew Drozd, ANDRO• <i>Welcome Remarks</i>- Mayor Jackie Izzo• <i>What is Means to be a STEAM Scholar</i>-Peter Blake, Rome City School District• <i>Meet and Greet the Rome Chamber</i>
5:45-6:10 PM	What is Project Fibonacci? -Andrew Drozd, ANDRO
6:10-6:30 PM	Orientation & Conference Overview -Dan Kostelec, ANDRO
6:30-7:30 PM	Dinner Buffet SPECIAL TOPIC: <i>Leadership in an Exponentially Changing World</i> -Dr. Bryant Wysocki
7:30-7:45 PM	Overview of the Code of Conduct -Ramona Smith, ANDRO
7:45-8:30 PM	Purposeful Learning -Greg Kelahan, Oriskany Central School District Reflections on Learning -Martha Group, Vernon-Verona-Sherrill School District Project Overview -Maria Smith, Rome City School District
8:30-10:00 PM	Project Planning/ Personal Time



Monday, August 1

Fibonacci and the Cosmos: The Big Picture of Mathematical Patterns and Numbers Throughout the Universe (s)

7:00-7:30 AM	Daily Exercise
7:00-8:00 AM	Breakfast Buffet <i>Sponsored by NUAIR</i>
8:15-8:30 AM	Overview & Introduction
8:30-10:00 AM	KEYNOTE: Dr. Alex Filippenko <i>The Birth and Early Evolution of the Universe: The Universe's Math and Numbers</i>
10:00-10:15 AM	Reflections on Learning
10:30-11:30 AM	SPECIAL TOPIC: Fr. George Coyne, S.J.- <i>The Mathematical Embrace of the Fertile Universe: Chance and Destiny Embrace</i>
11:30-12:30 PM	BREAK: Lunch Buffet
12:30-1:30 PM	PANEL: Humans, Space Travel and Mathematics Dr. Alex Filippenko, Fr. George Coyne, Dr. John Norgard, Dr. Jeanette Epps
1:30-1:45 PM	Reflections on Learning
2:00-3:30 PM	WORKSHOPS
<i>Workshop Rotation at 2:45</i>	<ul style="list-style-type: none"> <i>The Science & Art of Constructing a Geodesic Dome-</i> Daniel Buckingham <i>Women in STEM & the NASA Space Program: to Mars and Beyond; and the Importance of Mathematics-</i> Dr. Jeanette Epps
3:30-4:00 PM	SHUTTLE Departure: NUAIR Hangar <i>Snacks Available</i>
4:15-5:15 PM	OFF-SITE TOUR: NUAIR Unmanned Air Systems/Vehicle Demonstrations <i>UAS/V for Space Exploration?</i>
5:15-5:30 PM	SHUTTLE Departure: Rome Free Academy <i>Snacks Available</i>
5:45-7:15 PM	KEYNOTE: Dr. Alex Filippenko <i>Dark Energy and the Runaway Universe</i> In cooperation with the Rome Academy of Sciences & the Mohawk Valley Astronomical Society
7:30-8:00 PM	SHUTTLE Departure: Beeches
8:00-8:45 PM	Dinner Buffet
8:45-9:30 PM	Reflections on Learning <ul style="list-style-type: none"> Multi-Media Project Development & Computer Labs Town Hall Meeting: What did we learn today?
9:30-10:30 PM	Private Stargazing Sessions (Weather Permitting) <i>Courtesy of the Mohawk Valley Astronomical Society</i>



Tuesday, August 2

Fibonacci, the Brain and Human Physiology: The Golden Ratio and the
Convergence of the Cognitive & Creative Sides of the Brain

7:00-7:30 AM	Daily Exercise
7:00-8:00 AM	Breakfast Buffet <i>Sponsored by Black River Systems</i>
8:15-8:45 AM	SHUTTLE Departure: SUNY Poly <i>Overview/Introduction</i>
9:00-11:00 AM	KEYNOTE: Dr. David Eagleman <i>The Brain: The Story of You</i>
11:00-11:30 AM	Reflections on Learning <i>Meet and Greet Continues</i>
11:30-11:45 AM	SHUTTLE Departure: Masonic Medical Research Laboratory
12:00-2:15 PM	OFF-SITE TOUR <ul style="list-style-type: none">• Masonic Medical Research Laboratory Round-Robin Tour• Lunch (Group Rotation)
2:30-3:00 PM	SHUTTLE Departure: The Beeches
3:00-5:00 PM	College & Career Expo <ul style="list-style-type: none">• Project Development• Snacks Provided
5:00-5:30 PM	Reflections on Learning
5:45-6:30 PM	Buffet Dinner
6:45-7:45 PM	Bailey's Karate Demo Team <i>Fibonacci in Motion</i>
7:45-9:30 PM	Reflections on Learning <ul style="list-style-type: none">• Scholar Group Work Sessions• Multi-Media Project Development & Computer Labs• Town Hall Meeting: What did we learn today?
9:30-10:30 PM	Personal Time



Wednesday, August 3

Fibonacci in Art, Graphics, Photography and Nature

7:00-7:30 AM	Daily Exercise
7:00-8:00 AM	Breakfast Buffet <i>Sponsored by Indium</i>
8:15-8:30 AM	Overview/Introduction
8:30-10:00 AM	KEYNOTE: Alan Bean <i>My Experience as an Artist on the Moon</i>
10:00-10:15 AM	Reflections on Learning
10:15-11:00 AM	WORKSHOPS*: First Choice Workshop <i>STEAM Scholar Previously Selected First Workshop</i>
11:15-11:45 AM	Buffet Lunch <i>College and Career Expo</i>
11:45-12:30 PM	WORKSHOPS*: Second Choice Workshop <i>STEAM Scholar Previously Selected Second Workshop</i>
12:30-1:00 PM	SHUTTLE Departure: Sculpture Garden
1:00-2:00 PM	OFF-SITE TOUR <i>Fibonacci in Nature: Guided Griffiss International Sculpture Garden Tour-</i> Daniel Buckingham, Pratt MWP
2:00-2:30 PM	SHUTTLE Departure: Sculpture Space
2:30-3:15 PM	OFF-SITE TOUR: Sculpture Space
3:15-3:30 PM	SHUTTLE Departure: Munson-Williams Proctor Art Institute
3:30-4:45 PM	OFF-SITE TOUR: MWP AI
4:45-5:15 PM	SHUTTLE Departure: SUNY Poly
5:15-6:30 PM	Pizza Party & Personal Time
7:00-8:30 PM	KEYNOTE: Alan Alda <i>Getting Beyond a Blind Date: The Art of Communicating Science</i>
8:30-9:00 PM	SHUTTLE Departure: The Beeches
9:00-10:30 PM	Reflections on Learning <ul style="list-style-type: none">• Project Development

Pick Two (2) Workshops:

- *Nature Photography*– Mike Fanto
- *Identifying Fibonacci in Nature*- Bruce Tonner, Art with Nature
- *Screen to Script: How Technology is in Every Step of the Way* - Mark Casadei, Awesome Monkey Productions
- *The Science Behind the Art of Cartooning with Natural Elements*- Frank Page, Professional Cartoonist of *Bob the Squirrel*



Thursday, August 4

Fibonacci in Music & the Science of Sound

7:00-7:30 AM	Daily Exercise
7:00-8:00 AM	Breakfast Buffet
8:15-8:45 AM	SHUTTLE Departure: RFA
8:45-9:45 AM	VIRTUAL TOUR: Big Blue North Recording Studio <i>Music Production Sessions</i>
9:45-10:00 AM	Reflections on Learning
10:15-10:30 AM	Primer on Musical Intervals: Charles Schnieder & Julia Pilny
10:30-10:45 AM	BREAK: Overview & Introduction
11:00-1:00 PM	KEYNOTE: Chris Hadfield <i>The Art of Science</i>
1:15-2:00 PM	WORKSHOPS*: First Choice Workshop <i>STEAM Scholar Previously Selected First Workshop</i>
2:00-2:30 PM	LUNCH
2:45-3:30 PM	WORKSHOPS*: Second Choice Workshop <i>STEAM Scholar Previously Selected Second Choice Workshop</i>
3:30-3:45 PM	SHUTTLE: The Beeches
4:00-5:00 PM	Reflections on Learning <ul style="list-style-type: none">• College & Career Expo• Snacks Provided
5:00-6:30 PM	<ul style="list-style-type: none">• Creating a Musical Scale/Composition: With the Daytime Musicians• Project Development
6:30-7:30 PM	Buffet Dinner
7:30-9:30 PM	Reflections on Learning <ul style="list-style-type: none">• Project Development• Town Hall Meeting
9:30-10:30 PM	Pool Social & Personal Time

Pick two (2) workshops:

- *Resonance*- Nathan McDonald and Dr. Corey Merkel
- *A Presentation for Voice, Vibraphone, Bass and Percussion*– Benjamin Wright, Juliane Price, Jack Smith, Corey Colmey
- *Fibonacci in Musical Harmonics of Stringed Instruments*- Julia Pilny
- *Fibonacci in Musical Harmonics of Keyboarding*- Charles Schneider
- *Fibonacci in Musical Harmonics of Wind Instruments*- Colleen O'Neil
- *Fibonacci in Rhythm*– *Lead with Rhythm*; Corey Colmey, John Bertrand



Friday, August 5

Fibonacci in Science, Computing, Engineering, Mathematics &
Our World

7:00-7:30 AM	Daily Exercise
7:00-8:00 AM	Breakfast Buffet <i>Sponsored by AIS, Inc.</i>
8:15-8:30 AM	*SHUTTLE Departure: RFA
8:15-8:30 AM	**SHUTTLE Departure: AFRL
8:45-10:45 AM	*Autonomous Vehicle Hacking Demonstration- AIS, Inc. (RFA)
8:45-10:45 AM	**OFF-SITE TOUR: Air Force Research Laboratory
10:45-11:15 AM	SHUTTLE Departure: SUNY Poly
11:30-1:00 PM	KEYNOTE: Dr. Brian Greene <i>Beyond Einstein: Space, Time & Reality</i>
1:15-1:45 PM	Boxed Lunch <i>Sponsored by Griffiss Institute</i>
1:45-3:30 PM Group Rotation	SPECIAL TALK: Symmetries—from Nature to Math, from Mirrors to Lie Groups -Dr. Zora Thomova, SUNY Poly
1:45-3:30 PM	OFF-SITE TOUR: SUNY Quad-C Nano-Engineering Facility
3:45-4:15 PM	SHUTTLE Departure: RFA
4:15-5:00 PM	SPECIAL WORKSHOP <i>Cyber Security 101</i> -Dr. John Marsh, SUNY Poly
5:00-6:00 PM	SPECIAL Presentation <i>Mad About Science</i> -Buzz Putnam & John Bertrand
6:15-6:30 PM	SHUTTLE Departure: Beeches
6:45-7:30 PM	Reflections on Learning <ul style="list-style-type: none"> • Group Work-Time
7:30-11:00 PM	Party on the Green! <ul style="list-style-type: none"> • <i>Outdoor BBQ- Sponsored by Adirondack Financial Services</i> • <i>An Evening with Robert Channing</i>-Artist & Mentalist from NBC's America's Got Talent! • <i>Live Music</i>- Tangled Roots, The Rusty Doves • <i>Immersive Virtual Reality Demonstrations</i>- Noir Flux • <i>FIRST Robotics Robot Competitions & Demos</i> • <i>Firework Show</i>-Majestic Fireworks
8:00-9:00 PM	



Saturday, August 6

Ethics, the Art of Communication & Closing Ceremonies

7:00-7:45 AM

Hotel Check-Out– Bring Belongings

- Continental Breakfast

7:45-8:00 AM

SHUTTLE Departure: RFA

8:00-9:00 AM

STEAM Scholars Set Up Multi-Media Displays

9:00-11:00 AM

STEAM Multi-Media Fair

SPECIAL TALK: *STEAM & the Art of Communication and Ethics-*
Greg Mattacola, Esq., CHC, Hancock Estabrook, LLP

11:00-11:45 PM

Closing Ceremonies

- Retrospective Video
- Certificate Presentation
- Closing Remarks-Dan Kostelec, Project Fibonacci Chair;
Andrew Drozd, Project Fibonacci Founder

11:45-12:00 PM

SHUTTLE Departure: Beeches
STEAM Scholar Pickup/Departure

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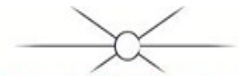


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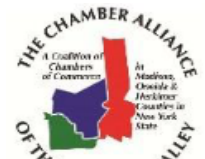
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