



41st Annual
Trenton Computer Festival
 The Oldest Personal Computer Show in the World
 The College of New Jersey
 Ewing, New Jersey

2016 PROGRAM BOOK

<p>Education Building Talks, Forums, Vendor Fair & Flea Market Saturday, March 18 - 9:00 am to 5:00 pm Talks/Forums start at 10:15 am Sarnoff Museum Tours - 9:00 am to 3:00 pm</p>	<p>«««« TCF Banquet 6:00pm »»»» Speaker: Chris Brogan CEO and founder of AssureNet Social Science Building Atrium \$30 - Purchase tickets at Speaker Registration Table</p>
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Sponsored by: The College of New Jersey (TCNJ) Electrical/Computer Engineering Department – www.tcnj.edu/~engsci/

With the support of

- IEEE Princeton/Central Jersey Section (PCJS) – ewh.ieee.org/rl/princeton-centraljersey
 - ACM/IEEE-CS – Joint Princeton/Chapters of ACM and IEEE Computer Society – princetonacm.acm.org
 - NYACC – New York Amateur Computer Club – www.nyacc.org
 - ACGNJ - Amateur Computer Group of New Jersey - www.acgnj.org
- Member of the *New Jersey Makers Day Partnership*

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Special Exhibits & Demos
ED Building - First and Second Floor Lobbies:
Demos and Poster Presentations on Quadcopters,
Robotics, Technology, Vintage Computers,
Digital Photos & Club Exhibits
RWH 2nd Floor: Sarnoff Museum
 WiFi SSID: login guest1323, password y2azataq

TCF Keynote Speaker
Chris Brogan
CEO and founder of AssureNet
The Driving Force in Intelligent Safety
 (Starting & growing a new emerging-technology business)
3:40 pm in Room ED-115

Twitter hashtags for TCF: #tcf and #tcf2016

Get a Ham Radio License in One Day!

Sponsored by the David Sarnoff Radio Club <www.n2re.org>

If you wanted to get an amateur radio license but never had the time, now is your opportunity! The FCC has changed the rules so that no Morse Code proficiency is required. To obtain the entry-level Technician license, all one has to do is pass a multiple-choice exam. With a Technician Class License, one may participate in Amateur Radio and enjoy privileges for operation on the HF amateur bands, use of VHF&UHF repeaters, participation in local Amateur Radio Emergency Services (ARES), the annual American Radio Relay League (ARRL) Field Day, and many other activities. We will be holding "HAMCRAM 101" in ED-103 from 9:00 am to 12:30 pm, and a practice exam at 1:30 pm. The course will provide participants with an overview of the requirements needed to pass the FCC Technician License exam. At 3:30 pm the FCC examination will be given by ARRL-certified Volunteer Examiners (VEs). One does not have to attend the HAM CRAM 101 or pay for admission to TCF to attend the exam session. An exam fee (\$15.00) must be paid by each examinee. Two forms of identification (at least one must have your photograph) will be required to take the exam. All license exams will be offered (Technician, General and Extra) at this testing session. If upgrading, bring an original and a photocopy of your current license. Results of your test will be provided after the exam session is completed. The slides and material for the ham cram can be found at: <https://drive.google.com/file/d/0B8Kvsw95jCqIeFZrU3E0R1k2TFU/view?usp=sharing>. A truly wonderful and free study guide can be found at <http://www.kb6nu.com/tech-manual/>. Online practice exams are also of great benefit, <http://qrz.com/hamtest/>. Students are urged to take advantage of these resources.

***** 10:15 am to 11:10 am *****

ED-115: Workshop - Learn How Information Resources from IEEE can support Entrepreneurship, Valerie Tucci, TCNJ & Ruth Wolfish, IEEE,

Abstract: This seminar will feature using IEEE resources to start your own business and increase your network. The IEEE Xplore database will be showcased and demonstrations given on how to gather information about possible new innovative technology including how not to duplicate existing technology, the importance of patenting your ideas, and how to stay abreast of new developments in your areas of interest.

Bio: (Facilitator) Valerie Tucci is Physical Sciences and Engineering Librarian at TCNJ with over 40 years of library experience in industrial R&D libraries. (Trainer) Ruth Wolfish is IEEE Client Services Manager and provides training and awareness on IEEE resources and tools. She works with IEEE's academic, government and corporate accounts in North America and Canada. Ms. Wolfish came to IEEE in 2001 from Lucent Technologies. Her 18-year career with Lucent and its predecessor companies included roles as Bell Labs Reference Librarian, management trainer and administrator of education, information specialist for business systems, and electronic content coordinator for Lucent's Digital Library.

ED-211: Personal Information Privacy – A Fool's Paradise, Brad Whitehead, Formularity

Abstract: This presentation examines the current HIPAA and PCI best practices for the collection and protection of such personal information as healthcare records and credit cards; "encryption-in-motion" and "encryption-at-rest." It then highlights the ever-present "missing link" vulnerability that still leaves your information unguarded and unprotected. SSL is a very secure technology that allows us to safely transmit information between two points. Likewise, most modern databases and file systems have the ability to securely encrypt and protect our personal information "at-rest." However, there is a transition stage during which your credit card information or health records emerge from their SSL "pipe" as human-readable information, before it's again protected by the database. Inside the data center, your information sits "in the clear," waiting to be read, stolen, or altered. After examining the vulnerability and the threats, the presentation constructively addresses how PII can be truly protected from end-to-end through client-side encryption. It outlines the various means of accomplishing this client-side encryption and how it's being done commercially today.

Bio: Brad Whitehead is Chief Scientist for Formularity, an electronic forms company dedicated to the secure collection and processing of personal information. Formerly, he was a Partner and Master Technology Architect with Accenture. Brad has architected and implemented national-scale information processing systems, and served as a security advisor to several Federal agencies. Brad holds a BS from Carnegie Mellon University and an MS from the University of Liverpool.

ED-209: Hosting: A comparison of leased servers, cloud hosting and IaaS with a focus on Amazon Web Services, Steve Saporta, SpinCar

Abstract: Options for web application hosting are available that we never dreamed of in the days before cloud computing. After an overview of the differences among traditional leased servers, cloud hosting and infrastructure-as-a-service, we'll take a deeper dive into the offerings of Amazon Web Services. The presentation will draw on real-world examples from a local software firm that uses more than half a dozen of Amazon's services. This is a great session for those with a less-technical background who want an overview of the hosting landscape, as well as for software engineering students and professionals whose formal training hasn't focused on real-world hosting and deployment of software. Participants will learn about: a) Why hosting is important, b) Pros and cons of shared, dedicated, cloud and IaaS hosting, c) Amazon Web Services (AWS) and its competitors, d) Details of AWS's EC2, S3 and other cloud hosting services, and d) How to optimize performance and cost of an AWS hosting environment.

Bio: Steve Saporta is a technology executive with a wide range of experience in all aspects of software engineering and business. He has served as Chief Technology Officer for four software companies, and is currently at SpinCar, a New York City-based startup. In addition to presenting "The Cost of the Cloud" at ITPC 2015, he has recently appeared as a panelist at the Rutgers Career Exploration and Networking Series: Computer Science & IT, and as a guest speaker to software engineering classes at Penn State and Southern Connecticut State University. A graduate of Princeton University in Computer Science, Steve enjoys skiing and playing guitar and bass.

ED-208: Workshop on Keeping Your Wordpress Site Safe and Fast (In a Dense Threat Environment) Louis J. Judice, The Round Mountain Group, LLC

Abstract: The Wordpress value proposition has never been stronger, but its popularity has made it a target for hackers, scammers and legions of bad bots. At the best they will slow your site down, at worst deface it or hijack it - potentially damaging your organization's online reputation. Louis Judice will present solid, achievable steps you can take TODAY to defend your site and keep it running smoothly. The audience is bloggers, site owners, Wordpress and Linux administrators. Most of the concepts to be presented are applicable to Joomla and Drupal users as well.

Bio: This is Louis Judice's fourth TCF workshop. He has over 30 years of experience in IT at GE, DEC and HP. He is the founder of the Round Mountain Group, LLC, a web design and hosting company that supports over 40 business and government clients on multiple servers.

ED-207: GPS Secrets – an Update, Cass Lewart, Freelance Writer

Abstract: There is more to a GPS than a pleasant voice telling you to turn right on Cedar Street, and a color display of adjacent ramps and intersections. I will cover the following subjects in my talk: 1) Technical background and implementation of current GPS systems; 2) How user location is derived from precise atomic clocks on satellites, and from an imprecise clock in your GPS receiver; 3) Capturing and analyzing the data stream coming from the GPS, and sending commands directly to the GPS; 4) Secret key codes (*jail breaking*) that allow changing base maps on the GPS, a practice frowned upon by GPS manufacturers; 5) How GPS enabled devices, including cell phones, impact on your privacy; 6) Using a GPS for Geocaching, a modern version of treasure hunting; 7) Review of currently available GPS devices; and 8) Modification of the built-in GPS vocabulary.

Bio: Cass Lewart is an electrical engineer, a long time hobbyist, and author of several books on computer programming, modems and programmable calculators. Cass also has written many electronic project articles. Every year he gives talks at the Trenton Computer Festival on GPS, HDTV, database programming and other subjects. Cass and his wife Ruth were joint recipients of the 2005 Hobbyist of the Year award from the Amateur Computer Group of New Jersey (ACGNJ). They are former presidents of the Brookdale Computer Users Group (BCUG). He is a graduate of the Swiss Federal Institute of Technology and worked at Bell Labs and Unisys.

ED-206: Getting Started With PCs, Pads and Tablets, Including the Internet and Digital Photography, Herman Hinitz, Hinitz Photography

Abstract: This session is designed for the beginner, people who would like to use a PCs/pads for word processing, electronic spreadsheets, graphics, Internet (browsers), databases, antivirus programs, firewall programs, digital photography, etc., but are unsure how or where to begin. Appropriate examples would be used with MS Office, etc. (Also, see a digital photography display in the building lobby area for related information and examples).

Bio: Herman Hinitz has used diversified software and hardware in research, consulting, publications, and digital photography. Some of his work has been included in commercially available books, professional publications, fine art collections, and gift shops. He is a long time supporter of TCF.

ED-113: The RTL-SDR Dongle as an "eye" to the wireless world, Mario Filippi, ARRL

Abstract: The RTL-SDR dongle is a broadband receiver capable of tuning in the LF/HF/VHF/UHF portion of the spectrum. Many common wireless devices transmit/receive in the radio spectrum to accomplish tasks our forefathers never dreamt of. This presentation will explore how we can "see" the individual, unique radio "footprints" of some common wireless devices using an RTL-SDR dongle and also show its use in basic troubleshooting.

Bio: A short wave, ham, satellite, and scanning enthusiast since the 1960's, Mario Filippi (N2HUN) is a graduate of St. John's University and has been employed in the medical, pharmaceutical, and public health sectors for the past four decades. He currently works as a Public Health Investigator and has written articles for Monitoring Times magazine, Radio World, The Spectrum Monitor magazine, TeleAudioVision magazine and others, and was one of the authors of two scientific articles in the field of Skin Biology. He has also been a speaker at TCF and similar events as club meetings.

ED-112: Microsoft Office 2016 Revised, David Soll, Omicron Consulting

Abstract: In 2007, Microsoft made a dramatic change in the user interface for its Office suite, moving away from menus towards the use of "ribbons". The ribbon concept was improved with the 2010 release of Office, and since there have been 2 more releases of Office, 2013 and 2016. The 2016 version of Office does not make any major changes to the ribbon, but does improve on Office's cloud integration. Microsoft has also made a major push towards a subscription basis for Office over the straight purchase. David Soll will

demonstrate Office 2016 and provide a side by side comparison with Office 2013 and discuss the changes to the Office suite.

Bio: David Soll is the CTO and President of Omicron Development, LLC. He is responsible for the overall technical direction and technology solution set provided by Omicron. David received a BS in Electrical Engineering from Drexel University and has been working in Information Technology for over 25 years, more than 20 of them with Omicron. He is currently the Chair of the Princeton Central Jersey chapter of the IEEE Computer Society and is a senior member of the IEEE. David is also the past Chairman and current board member of the Princeton chapter of the ACM and a senior member of the ACM. David has a long history of innovation working with Microsoft. He has worked with virtually every version of operating system that Microsoft has produced and has given many presentations on them. He received a prestigious IEEE Region 1 Award from technical contributions to it. He also is the founder and current chairman of the IEEE/ACM ITPC held in conjunction with TCF.

ED-109: Workshop on Android Apps, Barry Burd, Drew University

Abstract: Android is the operating system underlying many of Google's hardware technologies. First and foremost is the Android phone. But the list of Android devices also includes Android Wear (wristwatches), Android TV, Google Glass, Android Auto, and others. In this session, I'll show you how to get started creating Android apps.

Bio: Barry Burd is a professor of Mathematics and Computer Science at Drew University in Madison, NJ. He is the author of several articles and books, including *Java For Dummies*, *Android Application Development All-in-One For Dummies*, and *Java Programming for Android Developers For Dummies*, all from Wiley Publishing. He received an M.S. degree in Computer Science at Rutgers University and a Ph.D. in Mathematics at the University of Illinois.

ED-107: Arduino Developers Workshop, Bill French, FUBAR Labs

Abstract: A day long Arduino tutorial and user's meeting. We will start out with an intro to Arduino, followed by a beginner's Arduino hands on class. We then have an open *hack* period and finally have a developer's round table.

Bio: Bill French is the President for FUBAR Labs. Besides hacking, Bill's interests include silk screening, electronics, Arduino, Netduino, CNC Controls, and circuit board creation. He has an A.S. in Computer Science and is the Director of Telecommunications, Network, and Support Services for the Princeton Theological Seminary.

ED-105: OOP University; Introduction to Object-Oriented Programming and Design Principles, Mike Redlich, ACGNJ

Abstract: Object-Oriented Programming (OOP) is a programming paradigm that models real-world objects. The most well-known and widely-used OOP languages are C++ and Java, but some languages, such as Simula-67, were around much earlier. The advantages of OOP over structured programming include modularity and code re-use. As OOP has evolved over the years, things such as design patterns and principles have guided developers to write apps that are more adaptable to modification. This presentation will introduce OOP, its basic attributes (encapsulation, abstraction, inheritance, and polymorphism), the class mechanism, and some design principles that have led to the development of design patterns. Example C++ and Java source code will be reviewed to demonstrate the features of OOP and design principles.

Bio: Michael Redlich is a Senior Research Technician for a petrochemical research organization in Clinton, NJ. He has been a member of ACGNJ since 1996 and is its President and facilitator of the Java Users Group since 2001.

ED-201: Lockpick Village, Shawn Sheikhzadeh LOPSA-NJ/TOOOL NJ

Abstract: Continuing presentation on how to pick locks that is repeated at approximately half hour intervals.

Bio: Shawn Sheikhzadeh is founder of TOOOL New Jersey and has experience in instructing individuals on lock picking to increase their physical and virtual security posture. His particular interest is in bypass techniques and augmenting 3D printers to assist in generating keys for high security systems. Professionally he is a System Administrator.

*****11:20 am to 12:15 pm*****

ED-115: Workshop - Learn How Information Resources from IEEE can support Entrepreneurship continued.

ED-211: Industry, Academia, and Entrepreneurship: Insights from Riding the Metaphorical 3D See-saw, Nikhil Yadav, St. John's University

Abstract: Opportunities in computer science and engineering have hit a crescendo with the ability to pursue careers in three broad dimensions:

working for established and emerging IT companies (industry); research and teaching (academia); establishing technology startups (entrepreneurship). Making a decision as to which dimension to pursue involves dilemma resolution using the practical application of reason and revelation. Through my personal experiences as a rider on all three planks of this metaphorical 3D see-saw (as a college student, software engineering professional, doctoral researcher, startup co-founder, to my current role as a computer science assistant professor), I highlight challenges and resolutions in this decision making process. Finally, I present algorithms which can help in resolving internal conflicts and make an informed decision as to which side of the metaphorical 3D see-saw to sit on as an IT professional.

Bio: Nikhil Yadav is an Assistant Professor in the Division of Computer Science, Mathematics, and Science at St. John's University in New York. He completed his Ph.D. in Computer Science and Engineering at the University of Notre Dame. He co-founded Contect Inc., a startup, which was based on his doctoral research to find a correlation between speech and mild traumatic brain injuries, while he was a Ph.D. student at Notre Dame.

ED-209: Stock Market Timing Using Artificial Neural Networks, Donn Fishbein, Nquant.com

Abstract: Timing financial markets is essential in order to maintain a consistent rate of return. Buy and hold strategies work well only when the markets are heading north. Market downturns can be rapid and severe, and take years to recover from. This talk will address 1) the use of technical analysis in timing financial markets, 2) an introduction to artificial neural networks and genetic algorithms, and their application to technical analysis, 3) a practical system for timing the markets using these tools, and 4) the importance of testing and validation of trading systems, especially those whose inner workings may not be apparent.

Bio: Donn Fishbein, MD, PhD, is a physician and scientist who has investigated and traded the financial markets for 25 years. His main area of interest is mathematical systems with biological roots. For the past 15 years, his focus has been on hybrid artificial neural network and genetic algorithm systems, both for end-of-day trading and more recently for day trading systems. He has lectured on these subjects, describing profitable systems for trading equities, exchange traded funds, and index futures. He contributes trading signals to a neural net trading website. He offers consulting and private development of trading systems based on these technologies.

ED-208: Workshop on Keeping Your Wordpress Site Safe Continued

ED-207: Websites Are Well and Alive with the Best Yet To Come, Eva Kaplan, Consultant in Computer Education/STEM & STEAM

Abstract: Eva, TCF's Website Guru, will be sharing a selection from her *Best Websites* printed in the Trenton Computer Festival Proceedings of 1991, 1992, 1994, 1995, 1996, 1997, and 1998 that still thrive, but with a 21st century update. Some have essentially become the prototype for new websites or apps. Eva will also alert attendees to what is currently trending. Absolutely do not miss this 2016 version of Best Websites and Search Engines!

Bio: This year, Eva was inducted into her college's "Hall of Fame" as a "Pioneer in Computer Education." Her Computers and Kids summer camp, which ran from 1982 to 2013, received innumerable media recognitions and professional accolades. Her educational approach preceded STEAM - combining science, technology engineering, arts, and mathematics! The arts element came naturally as Eva is an exhibiting artist, art teacher, and pursued music studies extensively at The Third Street Music Settlement, privately, as well as having John Cage as a mentor. Eva has been a speaker for TCF since its inception in 1976.

ED-206: eBooks Textbooks for iPad - The Next Chapter in Learning, Dave Marra, Apple Education, Apple Inc.

Abstract: Discover how iPad is changing the learning landscape with eBooks Textbooks for iPad, eBooks Author, and iTunes U. First, with eBooks on iPad, we'll experience an entirely new kind of digital textbook that's dynamic, current, engrossing, and truly interactive. Next, we'll explore eBooks Author, a free app to create and publish amazing Multi-Touch textbooks for iPad. Finally, we'll learn about iTunes U, to design and distribute complete courses for iPad, featuring audio, video, books, and other educational content.

Bio: As a Senior Systems Engineer for Apple, Dave Marra has conducted thousands of technology presentations, keynote addresses and workshops for schools, Mac and PC user groups, businesses and other professional organizations across the United States and Canada. Certified as both an Apple Certified Technical Coordinator and an Apple Certified Systems Administrator, his specialty areas include digital multimedia, internet

technologies, accessibility and Mac/PC integration. For more information about Dave, please visit his web site at www.marrathon.com.

ED-113: Robotics - An Introduction, Seung-yun Kim, E/CE Dept. TCNJ

Abstract: Robotics is an emerging multi-disciplinary area in Science, Technology, Engineering, and Mathematics (STEM) that combines mechanical, electrical and computer engineering in the design and construction of robots to perform specific tasks. It requires a working knowledge of electronics, software, and mechanics. Before the coining of the term robotics, there was interest in ideas similar to robotics, namely automata and androids, dating as far back as 400 BC. Robots are used in industrial, military, exploration, home, academic, and research applications. Although the appearance and capabilities of robots vary vastly, all robots share the features of electronic sensors, and a movable structure under some form of autonomous electronics, computer, and software control. This presentation introduces the element of robotics with examples of uses and future trends. It is further enhanced through many multimedia based examples of the state of the art and further directions of research.

Bio: Seung-yun Kim is an Assist. Prof. in the Dept. of Electrical and Computer Engineering, and First Year Program Coordinator for the School of Engineering at TCNJ. He earned a Ph.D. and MS in electrical engineering at the University of Dayton and a BS degree in electrical engineering at Saint Louis University. His research interests include collaborative computing, human-centered systems, mobile and ubiquitous computing, and intelligent robotics. He was awarded over \$300,000 in grants. He has published over 20 refereed journal and proceedings papers, and serves as a reviewer for the NSF and several technical journals. He has extensive experience in outreach to K-12 programs, promoting STEM education.

ED-112: Bill Wong, Electronics Design Magazine

Abstract: Bill Wong, Technology Editor for Electronic Design, examines the latest trends at the 2016 Consumer Electronics Show including virtual reality, advanced automotive platforms and the Internet of Things.

Bio: William Wong is Technology Editor for Electronic Design with Penton's Design, Engineering and Sourcing group. He has worked on hardware and software projects for more than 40 years and has a BEE from Georgia Institute of Technology and an MS in Computer Science from Rutgers University.

ED-109: Workshop on Android App Development, continued

ED-107: Arduino Workshop, continued

ED-105: OOP Univ., Getting Started with C++, Mike Redlich, ACGNJ

Abstract: C++ is an object-oriented programming (OOP) language created by Bjarne Stroustrup at AT&T Labs that was first introduced to developers in 1985. It is one of the most popular programming languages and is usually the language of choice for applications such as systems software, device drivers, embedded software, and high-performance client/server applications. This presentation will introduce the C++ programming language, provide a brief overview, how to get started, review some C++ keywords, introduce the C++ class mechanism, and review a small, working C++ application. Since knowledge of OOP is vital in the development of robust applications, the OOP paradigm will also be introduced along with a brief discussion of the advantages of OOP over structured programming. An example C++ app will demonstrate how the attributes of OOP are utilized within C++ classes.

Bio: See OOP University ED-105 at 10:15 am.

ED-201: Lockpick Village Continued – see 10:15 am

*****12:25 pm to 1:20 pm*****

ED-115: 7 Success Secrets that Startups Can Learn from “Breaking Bad”, Alfred Poor, Health Tech Insider

Abstract: The popular TV show “Breaking Bad” has a lot of good lessons to teach entrepreneurs who want to start a business. Small business expert Alfred Poor leads you through seven essential strategic decisions with humor and a few comments for “insiders” without spoiling the show for those who have not seen it yet.

Bio: Alfred Poor is a dynamic speaker who has made presentations at seminars, private corporate training sessions, universities, and keynote addresses covering a broad range of topics. He engages his audience and delivers concepts and practical content that can be put to use right away.

ED-211: Homomorphic Encryption – The Plastics of the 21st Century, Brad Whitehead, Formularity

Abstract: This presentation explains what homomorphic encryption is, and how it is being used to revolutionize information technology and security. Encryption has proven to be an excellent means of securely protecting information, whether it is “in motion” or “at rest.” However, with existing encryption methods, the protected information must be decrypted when changing state from motion to rest, or before it can be processed. During the transition state and during processing, the decrypted information is subject to prying and malicious eyes. On contrast, homomorphic encryption is an encryption methodology that allows transitions, processes, and mathematical operations to be performed on encrypted information without decrypting it! While this sounds like magic, it’s based on sound, strong cryptographic principles. The presentation examines a practical example of the use of homomorphic encryption in databases. Without exposing either the search criteria or the encrypted contents, a homomorphically encrypted database can select and transform requested records. The presentation will include a live demonstration (OK, perhaps it does sound like a magic show, but the presenter promises not to wear a cape, twirl a wand, or utter incantations.)

Bio: See Personal Information Privacy, ED-211 at 10:15 am

ED-209: Internet Job\$\$\$, Donald Hsu, Dominican College

Abstract: Amazon, Expedia, Google, LinkedIn, Netflix, Priceline stocks are up. Yes, the economy is cooking. Retirees are working! Eighty percent of people have jobs from the Internet. Accounting needs 2.1 million by 2019 (Forensics, QuickBooks, PeachTree, MS Dynamics); application developers (C++, Java, C#) - thousands of jobs, but no applicants; cloud computing (Amazon, AWS, Dropbox, IBM, Microsoft Azure, Salesforce, VMware); Big Data (MS Sql server, Oracle 11g, SAP, Data Warehouse), starting at \$85,000; networking (Cisco, Info Security, A+, Network+, CIEE, CISSP); systems (Unix, Linux, Window 8/10); Analytics (IBM RSA, IBM SPSS, SAS, Hadoop, MapReduce, Hive), Social Media Manager (FaceBook, Twitter, Pinterest), Business Intelligence (Project/Product Manager, Global Finance, Sales/Marketing of Tech Product/Services). Computer majors are down 50 to 80% in US universities. This means more jobs for you and me. Bring a resume and get a free critique from the speaker.

Bio: Donald Hsu, PhD is a professor at Dominican College and President of the Chinese American Scholars Association (CASA). He has trained/taught 70 subjects, Accounting to Unix to >11,000 clients/students at AT&T, Bank America, Ford, Goldman Sachs, IBM, JPMChase, Mercedes Benz, Microsoft, Morgan Stanley, Siemens, Sony, Toyota, Volvo, and Verizon. CASA ran 19 successful E-Leader conferences in Asia and Europe, <http://www.g-casa.com>. He traveled to 79 countries, Africa, Asia, and Europe for international business. His profile with 6,100+ partners/clients can be found at LinkedIn and at <http://www.linkedin.com/pub/donald-hsu/0/15/A14>.

ED-208: Starting Out in Home Automation, Neil Cherry, Tech Mahindra

Abstract: A discussion and demonstration of the current state of Home Automation; commercial products, some Open Source hardware and software, and how home automation might be used with the Internet of Things. Neil will be demonstrating control of some common household items using a doll house, Arduino like ChipKIT boards, a RaspBerry Pi and various Home Automation controllers.

Bios: Neil Cherry is the author of Wiley's Linux Smart Homes For Dummies. He has been working with computers, electronics, and software since 1978; has been playing with X10 since 1982; and began automating his home in 1992 when a friend gave him an X10 computer interface. Neil started the Linux Home Automation web site and is a QA Engineer for Tech Mahindra.

ED-207: Defining the Next Generation of Learning Technologies, Christopher Brinton, Princeton University and Zoomi Inc.

Abstract: Distance learning has surged tremendously over the past decade. An increasing number of platforms for online learning have emerged, hosting courses for K-12, higher education, corporate training, and other scenarios. As course providers search for ways to enhance their services, online platforms are innovating on their ability to collect behavioral data about learners as they interact with course content. In this talk, I will describe the formation of Zoomi Inc (www.zoomiinc.com), a learning technology company founded in 2013 that hosts courses and provides instructors with predictive analytics from learning data. As the Head of Research, I will describe the key findings from our deployments thus far, and the key features that will define the next generation of learning technologies.

Bio: Christopher Brinton is currently a 5th year PhD candidate of Electrical Engineering at Princeton University. His research focuses on developing systems and methods to improve the quality of student learning, through big learning data analytics and social learning networks. Chris is a co-instructor of a Massive Open Online Course (MOOC) on Coursera, which reached over

250,000 students between 2012 and 2015, and a co-author of the undergraduate, interdisciplinary textbook *Networks Illustrated: 8 Principles Without Calculus*. He received the Yan Hao '94 Graduate Fellowship from Princeton for his research in 2015, and the Outstanding Teaching Assistant Award for his teaching in 2013. Chris is involved with the learning technology company Zoomi Inc. since its inception in 2013; he will become the Head of Advanced Research upon graduating from Princeton in 2016. Chris received his Masters' Degree in EE from Princeton in 2013, and his BSEE from The College of New Jersey (summa cum laude) in 2011.

ED-206: Reaching All Learners - Apple Technology for Special Needs, Dave Marra, Apple Education, Apple Inc.

Abstract: Discover new ways Apple is making exciting technology available to all learners as part of its ongoing commitment to accessibility. For over 25 years, the Mac has shipped with dozens of accessibility features built in, at no additional cost, allowing it to be used right out of the box by people with disabilities. Now, with the innovative new iPod and iPad, Apple continues to set the standard by taking accessibility and learning to a whole new level.

Bio: See iBooks Textbooks for iPad, ED-206, 11:20 am.

ED-113: New Ultra Low-Cost Wireless Embedded Systems are Making Internet of Things (IoT) Grow Exponentially, Joe Jesson, RFSigint Inc.

Abstract: The building blocks of IoT are embedded computer modules (CPU, I/O, DSP) with integrated wireless capabilities. These modules are becoming available at an incredibly low cost and are triggering an incredible growth in IoT -- 6.4 billion connected things will be in use by the end of the year! You can now embed wireless sensors on a server the size of a nickel! A \$3 tiny embedded 32-bit CPU with Arduino-compatible software, integrated GPIOs and A/D plus a 802.11 RF module are now available! Joe will show how this module can be integrated with sensors and applied to remotely provide data on temperature, humidity, water, pressure, heart rate, etc. He will also demo the outrageously expensive ESP8266 development system (\$12.00 – less than the cost of the iced-coffees he will consume during his talk).

Bio: Joe Jesson is CEO of RFSigint Inc., an IoT consulting company, CTO of Assurenet, a start-up Telematics company, and CTO of Able Devices, with a SIM OS wireless security product offering. He was co-founder and CTO of a new GE business unit, Asset Intelligence when he received the GE Edison Award at GE R&D in 2007. He has held technical management positions at Xact Technology, Amoco Oil R&D, BP Corporate and CAN, and engineering positions at Motorola and the University of Chicago's Jones & Searle Research Labs.

ED-112: Microsoft Windows 10 Revisited Workshop, David Soll, Omicron Consulting

Abstract: Microsoft's latest operating system, Windows 10, provides a vast departure from all previous versions of Windows. Microsoft has chosen to redesign the user interface from the ground up in order to support a wider array of devices such as PC's, Tablets, and Smart Phones. This drastic change means a change in how the operating system is used and how it integrates into other applications now that the "Cloud" is so prevalent. David Soll will demonstrate and talk about Windows 10, its pluses and minuses. He will discuss what "Cloud" integration means to you and the variety of editions of Windows 10. This talk is designed to help attendees better understand if a move to Windows 10 at this time is worthwhile or if they should continue with a previous version of Windows.

Bio: See Microsoft Office, ED-112 at 10:15 am

ED-109: Open Source Everything, James Dupont, Free/Libre Open Source advocate

Abstract: James will present an overview of the current trends in the free/libre open source software and open everything movement, and how it is relevant today.

Bio: Software Developer, Free/Libre Open Source advocate and conference organizer.

ED-107: Arduino Workshop, continued

ED-105: OOP Univ., C++Advanced Features, Michael Redlich, ACGNJ

Abstract: C++ is an object-oriented programming (OOP) language created by Bjarne Stroustrup at AT&T Labs that was first introduced to developers in 1985. It is one of the most popular programming languages and is usually the language of choice for applications such as systems software, device drivers, embedded software, and high-performance client/server applications. This in-depth seminar will cover some of the advanced features of C++. Four topics will be presented: overloaded operators, templates, exception handling, and

namespaces. Each of these topics will be individually discussed and sample code will be reviewed to demonstrate how each feature is implemented. There will also be an introduction to the Standard Template Library.

Bio: See ED-105 OOP Univ. at 10:15 am

ED-201: Lockpick Village Continued – see 10:15 am

***** 1:30 pm to 2:25 pm *****

ED-115: Intellectual Property (IP) Basics for Entrepreneurs, Hay Cheung, Myers Wolin, LLC

Abstract: This talk includes a brief discussion of various types of intellectual property (IP). Discussions will include how entrepreneurs can monetize their IP, and what IP strategies might work against major players.

Bio: Hay Yeung Cheung is a senior associate at Myers Wolin, LLC in Morristown, New Jersey. He is a Registered Patent Attorney with the United States Patent and Trademark Office, and is admitted in California, District of Columbia, and the Supreme Court of the United States.

ED-211: Best Practices and Models for Successful Technology Entrepreneurship, Frederick Kauber, Digiventures Media Group

Abstract: There has never been a more opportune time for technology professionals to pursue entrepreneurial ventures, as virtually every business model now has technology at its core. This abundance of opportunity also presents the burden of choice as technology professionals must decide whether to be entrepreneurs in established organizations or entrepreneurs in more speculative ventures, or perhaps a hybrid of both. This session will provide an overview of the entrepreneurial career options and business opportunities available to today's technology professionals and a framework for evaluating those opportunities. A variety of business models will be explored for consideration by prospective entrepreneurs including but not limited to consulting, productized services, and software as a service, and will range from those appropriate for bootstrapped financing to those requiring venture capital. The corresponding advantages and risks for the entrepreneur that are associated with each model will be presented in detail with appropriate best practices.

Bio: Fred Kauber is an accomplished executive and consultant with over 25 years of experience in entrepreneurial technology, marketing, product management/development and operations leadership roles. He currently serves as the CTO of CAIS Group, a financial product marketplace platform serving financial advisors, and is also the Founder and Managing Director of Digiventures Media Group, a boutique digital advisory firm. He has held leadership roles at Fortune 500 and entrepreneurial ventures alike, including IBM, D+B, Bigfoot Interactive, First Data and TRANZACT, and has helped lead multiple organizations to successful private equity exits. He is a professor and mentor at NYU and Columbia and holds an MBA in Finance and MS in Telecommunications.

ED-209: Social Media Opportunities: From Intern to VP of Strategy, Donald Hsu, Dominican College

Abstract: Social Media sites are hot such as Chive, Facebook, Flickr, Foursquare, Google+, LinkedIn, MySpace, Pinterest, Reddit, Shutterstock, Tumblr, Twitter, YouTube and hundreds of new ones being created every week, if not every day! You have 400 friends on Facebook, 500 followers on Twitter, 300 on LinkedIn; can you monetize this friendship? Yes, you can. Companies are hiring in Social Media for Intern, Associate, Coordinator, Analyst, Consultant, Mobile Marketing, Client Manager, Community Manager, Relation Manager, SEO Specialist, Strategist, Director, Vice President, and CEO. Salaries range from \$35,000 to \$120,000 per year. Using 10001 zip code, Monster.com generated 73 jobs; CareerBuilder.com had 638 openings; Dice.com 985 jobs; and Indeed.com 6,146 jobs; all in Social Media. Donald Hsu will give you specific details on how you can join a corporation as a Social Media expert. Don't miss this talk!

Bio: See Internet Job\$\$\$, ED-209 at 12:25 pm.

ED-208: Adventures in Home Automation, Pat Palmer, Academy of Natural Sciences of Drexel University

Abstract: In recent years, I upgraded my household with a whole-house energy monitor, a wireless "programmable" thermostat, programmable "smart" timers (for the birdcage and plants), dimmable smart LED light bulbs (so humans could be ready for sleep at the appropriate time), an Amazon Echo device (replacing the stereo system and many music CD's to provide voice recognition for controlling various other smart items), and a robotic vacuum cleaner. Some, but not all, are controllable via smartphone or tablet apps; all are intended to include at least partial smarts or automation. These gadgets have perplexed and puzzled visitors to the home who have not yet

encountered such automation. I will describe the devices, the problems they solved, their costs, any installation hassles, and new issues created because of them (plus workarounds). There will be slides and maybe a couple of short videos showing some of the items in action.

Bio: Pat Palmer has worked in software for decades, with periods spent at Bell Laboratories as a member of technical staff, others years as an independent consultant in industry, several years in college teaching of computer science, and currently is a programmer and system administrator for a group of algae scientists at the Academy of Natural Sciences of Drexel University.

Room ED-207: The Continuing Evolution of Console Computer Games, Roger W. Amidon, DX Computer Company

Abstract: The world of video games continues evolving due to the abundance of smartphones with the computing ability to compete with the hand held computer gaming systems of just a few years ago. For serious gamers, the dedicated console is still king, with XBOX, SONY PlayStation, and Nintendo at the forefront. We will be demonstrating the latest console games. As game "engines" improve, the more graphically stunning the games become. We will demonstrate the latest Zelda game. We will also discuss the convergence of video games with robotic warfare systems.

Bio: Roger has been giving a talk every year of TCF and, along with his sons and nephews, has been involved with video games since 1990. Although not currently actively developing games, he still maintains a strong interest in the technology.

ED-206: Reinventing Photography and Music with iPad, Dave Marra, Apple Education, Apple Inc.

Abstract: See and hear how iPad is reinventing photography and music, with exciting new apps for photo editing and music production. With its large, high-resolution Retina display, an incredibly responsive Multi-Touch screen, an amazingly powerful Apple-designed chip, the iPad is the ideal mobile device for photographers and musicians everywhere. Discover photography and music on iPad today!

Bio: See eBooks Textbooks for iPad, ED-206, 11:20 am.

ED-113: eBikes Have Arrived - Do Your Own Conversion And Save Money, Paul Bergsman, Author and Independent Consultant

Abstract: Efficient and reliable eBikes are here. You can buy one at your local bike shop. Or, you can retrofit your hybrid or mountain bike for a lot less money. Paul Bergsman will explain the differences between the different types of motors and mounting options as well as comparing the pros and cons of electric vs. gas engine motor conversions. Mr. Bergsman will have his eBike, built with a kit bought on eBay, available for display and inspection.

Bio: Paul Bergsman has degrees in electronics and education. He retired, after teaching in the Philadelphia Public Schools for over 27 years. He is the author of "Controlling the World with Your PC", which was in print for over 12 Years. Paul holds a U.S. Patent for an "Electro Mechanical Alarm Lock".

ED-112: Windows 10 Workshop Continued

ED-109: Developing for Amazon Echo, Barry Burd, Drew University

Abstract: Sure, Google is the search-engine giant. But Google also sells hardware. Echo is Amazon's entry in the intelligent voice-enabled assistant market. Unlike Siri or Google Now, Echo isn't mobile. Echo stays plugged into an outlet in your home. But Echo is completely hands-free, so you can talk to Echo the way Captain Picard talks to his ship's computer. In this presentation, Barry will demonstrate the Echo's capabilities and show you how to develop new capabilities for the Echo device.

Bio: See Android App Development Workshop, ED-109 at 10:15 am

ED-107: Arduino Workshop - continued - Arduino on network

ED-105: OOP Univ., Getting Start with Java, Mike Redlich, ACGNJ

Abstract: Java is an object-oriented programming (OOP) language created by James Gosling at Sun Microsystems that was first introduced to developers in 1995. It is one of the most popular programming languages for client/server web applications and there are many scripting languages (e.g., Clojure, Groovy) that seamlessly interact with Java. Much of Java's language syntax was derived from the C++, but as James Gosling once stated, "Java is C++ without guns, knives, and clubs." This presentation will introduce the Java programming language, provide a brief overview, how to get started, review some Java keywords, introduce the Java class mechanism, and review a small, working Java application. Since knowledge of OOP is vital in the development of robust applications, the OOP paradigm will also be introduced along with a brief discussion of the advantages of OOP over structured

programming. An example Java application will be used to demonstrate how the attributes of OOP are utilized within Java classes.

Bio: See ED-105 OOP Univ. at 10:15 am

ED-201: Lockpick Village Continued – see 10:15 am

***** 2:35 pm to 3:30 pm *****

ED-115: A Different Paradigm for High Tech Startups, Allen Katz, TCNJ

Abstract: This talk will discuss ways to start high tech companies. It will present a bootstrap approach that could be used as an alternative to attracting large investment dollars. This strategy has enabled Linearizer Technology, Inc. (LTI) to grow and prosper for over 25 years. Allen Katz founded LTI and other tech companies. He will discuss LTI's history and the importance of linearization in today's communication industry.

Bio: Allen Katz is a Prof. of E/CE at TCNJ. He has more than 25 years of experience in the microwave and satellite industries. He received a DSC and BS degrees in EE from NJIT and an MSEE from Rutgers Univ. He is founder and President of Linearizer Technology, Inc, Linear Photonics, LLC and Linear Space Technology, LLC. He is a Fellow of the IEEE and a past MTT-S Distinguished Lecturer. He holds 17 patents, has written more than 100 technical papers and has received numerous awards for his work.

ED-211: Best Practices in Entrepreneurship Workshop Continued

ED-209: The Business of Podcasting, Steve Lubetkin, Lubetkin Media Companies, LLC

Abstract: Increasingly, tech-savvy customers expect the businesses they patronize to deliver important news using a variety of information channels, including audio and video. Communications professionals who previously relied on email distribution and print newsletters and magazines must now be able to deliver important company news using audio and video podcasts. In this presentation, Steve Lubetkin, APR, Fellow PRSA, an award-winning producer of business audio and video programs, explains how to make audio and video podcasts (Internet-distributed audio and video programs) part of an organization's communications plan.

Bio: Steve is founder of Professional Podcasts, one of the first podcast production companies and now a division of The Lubetkin Media Companies LLC, an award-winning producer of business and organizational audio and video podcasts with more than three quarters of a million downloads. Steve is also the co-author with Toronto-based podcasting pioneer Donna Papacosta of *The Business of Podcasting: How to Take Your Podcasting Passion from the Personal to the Professional*, which focuses on the business aspects of producing audio programs for the Web.

ED-208: The Present and Future of Computer History, Evan Koblentz, MARCH

Abstract: The field of computer history has seen many exciting changes in the past few years. Collectible prices are rising, new people are bringing new ideas into our field, and a non-profit organization is emerging to help with structuring things. Come learn back to the future with us! No need for a Delorean.

Bio: Evan Koblentz is a computer historian. He is founder and president of Mid-Atlantic Retro Computing Hobbyists (MARCH). He often lectures and writes about computer history, and is a go-to source for the mainstream media.

ED-207: Evolution of Wireless Security, Joe Jesson, RFSigint Inc.

Abstract: Joe Jesson traces the application of wireless security from the Benchley Park WWII elite wireless intercept and decryption unit to the latest wireless PHY-layer intercept and decryption techniques enabled by \$10 Software-Defined Radios. If you want to sleep through the night after hearing Joe's talk, thinking your airplane's location cannot be spoofed, your car is safely locked, your garage door is secure, your safe's wireless controlled lock is secure, police dispatches and your cell phone's text messages are secure, and your new NEST home temperature is only under your control, etc., please do not attend Joe's talk! He describes the interception, I/Q-based demodulating, and decoding techniques employed by various alpha-agencies through today's advanced hobbyist and hacker communities. Tools such as GNURadio, GQRX, SDR#, Audacity, Wireshark, Baudline, and baseband Digital Voice encoding/decoding, and digital trunking will be presented and demoeed. Don't miss this amazing and acclaimed talk.

Bio: See New Low-Cost Wireless, ED-113 at 12:25 pm

ED-206: NAO Operated Autonomously Navigating Mechanical Vehicle, Sarah Dresher, Phillip Baldoni and Evan Miller, TCNJ

Abstract: A NAO robot is a highly capable humanoid robot, standing at 58 centimeters tall. They are designed to seamlessly interact with humans while maintaining a vast range of complicated abilities. The purpose of this project is to push the limits of the NAO's abilities through the design and addition of artificial intelligence modules limited to the scope of operating a vehicle. For this a mechanical vehicle will be constructed that is designed specifically for the NAO robot such that it can accelerate, decelerate, and steer in a desired direction. Using voice commands, a human interacting with the NAO can indicate a desired destination in which the NAO then navigates towards.

Bio: Sarah Drescher is a senior management engineer major at TCNJ with a electrical specialization. Her plan after graduation is to pursue an MBA and a degree in systems engineering. She is also pursuing multiple job opportunities in engineering. Evan Miller is a senior at TCNJ pursuing a ME degree. He transferred to the college after obtaining his AAS from The County College of Morris. He is currently seeking an ME position. Phil Baldoni is a computer engineering senior at TCNJ. After graduation he plans to work toward a PhD in artificial intelligence. He works part time for a software company developing a web based accreditation tool.

ED-113: Solar Photovoltaic: "Theory, history, and application, Jonathan Allen, RF Electronics Consulting

Abstract: Jonathan Allen will present the theory, history and application of solar photovoltaic.

Bio: Jonathan Allen received his Ph.D. in physics from Washington University in St. Louis with a dissertation on optical measurement of atmospheric aerosols. Since 1983 his career has been dedicated mainly to photovoltaic R&D. He has also taught electronics engineering and worked in RF power systems design. He is currently an independent consultant, and for the past three years has worked as a volunteer restoring and documenting the Sarnoff Collection at TCNJ.

ED-112: Unlimited Scalability in the Cloud: A Case Study of Migration to Amazon DynamoDB, Steve Saporta, SpinCar

Abstract: When SpinCar started to outgrow the read and write capacity of its SQL database, it turned to Amazon's DynamoDB, a NoSQL database in the cloud. In this presentation you will learn about: 1) Migrating from a SQL database to DynamoDB with no data loss and no downtime, 2) Optimizing the use of indexes with DynamoDB, 3) Capacity planning for DynamoDB (or "What the heck is an RCU, anyway?"), 4) Cost comparison of DynamoDB vs. a SQL database, 5) Data backup strategies, and 6) Using DynamoDB with Amazon SQS to achieve unlimited scalability. Actual performance and cost data from SpinCar's migration will be shared with the audience. This presentation is suitable for anyone with a moderately technical background and an interest in cloud computing. Programming knowledge is not required.

Bio: See Hosting, ED-209 at 10:15 am

ED-109: Introduction to OpenStack, Douglas Ferguson, ACGNJ/EMC

Abstract: The MITS Altair 8800 is the most famous of the hobby computers from the mid-1970s. You'll learn the basics of how it works and what it can do. Prepare to be amazed as we demonstrate how you would bootstrap this machine and then load BASIC into it, on a paper tape, by using a teletype machine. You will never again complain about your PC's slow boot-up time.

Bio: Doug Ferguson is a Principal Support Engineer for the Advanced Software Division of EMC supporting a variety of network management products. He is also a computer hobbyist who loves learning about new technologies. Having taught himself to program in high school, he continues to explore numerous areas of computers including video editing, web design, visualization, and robotics. He is the "Network Czar" of his local church, Bethlehem Evangelical Free in Randolph, NJ. Doug has been a presenter at TCF since 2002.

ED-105: OOP Univ., Java Advanced Features, Michael Redlich, ACGNJ

Abstract: Java is an object-oriented programming (OOP) language created by James Gosling at Sun Microsystems that was first introduced to developers in 1995. It is one of the most popular programming languages for client/server web applications and there are many scripting languages (Clojure, Groovy) that seamlessly interact with Java. Much of Java's language syntax was derived from the C++, but as James Gosling once stated, "Java is C++ without guns, knives, and clubs." This in-depth seminar will cover some of the advanced features of Java. Four main topics will be presented: Java Beans, exception handling, generics, and Java Database Connectivity (JDBC). Each of these topics will be individually discussed and sample code will be reviewed to demonstrate how each feature is implemented.

Bio: See OOP Univ., Room ED-105 at 10:15 am

ED-201: Lockpick Village Continued – see 10:15 am

***** 3:40 pm to 4:35 pm *****

ED-115: Featured Keynote Speaker: The Driving Force in Intelligent Safety, Chris Brogan (see front page)

Abstract: The trials and tribulations of starting, and growing, a new emerging-technology telematics/machine-to-machine communications (M2M)/internet of things (IoT) business in one of the toughest markets, New York City will be discussed by Chris Brogan. He will start by presenting the AssureNet product, and treat the audience as prospective investors. His adventures in raising capital from angel investors, venture capital fund investors, and private businesses are both humorous and sometimes tragic -- including an investor's CFO having a complete mental breakdown ... the same week they were closing over \$5 Mil in funding! Chris will address startup business issues such as business plan execution, cash flow management, and state and federal regulations. He'll also describe emerging technology forces that require *deep-knowledge* to address obsolescence issues. Despite the challenges, Chris and other founders love the freedom of controlling their own destinies, where the sky is the limit. AssureNet securely collects and manages the torrent of data generated by vehicle systems and sensors to manage risk, prevent accidents and allow for the precise determination of fault.

Bio: Christopher Brogan – Chairman, AssureNet Inc. Chris was the founder and President of FleetRisk Advisors. Prior to FleetRisk, he founded telematics pioneer Safety Intelligence Systems funded by ISO, the leading provider of insurance data, with the goal of developing the first vehicle crash data repository. Chris and the AssureNet team are well known within the transportation and insurance industries for delivering insurance and telematics-driven services that reduce the frequency and severity of loss. In addition to pioneering work in 'black-box' technology at Safety Intelligence Systems, where they developed the first Video Event Data Recorders and successfully completed the Drive Atlanta program with the National Highway Traffic Safety Administration and Georgia Tech, they founded FleetRisk Advisors – the leading predictive analytics telematics company – and developed TRAC, Transportation Risk Analytics Center. TRAC was licensed by Qualcomm and marketed as Qualcomm's Predictive Performance System, a proven life-saver, keeping fatigued and impaired drivers off our highways, and increasing fleet and underwriting profitability. FleetRisk Advisors was acquired by Qualcomm. Chris served as a Naval Aviator for eight years, received a B.S.E.E. from Manhattan College and attended Columbia University's EMBA Program.

Sarnoff Collection Tours 9:00 am to 3:00 pm RWH 2nd Floor

The Sarnoff Collection was originally established by RCA in 1967 as the David Sarnoff Library. Over the decades, the collection grew to include a museum, archives, and library. The museum collection, which comprises more than 6,000 artifacts related to the major developments in communication during the 20th century, was donated to The College of New Jersey in 2010. At the same time the library and archival holdings, which include Sarnoff's papers and memorabilia; 25,000 photographs; and thousands of notebooks, reports, and publications related to the histories of RCA and the RCA Laboratories, were transferred to the Hagley Museum and Library in Wilmington, Delaware.

The Sarnoff Collection at TCNJ includes artifacts related to David Sarnoff's life; RCA, NBC, Victor Talking Machine Company, and Marconi Wireless Telegraph Company of America; the history of radio, television, broadcasting, audio and video recording and reproduction, electron microscopy, radar, vacuum tubes, transistors, solid-state physics, semiconductors, lasers, liquid-crystal displays, integrated circuits, microprocessors, computers, communications satellites, and other technologies RCA played an important role in inventing and developing; and some of the many people, beside Sarnoff, who made these technologies work.

The research, cataloguing, and imaging of the Sarnoff Collection is an ongoing project. The information in the collection database, available through this website, is continuously updated as new or expanded information becomes available. Visitors to this website are encouraged to submit comments in the box included with each object record and to share their knowledge about the collection.

Saturday	Starting a Business	IT-PC Entrepreneurship	Computer Business	Applications	Games & Technology	Education & STEM	Technology & Hardware	Microsoft Office 2016 & Trends	Software/App Dev.	Arduino Workshop	OOP University	Amateur Radio	Exhibits
10:15am to 11:10am	Workshop on How IEEE Information Resources A. Poor	Personal Info Privacy B. Whitehead	Comparison of Leased Servers, Cloud Hosting & IaaS S. Saporta	Workshop on Keeping Your Wordpress Site Safe L. Justice	GPS Secrets Updated C. Lewart	Getting Started: PCs/Tablets, Internet & Digital Photography H. Hritz	SDR Dongle "eye" to Wireless World M. Filippi	Microsoft Office 2016 D. Sol	Workshop on Developing Apps for Android B. Burd	Introduction to Arduino (Presentation) Hands-On with Arduino (Limited Space; Bring Your Laptop!)	Introduction to OOP Design Principles M. Redlich	Ham Gram 101 Ham Radio License Exam Preparation Course Ham Gram Session begins at 9:00am and goes to 12:30pm Practice Exam given at 1:30pm Walk-in Real Exam given at 3:40pm	Special Exhibits and Demos Lockpick Village Workshop on How to Pick Locks, Repeated Hourly in Room ED-201 Quadcopter Demo Digital Photo Exhibit Vintage Club/Org Tables Tour the Samoff Museum of Historic Technology (9am-3pm in RWH, 2nd Floor)
11:20am to 12:15pm	Entrepreneurship: Riding the 3D Seasaw N. Yedav	Entrepreneurship: Tipping Neural Networks D. Fishbein	Stock Market Timing Using Neural Networks works D. Fishbein	Get Started in Home Automation N. Chery	Weblogs are Well and Alive with the Best Yet to Come! E. Kaplan	iBooks Textbooks for iPad D. Marra	Robotics - An Introduction S. Kim	2016 CES Trends in Consumer Electronics B. Wong	Open Source Everything J. Dupont	Arduino on the Network	Getting Started with C++ M. Redlich	Ham Gram License Exam Preparation Course Ham Gram Session begins at 9:00am and goes to 12:30pm Practice Exam given at 1:30pm Walk-in Real Exam given at 3:40pm	Lockpick Village Workshop on How to Pick Locks, Repeated Hourly in Room ED-201 Quadcopter Demo Digital Photo Exhibit Vintage Club/Org Tables Tour the Samoff Museum of Historic Technology (9am-3pm in RWH, 2nd Floor)
12:25pm to 1:20pm	7 Success Stories Startups you can Learn From "Breaking Bad" A. Poor	Homomorphic Encryption B. Whitehead	Internet JobSS\$ D. Hsu	Adventures in Home Automation P. Palmer	Next Gen Learning Technologies C. Brinton	Apple Technology for Special Needs D. Marra	Low-cost Embedded Wireless Systems Making IoT Explode J. Jesson	Introduction to Windows 10 D. Sol	Developing for Amazon Echo B. Burd	Arduino on the Network	Advanced C++ M. Redlich	Ham Gram License Exam Preparation Course Ham Gram Session begins at 9:00am and goes to 12:30pm Practice Exam given at 1:30pm Walk-in Real Exam given at 3:40pm	Lockpick Village Workshop on How to Pick Locks, Repeated Hourly in Room ED-201 Quadcopter Demo Digital Photo Exhibit Vintage Club/Org Tables Tour the Samoff Museum of Historic Technology (9am-3pm in RWH, 2nd Floor)
1:30pm to 2:25pm	Intellectual Property (IP) Basics for Entrepreneurs H. Cheung	Workshop on Best Practices for Successful Tech Entrepreneurship F. Kauber	Social Media Opportunities D. Hsu	Present and Future of Computer History E. Koblenz	Evolution of Console Computer Games R. Ambion	Reinventing Photography and Music with iPad D. Marra	Solar Photovoltaics: Theory, History & Application J. Allen	Scalability in the Cloud S. Saporta	Introduction to OpenStack D. Ferguson	Arduino on the Network	Advanced Java M. Redlich	Ham Gram License Exam Preparation Course Ham Gram Session begins at 9:00am and goes to 12:30pm Practice Exam given at 1:30pm Walk-in Real Exam given at 3:40pm	Lockpick Village Workshop on How to Pick Locks, Repeated Hourly in Room ED-201 Quadcopter Demo Digital Photo Exhibit Vintage Club/Org Tables Tour the Samoff Museum of Historic Technology (9am-3pm in RWH, 2nd Floor)
2:35pm to 3:30pm	A New Paradigm for High-Tech Startups A. Katz		The Business of Podcasting S. Lubelkin		Evolution of Wireless Security J. Jesson	Robot-Driven Autonomously Navigated Mech. Vehicle S. Dresner et al.							
3:40pm to 4:35pm													

Featured Keynote Speaker: Chris Brogan, CEO and Founder, AssureNet, will talk on "The Driving Force in Intelligent Safety" in Room ED-115

WiFi Connect: SSID: Guest-at-TCNJ3
Login: guest1323 Password: y2azataq



