SIMGHOSTS
THE GATHERING OF HEALTHCARE SIMULATION TECHNOLOGY SPECIALISTS

July 30 - August 2, 2019 Miami Florida

FIU
Nicole Wertheim
College of Nursing & Health Sciences
Simulation Teaching & Research (STAR) Center
Dear Simulation Specialists,

I am excited to welcome you all to our 9th year of SimGHOSTS event in the beautiful state of Florida. This event would haven't been possible without the support of our amazing team of staff and volunteers and the staff of Florida International University. I am proud that SimGHOSTS is a part of the largest, most innovative and passionate group of individuals dedicated to supporting healthcare simulation around the world. Our theme for SimGHOSTS USA 2019 is **Accelerate opportunity**, with subthemes **identify opportunity, create opportunity, embrace opportunity, and empower others through opportunity**.

The SimGHOSTS mission is to empower its community by providing them with the opportunities to meet their like-minded healthcare simulation specialists and simulation industry under one roof to share their knowledge of healthcare, technology, and simulation, and to further develop their skills and collaborations. We encourage each of you to embrace this event to network with each other, learn from our amazing presenters, and to take what you learn from this event and share it with your other simulation colleagues.

We are proud to have signed more than 10 international affiliations with organizations such as Society for Simulation in Healthcare SSiH, INACSL, ASPIH, PASSH, IPSS, Simulation Australia, ASPE, SimONE, HiMSS, Patient Safety Movement and collaborated with Society in Europe for Simulation Applied to Medicine (SESAM) over the years. This year we are excited once again to collaborate and work with S3 partners Singapore Institute of Medical Simulation (SIMS) and SESAM for S3 2019 which will be held in Singapore from Oct 22nd to Oct 25th, 2019.

Every member of the healthcare team is vital to delivering optimal patient care, just as you are critical to creating a consistently positive training environment. We want to be your advocate in the industry and make sure you are empowered to use your knowledge to deliver cost-effective, user-friendly educational environments that facilitate learning.

Thank you for taking the step to make yourself a better healthcare simulation specialist, facilitator, educator, and team member by joining us in our quest. Please take your time here to learn something new and meet with other members, both novice and veteran. We hope you discover and learn as much as we have and meet other great colleagues who have the same passion as you have. Make sure to take advantage of this opportunity to learn tips and tricks directly from the source.

We look forward to meeting you in class, at social events, and online at SimGHOSTS.org.

Welcome to SimGHOSTS!

Ferooz Sekandarpoor  
President: The Gathering of Healthcare Simulation Technology Specialists
MEETING OBJECTIVES

The SG19USA program highlights the use of technology and virtual environments in simulation programs and aims to bring the spectrum of simulation professionals together to improve learner and patient outcomes.

The meeting objectives are to:
• Meet with other Simulation Champions and share best practices
• Network and build long term industry relationships with peers and vendors
• Discuss and develop professional community needs and standards.

The SG19USA Program includes:
• High-fidelity manikin hardware & software operation, maintenance and repair
• Audiovisual system design and integration, operation, and troubleshooting
• 3D Printing, casting and molding, fabrication and prototyping.
• IT Networking and debugging
• Career development and staff management.
• Beginner to advanced moulage creation and application
• International healthcare simulation education practices
• Virtual environments and serious games
• A dedicated track of presentations conducted in Spanish.

WHO SHOULD ATTEND SG19USA?

Anyone involved in the technical operation of a clinical simulation lab, or clinical educators who contribute to the day-to-day operation of simulation spaces. This includes AV and IT department staff members who are responsible for supporting the simulation program.

Educators, game developers, academics and clinicians who are interested in learning more about how to use different simulation modalities to achieve learner outcomes and how to collect data on simulation activities.

Anyone evaluating clinical simulation technology for purchasing decisions should strongly consider attending as many major industry vendors exhibit and/or demonstrate their range at SimGHOSTS events.
REGISTRATION INFORMATION

Pricing
Early Bird - Ends June 14th USD $495
Regular - USD $625

Pre-Conference Workshops:
CHSOS Readiness Review Course $275
SIMBODIES Full Day Moulage - combines Basic and Advanced workshops $350
SIMBODIES Basic Moulage Techniques Workshop $200
SIMBODIES Advanced Moulage Techniques Workshop $200
Introduction to Scenario Programming with Laerdal LLEAP & SimDesigner presented by SimGHOSTS $75
Advanced Scenario Programming with Laerdal LLEAP & SimDesigner presented by SimGHOSTS $75
Simulator Maintenance of SimMan 3G Presented by Laerdal Medical $75
Demystifying the Conference Submission Process and Presentations: Tips and Techniques for Success $75
Fast and Effective Uses of Moulage for Manikins and Task Trainers $75

In-Conference Workshops: these workshops require additional materials and participants will make or receive a product to take home with them.
SIMBODIES Stop the Bleed $25
Revenge of the Cyst $25
Casting Silicone Moulage for Realism and Repeatability $25
Making Low Cost Task Trainers $25
Electronics Basics - Warming up to Soldering and Current Trends in Electricity $25
Trach Model Adaptation for Realism $25
Mass Moulage: Moulage for Role Players in Large Scale Simulations $25
Conceptos básicos de Moulage: aplicación de técnicas artísticas para mejorar el realismo del simulador $25

Refunds
Refunds are available until June 14th 2019. Partial refunds are available after this date. Registrations are transferable.

Save 10% on your annual SimGHOSTS.org subscription by subscribing or renewing with your SG19USA event registration. Have access to online courses, recordings of sessions from previous events and more! See page 7.
Exceptional healthcare begins with a strong education background. The Simulation Teaching and Research (STAR) Center at Florida International University is a 20,000 square foot learning space dedicated to providing the most realistic hospital experience possible for various healthcare programs, including undergraduate, graduate, and doctoral nursing; physical therapy; occupational therapy; and athletic training.

Housed at the Nicole Wertheim College of Nursing and Health Sciences, the STAR Center is the only simulation center in South Florida that is fully accredited by the Society for Simulation in Healthcare. The STAR Center provides various clinical simulations and fundamental skills building experiences while utilizing a number of high-fidelity manikins, each providing a unique educational opportunity that are invaluable in clinical practice. The STAR Center proudly boasts two fundamental skills learning labs, eight fully functional simulation suites and dedicated debriefing spaces for complete student immersion in the clinical environment.

High quality healthcare includes an emphasis on optimal recovery. The Collaborative Advanced Rehabilitation/Research & Education Center – aka CARE Center- provides superior resources and techniques to improve rehabilitation research methods with significant impact on the life quality of individuals with disabilities. The CARE Center of the Nicole Wertheim College of Nursing & Health Sciences truly embodies the interdisciplinary focus, evidence-based practice, and holistic approach to patient care that lies at the heart of the college’s mission and vision. The Center’s focus on therapy and rehabilitation perfectly complements the clinical focus of the STAR Center with equally realistic clinical rehabilitation settings that support teaching and research. The flexible modular laboratories of the CARE Center are classified into two categories:

**Core Research Laboratories** – developing advanced rehabilitation approaches and technologies to enhance the quality of life for people with physical or mental disabilities
- Human Performance Analysis Lab
- Driving Simulation Lab
- Communication Skills Lab

**Education Lab** – providing real-world rehabilitation environments for students to implement and hone therapeutic practice
- Pediatric Lab
- Rehabilitation Lab
- Speech & Language Skills Lab
- Therapeutic Activities Lab
- Neuromusculoskeletal Lab

Visit the [STAR Center website](#) to learn more.

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**SimGHOSTS.ORG  @SimGHOSTS #SG19USA**
SimGHOSTS have negotiated a special discounted rate for event attendees at the Courtyard by Marriott at Dolphin Mall and Hilton Garden Inn & Homewood Suites at Dolphin Mall. Both include free parking, wifi and breakfast and FREE bus transportation will be provided between the accommodation and event venue for attendees. Reservation links are available below or on the SimGHOSTS.org SG19USA event page.

**Courtyard by Marriott at Miami Dolphin Mall**

The Courtyard at Miami Dolphin Mall features a 24-hour market and full business center, fitness center, outdoor pool and cafe serving Starbucks coffee. Rooms have elegant marble bathrooms, HDTV with premium channels, complimentary bottled water, mini fridge, coffee maker, and large windows with city views.

Rate: single/double occupancy, breakfast, parking and wifi $125 plus 13% tax. Reserve your room here.

**Hilton Garden Inn & Homewood Suites Miami Dolphin Mall**

Hilton Garden Inn and Homewood Suites have a 24-hour pantry market, full-service restaurant, fitness center, business center, ATM, putting green and outdoor pool. Rooms have a microwave, mini-fridge, coffee maker, HDTV with premium channels.

Hilton Garden Inn: Standard King Room single/double occupancy, breakfast for one person, parking and wifi $139 plus 13% tax. Reserve your room here.

Hilton Homewood Suites: King Suite single/double occupancy, breakfast for one person, evening social, parking and wifi $139 plus 13% tax available for 3 night stay July 30-August 2 only. Reserve your room here.
TRANSPORTATION

FROM MIAMI AIRPORT (MIA)/ FORT LAUDERDALE AIRPORT (FLL) TO HOTEL
The closest airport to both the hotel and venue is the Miami International Airport, alternatively Fort Lauderdale International Airport is approx 45 minutes drive from the hotels and venue. As flights may be delayed by weather, please consider arriving a day early so that you don't miss out on any event content.

By Rental Car: MIA offers rental car stations for almost every major rental company such as Alamo, Hertz, Enterprise and more. At MIA, use the 3rd level Skyride (moving walks) to access the MIA Mover station, which will take you to the MIA Rental Car Center. At FLL the Rental Car Center is next to Terminal 1.

Airport-to-Hotel Shuttle Service: The hotels do not provide their own shuttle service however SuperShuttle will provide transport between FLL or MIA and the hotels. For prices and reservations go to www.supershuttle.com

Taxi/Rideshare: At MIA the taxi and rideshare pick up location is on the ground level outside the baggage claim area. At FLL the pick up location is on the lower (arrival) level. For rideshare pick up look for the curbside signage with a cellphone symbol. The SimGHOSTS app has a rideshare option for those who wish to arrange to share a taxi or rideshare with other attendees.

BETWEEN HOTELS AND FIU STAR CENTER
Shuttles: SimGHOSTS is providing free shuttles to and from the official hotels and the venue at the beginning and end of each conference day.

Driving: The FIU campus is located approximately 3 miles away from the hotel, which translates to about a 10-15 minute drive depending on traffic. Parking is available at the venue for $5 per day.

Taxi/Rideshare: This is the recommended form of transport for those who do not plan to use the free SimGHOSTS Shuttle and do not have their own vehicle.

Public Transport: Miami-Dade Transit has bus services that service the hotel and venue areas. Walking short distances may be required and the entire trip may take between 30-60 minutes. The bust stop at Dolphin Mall is closest to the Hilton Garden Inn hotel so we advise staying at this hotel if you plan to use public transport. Route planner and payment apps are available at the Miami-Dade transit website.
The learning doesn't stop at SimGHOSTS events! Join over 3,000 simulation champions from around the world communicating every day answering questions, sharing tips, and creating content! During registration you will have the option to join or renew a 12 month subscription to SimGHOSTS for just $67.50 - a 10% discount!

An annual SimGHOSTS.org website subscription provides significant benefits for you and your simulation team:

**Video Library** - Over 300 recorded sessions from previous SimGHOSTS events are immediately available to watch. Topics range from AV system design to daily utilization increases and from manikin programming to moulage creations. Instantly learn from global experts and leading vendors!

**Weekly or Daily Newsletter** - Follow all the latest updates with a weekly newsletter of blog and forum topics.

**Forums Discussion Groups** - Ask questions, gather answers, search for previous conversations, and share your successes on the only permanently saved forums dedicated to the operation of simulation technology.

**Document Database** - Download community provided templates, example forms, policy and procedure guides, job descriptions, standard operating procedures, tutorials, and more.

**SimGHOSTS Career Center** - Receive a $99 discount code to post free/discounted jobs.

**Online Training Programs** - Subscribers have exclusive access to our online training courses covering a range of simulation technology & operational topics as well as core career and employability skills.

**JOIN OR RENEW DURING SG19USA EVENT REGISTRATION**
FULL SERVICE TECHNOLOGY SOLUTIONS FOR YOUR SIMULATION LAB

www.level3healthcare.com
Faculty and staff development plans are a critical component for achieving the strategic goals and objectives of a simulation program. Industry best practices consistently identify the need for a formally trained staff and ongoing education to support and sustain simulation-based education programs.

Laerdal’s team of educators have years of industry-related experience and can provide a wide range of options to support your faculty and staff development.

Visit Laerdal.com/EducationalServices to learn more about Laerdal’s Educational Services portfolio.

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Whether you’re running a single simulation event or thousands, EMS’ SIMULATIONiQ™ uses the latest web-based technologies to simply and seamlessly capture, organize, and analyze the full spectrum of your clinical skills and mannequin-based simulation efforts. Working alongside subject matter experts, we serve as the driving force behind numerous consumer-centered innovations that continue to move the medical simulation software markets forward with breakthrough technologies. The results are tangible: greater visibility, usability, marketability, adaptability, scalability, measurement, and ROI.

EMS is dedicated to innovation. We offer complete turnkey solutions for clinical simulation training environments that include high stakes exams with standardized patients and integration with simulators, audio-video technology, design and planning, engineering, configuration, installation, training, and one-call support for both software and hardware.

With our suite of Companion Apps, users can maximize the return on investment (ROI) of their SIMULATIONiQ solutions to optimize simulation center operations with technology that’s right at their fingertips. And in support of the curriculum of tomorrow, we’re excited to announce our newest innovation: Competency.AI. This powerful artificial intelligence platform tracks learner performance across competencies and Entrustable Professional Activities (EPAs), helping institutions manage and measure their Competency Based Medical Education curriculum.

Although the success of your clinical simulation program largely relies on educators, as simulation management technology and methodology become more sophisticated, it is important for sim tech staff to be an ongoing partner for planning, maintenance, and problem solving. Sim tech staff need to interact not only with internal stakeholders but also with external simulation center management companies such as EMS to ensure that: all communication lines are open to make sure needs and requirements are perfectly clear; continuous engagement is maintained before, during, and after a clinical simulation center is built; common ground is established between the educators, planning, and tech staff for successful outcomes.

Since its founding in 1994, EMS has established a reputation for delivering superior and dependable solutions and providing unprecedented levels of customer service and support keeping our customers on the leading edge.

Find out more about SIMULATIONiQ here
Innovations For Life
MedVision is an innovative, fast-growing company, specializing in development and production of high-end medical simulators.

North America South America
USA
6555 Sanger Road, Orlando, FL 32827
1 407-961-1330
Sales Inquiries/Customer Service
mail@medvisiongroup.com

Find out more about MedVision here

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Is your high fidelity simulation experiencing low fidelity, due to poor sound quality? Stress no longer! Lecat’s Ventriloscope will show you how to incorporate high quality sounds into your mannequin scenarios or even simulate abnormal auscultation findings on Standardized Patients.

Heart and Lung sounds can be synchronized to the pulse and breathing of a mannequin or SP. Low cost and easy to use. You can even use any MP3 file you own on our device!

Increase throughput of your sim center by having the SP operate the device while freeing the sim tech to do other activities.

Check out our full sound library of heart, lung, bowel, vascular, and percussion files and our new line of products too. Increase the reality of all your mannequin and SP scenarios quickly and simply!

Simulaids began producing trauma moulage products in the town of Woodstock in 1963. The first order was received and we were on our way. Simulaids’ moulages were the first commercially available wounds for EMS practice.

Since our formation, we have led the industry with many firsts which include: “Sim” in our name, CPR Baby manikins, Fire and Water Rescue Manikins, intubation heads manufactured of silicone, hand held Personal Data Assistants for controlling patient simulators, and new silicone moulages offering realistic details and a lifelike feel.

Simulaids is proud to currently offer patient simulators controlled by the iPad.

Click Here to Learn More

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CAE Healthcare is a healthcare training partner of choice, delivering leading-edge simulation-based solutions to hospitals, physicians, nurses, students, emergency responders and the military around the world. With a mission to improve patient safety and outcomes, CAE Healthcare develops each product in partnership with clinicians and clinical educators whose aim is to ensure physiological accuracy and educational relevance. Visit our booth to learn about our advanced patient, imaging and interventional simulators, evidence-based curriculum and CAE LearningSpace for simulation center management and debrief. Ask about the CAE Healthcare Academy’s professional services and our Turnkey Solutions.

Find out more about CAE Healthcare here

Echo Healthcare is a progressive health care simulation and technology company, focused on improving educational experiences through innovation. By providing a level of service never before seen in the industry, Echo Healthcare promises to deliver on the commitment of putting customers first! With over 20 years of medical simulation experience, the team at Echo Healthcare understands that customers need products and services that meet today's demand. Echo Healthcare is proud to represent select global brands that are aligned with our mission to improve patient care through education. To learn more, check us out to see how we are redefining service excellence and innovation!

Find out more about Echo Healthcare here
Gaumard is committed to providing innovative simulation solutions for health care education. Our products today are built on a foundation of knowledge and experience in maternal, neonatal, emergency, nursing, respiratory, life support, trauma and surgical simulation that spans over 65 years. We offer unrivaled Tetherless “Care in Motion” simulation technology that allows care givers the opportunity to treat simulators like real people in any teaching environment. We are the pioneers and the industry leaders. Educators worldwide rely on Gaumard and our diverse line of simulators to train today's medical students and health care professionals. Our philosophy remains “Leadership through Innovation.”

Find out more about Gaumard here

MEDIA PARTNERS

Improving Performance, Improving Outcomes
Medical Training Magazine aims to promote the best education and training practices for the next generation of healthcare professionals.

Find out more here

HealthySimulation.com: Healthcare Simulation resource website with the latest news, job listings, product demos, research highlights, conference coverage and more!

Find out more here

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Today and into the future, Cardionics’ approach continues to set the pace for auscultation products and services through the development of unique, interactive, and experiential systems that integrate seamlessly into classroom, clinical, and tele-health applications.

Click Here to Learn More

Pocket Nurse is a leading manufacturer and distributor of medical supplies and equipment for simulation and healthcare education. A nurse-owned-and-operated company, Pocket Nurse has been a trusted partner in nursing, EMS, pharmacy, and allied healthcare education since 1992.

Click Here to Learn More

3D Systems offers a complete line of Simbionix medical training simulators that include the LAP Mentor laparoscopic surgical simulator, U/S Mentor ultrasound simulator, RobotiX Mentor for robotic surgery, GI-BRONCH Mentor for GI endoscopy and flexible bronchoscopy training, and many more that span medical specialties and skill levels. Interested in a demo at your institution or want to learn more about our trade-in program? Contact us at healthcare@3dsystems.com.

Click Here to Learn More

KbPort is a software and hardware development company, with a specialization in medical education, that designs recording, debriefing and simulation-based solutions. KbPort has developed the next generation of simulation teaching tools in KbPort Simplicity. Realistic, fully-integrated and functional, Simplicity enables institutions to achieve a more positive educational outcome through the use of technology.

Click Here to Learn More
The VALT solution is an incredibly simple but powerful tool that can be learned in minutes. Basic observation and recording tasks are often picked up intuitively without the need for any extensive training or technical support. Our interface minimizes complexity and points of failure so that your recording system is always there when you need it for critical simulation observation, recording and debrief tasks.

[Click Here to Learn More]

7-SIGMA Simulation Systems (7S3) is proud to present the 7S3 Modular, High Fidelity Airway Trainers and other airway management training models with conformable sensor technology. 7S3 Modular Airway Trainer is unparalleled in realistically simulating intubation. Modular construction allows a versatile training system that translates into superior patient care, training many pathologies and complications.

[Click Here to Learn More]

B-Line Medical is a patient safety company focused on solutions designed to help manage healthcare simulation centers and supplement hospital quality improvement initiatives through recording, debriefing, data, and operations management. Since our founding in 2004, we have amassed over 500 clients in almost 40 countries around the world and are more dedicated today than ever to delivering a product that helps mold the future of medical education.

[Click Here to Learn More]

OtoSim Inc, is a leader in otoscopy and ophthalmoscopy simulation systems. This year, we will be showcasing our new otoscopy simulation products; OtoSim Educators Portal and OtoSim Mobile, along with our existing products OtoSim 2, PneumatoSim and OphthoSim. For more information, please visit our booth for a demonstration or http://www.otosim.com or email sales@otosim.com.

[Click Here to Learn More]

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Simulab is a medical simulation company, dedicated to replicating human anatomy, and turning it into realistic, easy-to-use training tools that help save lives. Our mission is to create a human mimic so perfect, participants feel truly immersed—in every procedural training. Just touch our tissues to feel the difference. You’ll see they look, feel, ultrasound, suture and bleed just like human.

Click Here to Learn More

OMS provides virtual reality simulation for optimal patient care. Our virtual reality scenarios give learners the benefits of traditional simulation in a scalable model, allowing them to practice more, learn from their mistakes, and improve patient care.

Click Here to Learn More

SimBodies®

Trauma FX T/A SIMBODIES has successfully designed, developed and delivered Casualty Simulation Solutions for a variety of Armed Forces, Emergency Services, Hospital Treatment Facilities and other organisations both in the UK and internationally.

We provide Make-up Artists and Amputee Role Play Actors together with Bespoke Adjuncts to replicate a range of simulated injuries.

Click Here to Learn More

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8:15 AM - BUSES DEPART Hotels

9:00 AM - MORNING PRE-CONFERENCE SESSIONS (INCL. BREAK)  Details page 29-30
P1 CHSOS Readiness Review Workshop $275 *FULL DAY SESSION*
P2 SIMBODIES Basic & Advanced Moulage Technique Workshops $350
*FULL DAY SESSION*
P3 SIMBODIES Basic Moulage Techniques Workshop $200
P4 Introduction to Scenario Programming with Laerdal LLEAP & SimDesigner $75 -
   Presented by SimGHOSTS
P5 Gordon Center for Research in Medical Education Tour

12:30 PM - LUNCH BREAK

12:45 PM - BUS DEPARTS FIU
1:00PM-1:10pm - BUS DEPARTS HOTELS

1:30 PM - AFTERNOON PRE-CONFERENCE SESSIONS (INCL. BREAK)  Details Page 31-32
P6 SIMBODIES Advanced Moulage Techniques Workshop $200
P7 Advanced Scenario Programming with Laerdal LLEAP & SimDesigner $75 -
   Presented by SimGHOSTS
P8 Simulator Maintenance of SimMan 3G $75 - Presented by Laerdal Medical
P10 Fast and Effective uses of Moulage for Manikins and Task Trainers $75

5:00 PM - PRE-CONFERENCE WORKSHOPS END

5:10 PM - BUSES RETURN TO HOTELS
WEDNESDAY, JULY 31: CONFERENCE DAY 1

7:15 AM - BUSES DEPART HOTELS

7:15 AM - REGISTRATION & EXHIBIT SPACE OPEN

8:10 AM - WELCOME AND OFFICIAL OPENING

8:30 AM - KEYNOTE PRESENTATION
Accelerate Opportunity by Patenting Your Simulation Innovations
Presented by Professor John Rizvi  Details page 33

9:25 AM CONCURRENT SESSIONS BLOCK A (Incl. Platinum and Gold Sponsors)

A1 Evaluation of Technical Competency in Health Care Simulation Tool: A Modified Delphi Study (INT)  Details page 34
Research Track

A2 Get to Know Nursing Anne Simulator (BEG) - Presented by Laerdal Medical  Details page 34
Simulation Technology Track

A3 Hybrid Learning Environments: Scaling Simulation for Online Experiential Learning (BEG) - Presented by EMS  Details page 34
Simulation Technology Track

A4 A Review and How To Operationalize the Revised INACSL Standards of Best Practice: Simulation 2018 (BEG) - presented by INACSL  Details page 34
Operations & Management Track

A5 Accelerate Opportunity with Mentorship (BEG)  Details page 35
Professional Development Track

A6 Introduction to Educational Theory for Simulation Professionals (INT)  Details page 35
Education track

10:15 AM MORNING BREAK & EXHIBIT SPACE OPEN
WEDNESDAY, JULY 31: CONFERENCE DAY 1

10:45 AM CONCURRENT SESSIONS BLOCK B - WORKSHOPS
B1 Are You Capturing Simulation Data? You Should! (BEG)
Research & Evaluation Track Details page 35
B2 Trach Model Adaptation for Realism (INT)
Moulage & Fabrication Track Details page 35
B3 SIMBODIES Moulage Workshop: Stop The Bleed! (BEG)
Moulage & Fabrication Track Details page 35
B4 Casting Silicone Moulage for Realism and Repeatability (ADV)
Moulage & Fabrication Track Details page 36
B5 Storytelling for Better Patient Outcomes (BEG)
Education Track Details page 36
B6 How to Make your Development Look Professional - Lessons from Academia (BEG)
Professional Development Track Details page 36
B7 ¿Cómo hacer cuando falta presupuesto o materiales?
Desarrollo de entrenadores de bajo costo y bajos recursos (BEG)
Spanish Track Details page 36

12:45 PM LUNCH BREAK & EXHIBIT SPACE OPEN

2:00 PM - EMS GOLD PLENARY
Practical and Academic Considerations for Integrating Serious Games, VR, and AR to the Simulation Center Repertoire
Dr. Todd Chang Details page 37

3:00 PM - AFTERNOON BREAK AND EXHIBIT SPACE OPEN
WEDNESDAY, JULY 31: CONFERENCE DAY 1

3:30 PM - CONCURRENT SESSIONS BLOCK C
C1 Successful In Situs: A Simulation Specialist's Perspective (INT)
   AV and IT Track
C2 Printing Pennies: 3D Printing on a Budget (BEG)
   Simulation Technology Track
C3 Creating Methods of Organization to Simplify and Sustain
   Simulation Center Management (BEG)
   AV and IT Track
C4 Logistics and Planning for Mass Casualty Events (BEG)
   Operations & Management Track
C5 Scholarship for Simulation Technologists: Publishing your
   Innovative Ideas on Cureus.com (BEG)
   Research & Evaluation Track
C6 New Trend in Training: Taking Hi-Fidelity Simulation Cross-
   Country to Under-Resourced Anesthetists (INT)
   Education Track
C7 Expanding Collaboration Opportunities via Telehealth (BEG)
   Simulation Technology Track
C8 Uso de App Moviles Para Evaluacion Y Seguimiento Del
   Aprendizaje en Simulacion (INT)
   Spanish Track

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Details page 39
Details page 39
Details page 40
Details page 40
WEDNESDAY, JULY 31: CONFERENCE DAY 1

4:30 PM - CONCURRENT SESSIONS BLOCK D - Silver Sponsors
D1 One Tool, Multiple Disciplines: Teaching and Assessing RT, BP and Cardio with the Ventriloscope - Presented by Lecats Ventriloscope (BEG)
Simulation Technology Track
D2 Managing Multi-Patient Scenarios Using a Distributed Simulation Environment - Presented by Simulaids (BEG)
Simulation Technology Track
D3 Under the Hood of Ares - Presented by CAE Healthcare (BEG)
Simulation Technology Track
D4 Redefining Service in an Educational Construct - Presented by Echo Healthcare
Simulation Technology Track
D5 Working with Victoria: The World's Most Advanced L&D Patient Simulator - Presented by Gaumard Scientific (INT)
Simulation Technology Track

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Details page 41

5:30PM - CLOSE/BUS RETURNS TO HOTEL

6:30 PM - OPENING RECEPTION: Bowlero Miami
Details page 42

9:30 PM - OPENING RECEPTION CONCLUDES
THURSDAY AUGUST 1: CONFERENCE DAY 2

8.00 AM - BUS DEPARTS  Dolphin Mall Hotels
8.15 AM - EXHIBIT SPACE OPEN
8:45 AM - LAERDAL MEDICAL PLENARY ADDRESS

Presented by Henry Henao

Details page 43

9.50 AM - CONCURRENT SESSION BLOCK E - WORKSHOPS
E1 Expanding Collaboration Opportunities via Telehealth (BEG)
Simulation Technology Track
Details page 44
E2 Hide the Trash Can! Save Time and Money by Reusing and Repurposing Medical Consumables (BEG)
Simulation Technology Track
Details page 44
E3 Do I Need to Know IT? (BEG)
AV & IT Track
Details page 44
E4 Training Technologists (BEG)
Operations & Management Track
Details page 44
E5 The Highly Successful Simulation Specialist/Technician: How Do I Compare? How Can I Improve? (BEG)
Professional Development Track
Details page 45
E6 Exploring Training Foundations Healthcare Managers Use to Train the Simulation Operation Specialist (INT)
Research Track
Details page 45
E7 Mission Possible: How to Run Simulations for 100+ Learners Per Day (INT)
Operations & Management Track
Details page 45

10:45 AM - MORNING BREAK & EXHIBIT SPACE OPEN
THURSDAY, AUGUST 1: CONFERENCE DAY 2

11:15 AM - CONCURRENT SESSION BLOCK F - WORKSHOPS
F1 Avoid Pitfalls when Incorporating AV into a Simulation Center Design (BEG) - Presented by Level 3 Healthcare
AV & IT Track
Details Page 46

F2 SIMBODIES Moulage: Stop the Bleed - Lower Limb (BEG)
Moulage & Fabrication Track
Details page 46

F3 Revenge of the Cyst (INT)
Moulage & Fabrication Track
Details page 46

F4 Poster Presentations & Innovation Showcase (BEG)
Simulation Technology Track
Details page 46

F5 Preventive Maintenance: Developing and Implementing a PM Program for Your Simulation Center (BEG)
Simulation Technology Track
Details page 47

F6 Making Scenario Templates More User Friendly (BEG)
Operations & Management Track
Details page 48

F7 Electronics Basics: Warming up to Soldering and Current Trends in Electricity $25 (BEG)
Simulation Technology Track
Details page 48

F8 Conceptos básicos de Moulage: Aplicación de Técnicas Artísticas para Mejorar el Realismo del Simulador (BEG)
Spanish Track
Details page 48

1:00 PM - LUNCH & EXHIBIT SPACE OPEN

2:00 PM - PLENARY ADDRESS
The Simulation Technology Specialist as a Stakeholder in Patient Outcomes
Presented by Kristina Artiles
Details page 49

3:00 PM - AFTERNOON BREAK & EXHIBIT SPACE OPEN
3:30 PM - CONCURRENT SESSION BLOCK G

G1 Ocular Ultrasound Task Simulator: Journey from Invention to Patent Using 3D Printing (INT)
Simulation Technology Track Details page 50

G2 Implementation of In Situ Simulation in Two District General Hospitals (BEG)
Education Track Details page 50

G3 A Year of Firsts - Simulation Professionals in the First Year of Their Roles (BEG)
Professional Development Track Details page 50

G4 Preparing for Tomorrow's AV Technology, Today (BEG)
AV & IT Track Details page 50

G5 Operational Considerations for Standardized Patient Programming (INT)
Operations & Management Track Details page 51

G6 FIU STAR Center Tour (BEG)
Operations and Management Track Details page 51

G7 Desarrollo de Programas de Simulación Desde una Perspectiva de Trabajo en Red (INT)
Spanish Track Details page 51
4:30 PM - CONCURRENT SESSION BLOCK H
H1 Making the Connection: Managing AV Signals for the Non-AV/IT Simulation Technology Specialists (BEG)
   IT and AV Track
H2 Do I Need to Know IT? (BEG)
   IT and AV Track
H3 Introduction to Assessment in Simulation (BEG)
   Education Track
H4 An Analysis of Technical, Operations and Management Roles in Healthcare Simulation (BEG)
   Research & Evaluation Track
H5 Essential Ingredients for Inventory Management (BEG)
   Operations & Management Track
H6 FIU STAR Tour (BEG)
   Operations and Management Track

5:30 PM - BUS RETURNS TO HOTEL
FRIDAY, AUGUST 2 - CONFERENCE DAY 3

7:45 AM - BUS DEPARTS Hotels

8:30 AM - CONCURRENT SESSION BLOCK I
I1/J1 Moulage Test Kitchen (BEG)
Moulage & Fabrication Track Details page 54
I2/J2 Advanced Moulage: Movie Materials & Techniques for Mascal Realism (INT)
Moulage & Fabrication Track Details page 54
I3 Creating Methods of Organization to Simplify and Sustain Simulation Center Management and Printing Pennies: 3D Printing on a Budget (BEG)
Operations & Management Track/ Simulation Technology Track Details page 55
I4 FIU Star Center Tour (BEG)
Education Track Details page 55
I5 Casting Silicone Moulage for Realism and Repeatability (ADV)
Moulage & Fabrication Track Details page 56

10.15 AM - CONCURRENT SESSION BLOCK J
J3 - Successful In Situs: A Simulation Specialist's Perspective and Preparing for Tomorrow's AV, Today (BEG)
AV and IT Track Details page 57
J4 Trach Model Adaptation for Realism (INT)
Moulage & Fabrication Track Details page 57
J5 Preventive Maintenance: Developing and Implementing a PM Program for Your Simulation Center (BEG)
Simulation Technology Track Details page 57
J6 Liderazgo: Una Competencia Esencial en el Facilitador (BEG)
Education Track Details page 57

12:00 PM - AWARD PRESENTATION & CLOSING CEREMONY

12:30 PM - EVENT CLOSES

12:45 PM - BUSES RETURN TO HOTEL AND MIAMI INTL AIRPORT
P1 CHSOS Readiness Review Workshop
Gain the confidence and knowledge you need to become a Certified Healthcare Simulation Operations Specialist (CHSOS) by attending the Society for Simulation in Healthcare’s (SSH) new CHSOS Exam Review Workshop. Led by well-known, experienced simulation experts, this one-day course provides essential information on pursuing certification.

Learning Objectives
Learn the components of the certification process. The workshop introduction will focus on exam prerequisites, the application process and the study resources available.
Identify your exam content strengths and weaknesses. The CHSOS exam blueprint will be the basis for discussion.
Develop your personal action plan. At the close of the workshop, instructors will help you create a step-by-step action plan that includes a timeline, a list of study tools and resources, key dates and more.

Facilitator: Sunmeng Chen

P2 SIMBODIES Basic and Advanced Moulage Full Day Workshop
Combine both Basic and Advanced SimBodies moulage sessions into a full day workshop for just $350 - a saving of $50!
See P3 and P6 for detailed descriptions.

P3 SIMBODIES Basic Moulage Techniques
The course will be delivered by combining expert demonstrations and practical sessions, where students will have the opportunity to see both the method and application of moulage by the Course Leaders and then under supervision, practice the effects on one another in groups, there will also be study periods on looking at real images of wounds, medical conditions and injuries. Topics covered include health and safety guidance, hygiene, make-up application and removal, pallor changes (cyanosed, flushed and sweating), bruising (recent and aged), swellings and closed fractures, small scab lacerations and grazes, dirt and dust, and quick flash burns.All necessary simulation materials and equipment will be provided for the duration of the courses. We recommend wearing old clothing, aprons will also be provided. Photography is permitted.

Learning Objectives:
Identify moulage techniques suitable for live role players or manikins.
Demonstrate bruising, swelling, and closed fracture moulage techniques.
Demonstrate flash, full thickness burns and chemical burn moulage techniques.

Facilitators: Linzi Foxcroft & Joanna Wilson, SimBodies
P4 Introduction to Scenario Planning with Laerdal LLEAP and SimDesigner

LLEAP programming styles vary from person-to-person and may also depend on scenario complexity. The workshop will provide an overview of Laerdal SimDesigner Software and will include an introduction to trends and handlers, show users how to upload media such as labs and x-rays, and demonstrate two common programming styles. Participants will create a simple scenario during this workshop.

Learning Objectives:
Understand the concepts of programming scenarios with SimDesigner using themes and scenarios. Understand how to create and apply trends and handlers. Identify how to embed & transfer images, videos and labs to the patient monitor.

Facilitators: Nick Brauer & Amy Wise, SimGHOSTS

P5 Gordon Center for Research in Medical Education Tour

The Gordon Center for Simulation and Innovation in Medical Education (GCSIMed) is a designated Center of Excellence of the University of Miami Miller School of Medicine. It was established more than 45 years ago for the application of advanced technology to healthcare education. Audiences taught include medical, nursing and physician assistant students, physicians, nurses, physician assistants, paramedic/firefighters and healthcare simulation faculty. In addition to direct training using simulation and other educational technologies, the Gordon Center is also engaged in interprofessional education, team training, development of new technologies and tools for healthcare education, assessment and outcomes research, and faculty development in simulation and educational research.

...continued

Over 2,200 medical centers and agencies worldwide use the educational systems and training curricula developed at the center. The most long-standing example of its creative work is Harvey®, the Cardiopulmonary Patient Simulator. First introduced in 1968, it has been validated in numerous studies and trains thousands of learners worldwide. The Gordon Center's Prehospital and Emergency Training Programs train thousands of registrants per year at more than 700 agencies in Florida and more than 1,000 in other states, as well as internationally. Courses address multiple content areas, including cardiac life support, trauma, pediatrics, stroke, heart attack, advanced airway, team training, point-of-care ultrasound, active shooter, and disaster response. First responders manage problems using simulators and actors to play the role of patients. The Gordon Center's curricula are disseminated to Florida's state and community colleges, and the first responders who are trained respond to the 911 calls of millions of Floridians. The Gordon Center also helps to train U.S. Army Forward Surgical Teams prior to front-line deployment, and healthcare providers from other high-level federal agencies, including the White House Medical Unit.

During the SimGHOSTS 2019 US event, attendees will get to take a guided tour of this pioneering 34,000 sq.ft. state-of-the-art facility, with the capability for simulation and computer design engineering, production and manufacturing. It houses a high-technology auditorium, self-learning laboratory, standardized patient training area, team-based simulation rooms, fire rescue vehicle, car for extrication of trauma victims, military field hospital, hazardous materials decontamination area, and mock emergency department.
P6 SIMBODIES Advanced Moulage Techniques Workshop

The course will be delivered by combining expert demonstrations and practical sessions, where students will have the opportunity to see both the method and application of moulage by the Course Leaders and then under supervision, practice the effects on one another in groups, there will also be study periods on looking at real images of wounds, medical conditions and injuries. Topics covered include application of SIMWOUND pre-made wounds, sculptural wound effects with SIMSCULPT prosthetic grade silicone, color effects, bloods and foreign bodies, open fractures, full thickness and chemical burns, and use of SIMSLEEVEs for simulating major haemorrhage. All necessary simulation materials and equipment will be provided for the duration of the courses. We recommend wearing old clothing, aprons will also be provided. Photography is permitted.

Learning Objectives:
- Review health and safety issues around use of moulage.
- Demonstrate flash, full thickness burns and chemical burn moulage techniques
- Understand uses for pre-made wounds and prosthetic grade silicone sculpting materials.

Facilitators: Linzi Foxcroft & Joanna Wilson, SimBodies

P7 Advanced Scenario Planning with Laerdal LLEAP and SimDesigner

This workshop will explore various advanced SimDesigner features and programming methodologies. Trends and Handlers are valuable but often overlooked tools for automating scenario progression and manikin responses. This workshop will take LLEAP users through the process of creating a “semi-automated” scenario using SimDesigner Software.

Participants must have completed the Introductory course or have previous experience using SimDesigner as individual support for novice users will not be available during this workshop.

Learning Objectives:
- Understand how to plan and develop a complex scenario including branch and loop structures.
- Create multi-parameter trends and handlers that can be used to automate scenarios.
- Program a semi-automated branched scenario

Facilitators: Nick Brauer & Amy Wise, SimGHOSTS

P8 Simulator Maintenance of SimMan3G

Simulators are an important investment in your educational program. Protect this investment by becoming proficient with routine maintenance procedures designed to keep a simulator performing at an optimal level. Participants will also learn basic troubleshooting, how to resolve connectivity issues and other simple tips and tricks. Prerequisites required for this program: Familiarity with Laerdal simulators and software.

Learning Objectives:
- Define various types of routine maintenance.
- Learn solutions to basic functionality issues and connectivity problems.
- Describe common tips and tricks.

Facilitator:
Steve Ospina, Laerdal Senior Field Service Engineer
P10 Fast and Effective Uses of Moulage for Manikins and Task Trainers

In this workshop we will approach theory and application of moulage for manikins and task trainers. We will go over the materials, products and theory of manikin moulage. ROI and learning objectives should be thought of every time you make a simulation case, and is even more important when you add materials such as makeup when enhancing simulation. How do you get just enough of a cue across to the learner that guides them to the correct diagnosis or clinical pathway? Now how do you do this in such a way that does not take your manikin out of service for an entire day for cleanup and reset? These are some of the problems we will discuss and find solutions for.

Learning Objectives:
- Compare and contrast moulage use for manikins as opposed to humans.
- Recognize the materials used in manikin manufacture and select appropriate moulage products to avoid damaging an expensive trainer.
- Demonstrate quick approaches to moulage that save you time and allow for a fast turn around to the next simulation.

Facilitators: David Shablak & Will Enfinger
ACCELERATE OPPORTUNITY BY PATENTING YOUR SIMULATION INNOVATIONS

Presented by John Rizvi "The Patent Professor"

Innovators in the medical industry often focus so much on overcoming the technical obstacles in perfecting their solution that they forget about the importance of an early intellectual property audit. Others leave the evaluation of patentable subject matter until the very end and often are dismayed to find that all of the time and money invested in creating their solution was worthless because someone already filed a patent first and therefore owns rights to the intellectual property. In 2013, the U.S. Patent Law underwent the single biggest change in the last century – the move from a “first to invent” to a “first to file” system. In this presentation, Professor Rizvi covers the critical action steps for successfully accelerating opportunity under the new set of rules by properly evaluating the novelty of their idea and quickly taking the right steps to patent first.

Professor John Rizvi
Board Certified Patent Attorney and Adjunct Professor of Law

Professor John Rizvi is a Board Certified Patent Attorney, Adjunct Professor of law, and recognized speaker in the field of intellectual property. He is a recognized TED Talker with 2 of his talks featured last year in Inventor's Digest in a listing of the “top 10 TED Talks for Inventors”. His books "Escaping the Gray" and "Think and Grow Rich for Inventors" are international best sellers and have won critical acclaim including an endorsement from Kevin Harrington, one of the original sharks on the hit TV show - Shark Tank.
A1 Evaluation of Technical Competency in Health Care Simulation Tool: A Modified Delphi Study - Patrick Hughes & Scott Atkinson

The purpose was to develop and obtain content validation of a novel instrument designed to assess a simulation fellow’s ability to perform the five core simulation technical skills.

Learning Objectives:
- Describe the five core simulation technical skills.
- Identify the five elements and 16 sub-elements within the E-TeCHS tool.
- Apply the E-TeCHS tool to simulation technical skills assessment.

A2 Get to Know Nursing Anne Simulator - Presented by Steve Ospina, Laerdal Medical

Designed based on input from leading nursing educators from around the world, this engaging and robust platform has many new feature sets to explore. This hour-long session will take you through the simulator system components and demonstrate basic operation procedures.

Prerequisite required for this session:
- Familiarity with operating Nursing Anne simulator.

Learning Objectives:
- Identify simulator features.
- Understand the system components.
- Demonstrate operations of the simulator and system components.

A3 Hybrid Learning Environments: Scaling Simulation for Online Experiential Learning - EMS

Healthcare continues to expand beyond brick and mortar simulation centers. As more disciplines embrace simulation, the demand to scale healthcare education through online programs escalates. Learn how Healthcare Systems have embraced a hybridized, video-centric, online environment to bring high value simulation into a flexible and collaborative cloud-based education environment.

A4 A Review and How to Operationalize the Revised INACSL Standards of Best Practice: Simulation SM 2018 - Cynthia Foronda

The INACSL Standards of Best Practice: Simulation SM 2018 is a living document and each standard has been revised to reflect the evidence and science of simulation. This presentation will explore the new Standards and strategies for operationalizing them.

Learning Objectives:
- Name the titles and focus of the INACSL Standards of Best Practice: Simulation SM.
- Identify at least one strategy for operationalizing each Standard.
- Determine resources needed to operationalize the Standards at their institutions.
**BLOCK A**

**A5 Accelerate Opportunity with Mentorship - Billie Paschal and Nick Brauer**
Mentoring is a two way street, it can be used to empower others or create an opportunity to learn from an industry leader. SimGHOSTS has started a mentorship program and we would like to share the details and experiences of our participants.

Learning Objectives:
- Empower opportunity for others through mentoring.
- Gain opportunity as a mentee.
- Identify how this opportunity may benefit me.

**A6 Introduction to Educational Theory for Simulation Professionals - Matt Charnetski**
Educational theory can sometimes be elusive and often doesn't seem applicable in the operations world. Come discuss several educational theories that underpin the development of simulation education. Learn the importance of the theories and how they may affect your choices in programming, research, and maybe even approach to solving educational and logistical problems!

Learning Objectives:
- Discuss several educational theories that underpin simulation based education.
- Explore how these theories affect what we do and how we apply our experience to future endeavors.
- Apply theory to some current issues that the attendees are experiencing.

**BLOCK B**

**B1 Are You Capturing Simulation Data? You Should! - Eduardo Luevano & Victor Torres**
A common question presented in the administrative side of simulation are numbers. From contact hours to the utilization of staff and equipment. Our goal is to provide you with the framework to begin capturing numbers and evaluate the data collected.

Learning Objectives:
- Identify data points to capture.
- Analyze the data collected.
- Evaluate the data analyzed.

**B2 Trach Model Adaptation for Realism $25 - Jane Fedoruk**
Power Point and Demonstration on how to build the skin adaptation to Dr. Kei's and Dr. Mebust's Trach Model, for a more realistic tactile experience when performing a tracheostomy.

Learning Objectives:
- Introduce the "Real Cric Trainer" created by Drs. Kei and Mebust of the Kaiser Permanente San Diego Medical Centre.
- Introduce the new skin adaptation created at the University of Manitoba.
- Provide instruction on how to build the Trach Model and the skin adaptation.

**B3 SIMBODIES Moulage: Stop the Bleed! $25 - Linzi Foxcroft & Joanna Wilson**
The 2-Hour workshop will be delivered by combining expert demonstrations and practical sessions, where students will have the opportunity to see how simulated haemorrhaging wounds are created that deliver simulated bleeding to the point of injury. Examples of Gunshot wounds with both entry & exit wounds will be demonstrated together with other injuries.

Learning Objectives:
- Understand the principles of simulated haemorrhaging.
- Understand the principles of packable wounds.
- Understand the principles of creating simple pressurised bleeding systems.
**CONCURRENT SESSIONS**

**BLOCK B**

**B4 Casting Silicone Moulage for Realism and Repeatability $25 - Steven Lichtenberg**
Take your moulage skills up a step by building plaster casts to use for making multiple silicone pieces that are consistent and much easier to build. This workshop will take your skill to the next level by using clay, wax, and other materials to design your original pieces. Using the original to build a plaster negative, you will have a permanent tool to use to build multiple moulage pieces. This allows you to quickly make another piece when the one being used either wears out or becomes non-functional for some reason. Additionally, making multiple pieces like lacerations, bullet wounds etc becomes easy. Make as many as you need for your scenario and be assured they will all look great. This technique can then be expanded to make full masks for your simulator to allow the manikin to become older or more decidedly female or even make it into a monster!

Learning Objectives:
- Understand the reasons why making casts saves time in the long run.
- Explain the skills necessary to build casts and use them repeatedly.
- Demonstrate the ability to design and make multiple moulage products through these techniques.

**B5 Storytelling for Better Patient Outcomes - Saeed Dhoble, Sarah Atwood & April McGarry**
In this workshop, our goal is to demonstrate how the application of narrative learning theory in patient simulations improves patient-centered clinical decision-making.

Learning Objectives:
- Explore narrative learning theory as an effective teaching and learning tool in patient simulations to improve patient outcomes.
- Apply narrative learning theory to healthcare simulations effectively.
- Discuss the role of empathy in a clinical setting and how it can impact clinical decision-making and patient-centered care.

**B6 How to Make your Development Look Professional: Lessons from Academia - Scott Crawford**
This workshop will allow review of existing job applications and describe how to present and appropriately represent yourself to current and future employers. Participants will also have a chance to understand what is meant by "equivalency" for training, hiring, and the ever pervasive certification discussion.

Learning Objectives:
- Understand the factors that go into a job description and the interview process.
- Be able to critically review and create a visually appealing and content appropriate application.
- Describe the relevance of prior experience and "equivalency" in the context of HR and certification.

**B7 ¿Cómo hacer cuando falta presupuesto o materiales? Desarrollo de entrenadores de bajo costo y bajos recursos - Nadir Ayrad, Tatiana Torre, Diego Alaverez & Karen Vergara**
El taller propone un espacio de revisión para el bagaje al que apelamos al producir simuladores, con la intención de expandirlo y hacerlo más flexible. Los participantes experimentarán diferentes materiales y discutirán sus beneficios y desventajas. El encuentro concluirá con esquemas de propuestas grupales para el desarrollo de nuevos simuladores de bajo costo. Este curso se impartirá en español.

Objetivos de aprendizaje:
- Aplicar diferentes técnicas de modelado / intervención en materiales de bajo costo para obtener producciones finales que cumplan con los estándares de práctica.
- Reconocer los diferentes materiales de bajo costo disponibles en el mercado, identificando sus ventajas y desventajas.
- Discutir los obstáculos que encontramos cuando se presenta la necesidad de producir / reparar / adaptar un simulador, proponiendo nuevos enfoques.
PLENARY ADDRESS

SPONSORED BY:

PRACTICAL & ACADEMIC CONSIDERATIONS FOR INTEGRATING SERIOUS GAMES, VR, AND AR TO THE SIMULATION CENTER REPERTOIRE

*Presented by Dr Todd Chang*

Digital simulations have often occupied a different growth trajectory in healthcare. Centers strong in manikin-based simulations, in situ simulations, and even standardized patients are often lacking or not integrated with digital technologies, such as serious games, virtual reality, augmented reality, and mixed reality. This plenary seeks to explain the current 2019 technologies and trends that can augment and complement existing simulation center efforts to improve healthcare outcomes.

There are several ‘lenses’ through which we can view digital simulations. There is a practical lens, that thinks how to best afford and sustain digital simulations alongside established simulation methods. There is an academic lens, that looks to discoveries and new methods of skills improvement and safety training not previously possible through manikin-based simulations. And finally there is an integrative lens, that outlines how existing simulation infrastructure, resources, and staffing can enhance digital simulations within a simulation center.

**Dr. Todd P Chang, MD MACM**, is the Divisional Director for Research & Scholarship for the Division of Emergency Medicine at Children's Hospital Los Angeles, and the Associate Medical Director for the CHLA Simulation Center.

He has been Principal Investigator and Co-Investigator in a variety of grant-funded and multi-center educational technology research examining best practices of gamification, serious games, and virtual reality in training healthcare providers, with significant peer-reviewed publications and conference proceedings. His primary research interest is in judicious use of games and game-based learning for healthcare professionals – including appropriate – and inappropriate – use of games in healthcare education, through meaningful outcome-based assessment.
C1 Successful In Situs: A Simulation Specialist's Perspective - Tyler Burks
The purpose of this session is to detail the equipment, staff, and logistics required to facilitate a successful In Situ from an operations team standpoint. We will discuss how to create a mobile a/v unit, how to determine the best use and placement of cameras, how to prepare to leave the sim center for specific areas, and how to communicate during the simulation and keep track of learners and simulated medications.
Learning Objectives:
Describe an In Situ simulation.
List the necessary and optional equipment for a successful in situ.
Explain different ways in which equipment can be transported or assembled to minimize your footprint and carry out the needs of the operations team.

C2 Printing Pennies: 3D Printing on a Budget - Jimmy Johnson
The recent rise in 3D printing has helped push forward medical innovation and technology. Often thought of as an expensive endeavor, this presentation will cover how attendees can begin implementing 3D printing in their simulation center. The presentation will briefly cover the history of 3D printing, basic 3D printing terminology/technology, and the different 3D printing resources that exist. This presentation will focus on budget friendly printers, materials, and resources.
Learning Objectives:
Describe the 3 differences between FDM, SLS, and SLA 3D printing.
Compare and contrast PLA, ABS, and PETG printing material.
Determine the 3D printer that could most efficiently be used in your simulation environment at budget points ($300, $500, and $1000).

C3 Creating Methods of Organization to Simplify and Sustain Simulation Center Management - Merona Hollingsworth & Juan Gonzalez
A review of the literature showed there is limited information on the management and sustainability for the improvement, necessary to support increased simulation utilization. As an Operational (Coordinator) Technician you are often tasked with researching purchasing decisions and producing creative ideas to meet the technical and administrative demands of a simulation center. Providing administrative support to any simulation center requires innovative approaches to create systemic methods in maintaining ongoing operations and growth of a center. The purpose of this presentation is to deliver tools that will maximize administrative resources.
Learning Objectives:
Discuss multiple uses of office software to collect center consumption and utilization.
Identify tools to streamline the tracking and management of simulation equipment.
Analyze available web applications to aid in the organization of documentation and scheduling.

C4 Logistics and Planning for Mass Casualty Events - Matt Charnetski & Will Enfinger
Mass casualty simulation events require a slightly different approach than the average simulation event. Come to learn about an approach to logistics and planning for mass casualty events, specifically mass shootings, and explore ways you might implement these elements in to your programming.
Learning Objectives:
Discuss the logistics unique to simulated mass casualty events.
Explore the value of realism vs learner engagement vs logistical possibility.
Discuss unique requirements and expectations of interprofessional, large-scale simulation events.
**C5 Scholarship for Simulation Technologists: Publishing your Innovative Ideas on Cureus.com - Edward Rovera**

Professional development for simulation technologists is becoming an important factor in the growth and development of the individual simulationist. While becoming more common, publishing simulation innovations in peer reviewed, indexed journals is rare among simulation technologists. This presentation will highlight the professional advantages of being a published author and cover how to publish innovative ideas in Cureus.com, a peer reviewed online journal that is indexed in PubMed.

**Learning Objectives:**
- Describe the benefits of peer reviewed publications to the simulation technology community.
- Review the Cureus publication process from initial account creation through to final publication.
- Understand the reach of articles published on Cureus within the medical and healthcare literature.

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**C6 New Trend in Training: Taking Hi-Fidelity Simulation Cross-Country to Under-Resourced Anesthetists - Narendra Bhimsan**

It is common knowledge that various countries within Africa are under resourced and financially deprived. The high costs of travel to centers of high-fidelity simulation, especially for these poorer countries, are virtually impossible. As a result, we decided to take the same training to these countries instead. The University of KwaZulu-Natal in Durban, South Africa has four hi-fidelity human patient simulators manufactured by CAE Healthcare in their state of the art simulation center, which is used to train medical students, physicians, nurses and other allied health professionals. Having successfully taken our hi-fidelity simulators to Tanzania in 2017, we endeavored to continue MEPA training in Lusaka, Zambia in 2018 at The University Teaching Hospital. This presentation briefly discusses the operation and feedback.

**Learning Objectives:**
- Demonstrate impact of training in different across-border countries.
- Describe the experience of cross country collaboration and sharing of expensive resources.
- Explore the role of high fidelity simulation in emergency training.
BLOCK C

C7 Expanding Collaboration Opportunities via Telehealth - Lori Lioce, Garnett Duenow & Hunter Cowing

This presentation will review telehealth terminology, provide an overview of telehealth using applications, software, robots and tablets. A brainstorming and question and answer session will enable attendees to develop an action plan for offering telehealth practice in your existing simulation program.

Learning Objectives:
- Provide an overview of telepresence & telehealth and use in simulation.
- Review National Goals & examples of existing integration.
- Discuss telehealth in medical education and recommendations for telehealth operations & collaboration opportunities.

C8 Uso de App Moviles para Evaluacion y Seguimiento Del Aprendizaje en Simulacion - German Barerra

Se revisa el uso de app basadas en dispositivos como estrategia pedagogica para reforzar los procesos de evaluacion y seguimiento del aprendizaje en simulacion clinica. Se realizara una revision de las APP moviles disponibles en el mercado con acceso gratuito y licencias abiertas, como apoyo a las actividades docentes en diferentes areas del conocimiento.

Se presentan varias experiencias de su uso y se brinda ideas a los docentes para su implementacion.

Se busca el aprovechamiento de los dispositivos moviles como herramientas de apoyo al aprendizaje.

Objetivos de aprendizaje:
- Conocer las diferentes APP basadas en dispositivos moviles existentes en el mercado
- Identificar los usos posibles de estas APP
- Realizar una prueba piloto o taller durante la presentacion

BLOCK D

D1 One Tool, Multiple Disciplines: Teaching and Assessing RT, BP and Cardio with the Ventriloscope - Laura Andrews, Lecats Ventriloscope

Lecat's Ventriloscope is a versatile teaching and assessment tool that can be used with any mannequin or SP and in almost any size teaching setting. Join Lecat's Ventriloscope® for interactive rotations focused on the following learning objectives:

- Synchronize your SP’s or manikin’s pulse to live-patient heart sound recordings.
- Coordinate your manikin’s respiratory sounds with the rise & fall of the chest.
- Train & assess one student per minute on taking proper blood pressure.

D2 Managing multi-patient scenarios using a Distributed Simulation Environment - Greg Vis, Simulaids

Many healthcare students experience a performance gap when they transition from academic study to the real world. Operating in a real environment students will face multiple stresses and challenges not always encountered in the simulation lab at school. The same challenges are faced by first responders in multiple casualty situations. New technologies allow simulation specialists to more closely recreate the stress levels, management, delegation and prioritization challenges graduates will face and fully prepare them for the transition to the work environment. In this session participants will explore the key concepts of managing multiple patient scenarios and have the opportunity for hands-on exploration of a tablet based technology platform, SimVS Virtual Simulation System, that helps recreate these environments.

Learning Objectives:
- Develop an understanding of how multiple patient scenarios can be used to teach management, prioritization and delegation topics.
- Explore a technology framework (SimVS) that facilitates multi-patient scenarios.
- Recreate and manage the sights and sounds of a typical hospital floor with alarms, call bells other inputs from patients in a hands-on session.
CONCURRENT SESSIONS

BLOCK D

D3 Under the Hood of Ares - Alexander Rondero
This hands-on course will review the most common tips and tricks for identifying and resolving issues with the ARES patient Simulator. Lessons learned can be put to use across the full array of patient simulators.
Learning Objectives:
- Describe techniques for troubleshooting simulator wireless issues.
- Describe preventive maintenance procedures.
- Demonstrate simulator standard operating procedures.

D4 Redefining Service in an Educational Construct - David Halliwell & Rob Clark
Medical simulation has undergone significant change in the last 20 years. What were once complex machines and processes have been simplified, and these technologies are more accessible than ever before. Join us for an informative and participative discussion to uncover some mysteries of technology and apply them to education.
Learning Objectives:
- Understand the current application of simulation technology.
- Understand how technical advances inform educational objectives.
- Inform colleagues and leaders on technology and technical issues.

D5 Working with Victoria: The World's Most Advanced L&D Patient Simulator - Tyson Rodriguez
Join Gaumard as we show you how to get the most out of your Victoria so you can achieve a new level of efficiency in your workflow. This hands-on demonstration will provide you with expert insight into Victoria's capabilities, routine operation, and maintenance procedures. Prior experience with Gaumard products is recommended.
Learning Objectives:
- Understand Victoria's capabilities and technology
- Learn routine operation and maintenance best practices
- Understand UNI® software: physiological controls, event capture, data export
OPENING RECEPTION

Join the SimGHOSTS Bowling League!

Form a team, plan your uniform and challenge fellow attendees to a game to win great prizes! No matter your skill level there is fun to be had for all. Catch up with old friends, make new ones and have plenty of laughs with the Level 3 Healthcare and SimGHOSTS teams!

The Opening Reception starts at 6.30pm at Bowlero Dolphin Mall. The venue is a bowling alley, sports bar and lounge. We've got everything covered for you - bowling shoes, food and sodas are provided and beer, wine and cocktails are available for purchase at the bar. Make sure you reserve your spot by using the SimGHOSTS app, instructions provided during registration.
PLENARY ADDRESS

Simulation Technologists: The Foundation for Success

Presented By Professor Henry Henao

The FIU STAR Center has established the tradition of building the Center on the shared experiences of technologists. From the Director on down, every member of the STAR Center administration and staff have at one point, worked as a simulation technologist. This diverse background has been attributed as one of the main factors that have led to the success of the Center as an innovator in the field. Many of us have further developed as educators and scholars in the field of clinical simulation, but rest assured, the foundational experiences the leadership of the Center have had come from their work as technologists, specialists in the implementation of clinical simulation. Creativity that comes from our own personal experiences coupled with the support and recognition by upper administration of our passion and expertise have allowed us the ability to apply creative thinking to emerging opportunities like only technologists could. We have found that partnering with and empowering technologists to contribute to a duplicatable approach to implementing simulation is the key to long term success.

Henry Henao MSN, ARNP, FNP-BC, CHSE
Clinical Assistant Professor
Director, Simulation Teaching and Research Center
Nicole Wertheim College of Nursing & Health Sciences
Florida International University

Professor Henao has been recognized as an influential voice in the field of clinical simulation education. He has served as a subject matter expert to review the original standards for simulation evaluation from the International Nursing Association of Clinical Simulation and Learning (INACSL), was site principal investigator for the longitudinal, multi-site, landmark “The National Simulation Study”, funded by The National Council of State Boards of Nursing (NCSBN), and is currently completing his PhD in Nursing with a focus on simulation center operations.
**E1 Expanding Collaboration Opportunities via Telehealth** - Lori Lioce, Garnett Duenow & Hunter Cowing
This presentation will review telehealth terminology, provide an overview of telehealth using applications, software, robots and tablets. A brainstorming and question and answer session will enable attendees to develop an action plan for offering telehealth practice in your existing simulation program.

**Learning Objectives:**
- Provide an overview of telepresence & telehealth and use in simulation.
- Review National Goals & examples of existing integration.
- Discuss telehealth in medical education and recommendations for telehealth operations & collaboration opportunities.

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**E2 Hide The Trash Can! Save Time and Money by Reusing and Repurposing Medical Consumables** - Preston Phillips, Colton Crook & Mark Zumalt
Using authentic medical consumables in simulation training adds fidelity and increases learner engagement. At ZIEL, we have developed methods to reuse and repurpose a large variety of supplies, saving our simulation center considerable time and money. This session will share tips and tricks for reusing or repurposing common procedure kits, medications, and supplies. Participants will learn how to setup a system that supports reliable reset and reuse of supplies.

**Learning Objectives:**
- Identify importance of standard procedure in simulation supply reset and reuse.
- Learn methods of recycling common simulation consumables and be able to apply these processes to the learner’s institution.
- Recognize cost and time saving possibilities by recycling simulation supplies.

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**E3 Do I Need to Know IT?** - Ferooz Sekandarpoo
Simulation centers rely on information technology (IT) to meet desired educational outcomes. IT resources including networks, IT security and the integration simulation-specific components within a larger system are important concepts that must be understood by any technical operator and many personnel within a simulation center. This course will provide an overview of the technology, terminology, concepts and components to aid novice users.

**Learning Objectives:**
- Describe components of computer network systems.
- Search for and access a specific device (computer, manikin or video camera) within your system using a computer interface.
- Identify potential IT security threats at their home institution and solutions.

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**E4 Training Technologists** - Jimmy Johnson & Kino Sisoura
Multiple page long orientation checklists are the most common way that we used to orient new hires. Is it effective, or is there a better way? The Tiered Skills Acquisition Model (TSAM) is an effective method of structuring orientation competency “checklists”. The TSAM methodology is frequently used in clinical unit orientation and focuses on moving the learner (staff) through “tiers” of increasing responsibility from simple to complex. This type of learning model has been shown to decrease time in orientation by almost 20%, increase confidence, improve learner (staff) outcomes, reduce turnover and burnout. Given the unique nature of simulation it is essential that each institution look at the TSAM methodology to help create the best scenario for their own staff. This presentation will give a brief overview of the TSAM methodology, and then, taking participant feedback determine the key skills required for recruitment at their own center/institution.

**Learning Objectives:**
- Describe the key skill or background area needed for recruits to be successful at YOUR institution.
- Determine the base line skills/tasks that ALL Operations Specialists must be competent in.
- Create the first 3 tiers of the Tiered Skills Acquisition Model (TSAM) for YOUR institution.
E5 The Highly Successful Simulation Specialist/Technician. How Do I Compare? How can I Improve? - Brian Wallenburg
We will discuss topics related to how well you know your workplace and equipment and your job, the expectations your supervisor and faculty have of you, and how they differ. We'll discuss the need for you to be an integral member of the team and how to perform at that level, ultimately impacting the success of all activities. We will use Poll Everywhere for you to gauge yourself and your knowledge on a variety of topics related to your position, compared to peers in attendance.
Learning Objectives:
Understand the basic knowledge and requirements to be a successful simulation technician.
Understand adult learning theory and how it relates to the setup, briefing, exercise and debriefing of simulation activities.
Identify knowledge gaps and propose strategies to address them.

E6 Exploring Training Foundations Healthcare Managers use to Train the Simulation Operation Specialists - Troy Hambrick
The goal of this research study is to understand the fundamental training needed to be developed by healthcare managers to train the simulation operation specialist. There is a significant meaning towards the development of the training foundations. The development will provide established training foundations that can be the standardized knowledge needed by simulation operation specialists.
Learning Objectives:
Understand the research gap for a simulation operation specialist.
Discuss the research study and the results.
Propose future training strategies for simulation operation specialists.

Sim centers around the country are struggling to keep up with the growing demands of accommodating more learners. The resources and manpower provided to the center continue to be limited making scheduling logistics difficult. We will be providing some different methods that has worked for multiple situations at our center that will help your center to rotate learners through in an efficient and productive manner. Issues and challenges will also be discussed to help you prepare for the unforeseen.
Learning Objectives:
Define different methodology for the different high learner volume scenarios.
Identify the stages of the planning logistics needed to pull off high learner volume scenarios.
Discuss challenges and issues that could face from multiple views.
F1 Avoid Pitfalls when Incorporating AV into a Simulation Center Design - David Escobar
Adding AV into a new or existing simulation center can be challenging. During this presentation Level 3 Healthcare will address common points of failure, and how to incorporate best practices into a simulation center design. Time will be allotted for Q&A.
Learning Objectives:
Identify stakeholders for new/existing AV project.
Understand how room layout and end-user workflows can impact AV design.
Differentiate between a DIY project, and when to call an AV integrator.

F2 SIMBODIES Moulage: Stop the Bleed! $25 - Linzi Foxcroft & Joanna Wilson
The 2-Hour workshop will be delivered by combining expert demonstrations and practical sessions, where students will have the opportunity to see how simulated haemorrhaging wounds are created that deliver simulated bleeding to the point of injury. Examples of Gunshot wounds with both entry & exit wounds will be demonstrated together with other injuries.
Learning Objectives:
Understand the principles of simulated haemorrhaging.
Understand the principles of packable wounds.
Understand the principles of creating simple pressurised bleeding systems.

F3 Revenge of the Cyst $25 - Zachary Wade
Every moulage piece has a purpose, then there are those that have purpose as well as function. In this workshop, participants will learn to create a cyst that will have the ability to rupture under pressure or when lanced. Participants will create their own functioning cyst using advanced moulage techniques so need to have an intermediate moulage skill level as a prerequisite for this workshop. To finish, everyone will have the chance to see how effectively their cyst ruptures.
Learning Objectives:
Identify learning objectives and scenarios that would benefit from cyst moulage.
Use moulage techniques to create an accurate functioning cyst.
Apply a moulage cyst to a patient simulator.

F4 Poster Presentations & Innovation Showcase
Creating Opportunity Through Identifying Cost-Savings with Molding, Casting, and Creating with Silicone - Shellie Kirby
By creating cost-savings from my ability to make the recurring consumable parts for task trainers my department uses on a regular basis, I save my department money and I became an employed Sim Tech because of it.

Health Professions Summer Camp - Jennifer Weeks & Alma Gray
We invite high school students every summer for a weeklong immersive health care experience. Not only does this camp help recruit future healthcare providers, it also serves as a source of income for the sim center.

Integrating Simple Solution with EHR Tutor Charting and Medications in High Fidelity Simulation - Daniel Rodriguez
This presentation is going to focus on the key technologies needed to have successful medication administration and charting components to simulation. The need for students to practice and incorporate their skills in this arena is vital to their success in the post-collegiate life and in the real clinical setting.

Mastering Mock Codes: Improving Clinical Response One Unit at a Time - Julie Lee
This digital poster presentation includes the Evidence Based Practice journey embarked on by the Dayton VA Simulation Program to improve initial code response on patient care units. Obstacles encountered will be described, as well as creative methods to overcome these barriers. A live demonstration of our tracking application will be included.

Operational Efficiency for Procedural Simulation - David Mathews
Our digital poster will demonstrate the methods and processes our simulation team developed to support procedural simulation. The focus of this poster is on operational efficiency and sustainability.

Resuscitative Hysterotomy Interactive Poster - Sue Zelko
A poster presentation of a Resuscitative Hysterotomy model. The model is essential for training residents and physicians who may be faced with having to perform the life-saving measure. It requires a clear head and a steady hand. Given this procedure only occurs in 1 in 100,000 pregnancies, practicing on life-like models helps to prepare medical professionals for the actual event.
**CONCURRENT SESSIONS**

**BLOCK F**

**F4 Poster Presentations & Innovation Showcase**

**The Benefits of Creating an Idiot’s Guide for all Interfaces of Manikins in a Simulation Center: A Story from Dubai - Abi Sayed**

One of the means to make simulation users actively engaged is to make the learning environment and manikin’s capabilities known to the users and facilitators by establishing safe containers or establish the psychological safety, logistic details are partially achieved through the manufacturer’s user guides, usually over-elaborated and contain erroneous information. If that is concise and laminated on a sheet or two users could quickly go through it and distinguish the salient feature in manikins.

**Creating a Digital Documentation Framework to Streamline Simulation - Alexandre Torre, Jessica Caampued & Henry Henao**

This purpose of this project is to fully implement a document solution to migrate paper-based simulation documents to an electronic platform. By digitizing the legacy paper-based documents, an easily accessible location for sharing documents was created through the Center’s Microsoft Sharepoint site. This process allowed for mobile access to simulation scenarios by all users with a device that is connected to the workplace environment. The transition to this electronic environment eliminated excess waste of supplies, time, and funds to prepare multiple paper-based documents. This system can easily be adapted to any other file sharing platform once documentation has been digitized. This innovation allows for the flexibility of the software platform and does not limit you to a specific operating system.

**Talking Heads: Audio Solutions for Simulations - Robert Vega**

Advancements in audio sounds produced from high fidelity manikins continues to improve realism in simulation. At times, limitations in manikin speech hardware make it necessary to use other sources of audio devices to speak as the manikin in a simulation. New developments in quality sounding mini speakers and the use of wireless technology can improve simulations. This session will identify types of audio devices for manikins to communicate to the learners in a controlled environment.

**Ocular Ultrasound Task Simulator: Journey from Invention to Patent Using 3D Printing - Yixing Chen, Dan Brainard & Kelley Stanko**

See G1 for Description

**Establishing a Simulation Center Activity Dashboard for Centralized Management - Alexandre Torre & Henry Henao**

This purpose of this project is to create a site-wide at-a-glance activity dashboard for the center using Microsoft Excel. The dashboard is designed from an administrative perspective. Its purpose is to provide a centralized display of all activity that is taking place in the Center for a quick visual overview for management purposes. This visual overview allows for easy access to what is taking place in the center and what the centers space availability resembles. It quickly transitioned into a full site tool that is available to all staff and anyone that visits the Center.

**F4 cont. Innovation Showcase Presentations**

**Create Opportunity with an Infant Trach Task Trainer - Billie Paschal**

Serving over one million patients system wide in 2017, we have large infant population with tracheotomies in place. This lead to the need to incorporate tracheotomy care and change to our annual Clinical Skills Investigation (CSI), and to our Patient Family simulations upon discharge. There are numerous trach task trainers on the market for adults, but that is not our primary size of patient in need of this care. I will show how we used existing items in the lab and things from the local hardware store to create Tracy the Trach Trainer.
CONCURRENT SESSIONS

BLOCK F

F5 Preventive Maintenance: Developing and Implementing a PM Program for your Simulation Center - Matt Stieber & Erica Hinojosa
A preventive maintenance (PM) program is not just important, it is essential. In this workshop you will learn how to develop and implement a preventive maintenance program for your simulation center, and get buy in from management to support the program.
Learning Objectives:
Describe how preventive maintenance (and related aspects such as corrective maintenance and maintenance agreements) are essential for your simulation center.
Develop a PM plan.
Document PM processes and implement a PM tracking system.

F6 Making Scenario Templates More User Friendly - Jane Robinson & James Bloodgood
This workshop will explore how one organization’s standardized scenario templates has allowed for consentient delivery of simulation at multiple sites and demonstrates how standardized scenario templates can be used in various stages of scenario preparation and delivery by clinical or non-clinical personnel. In a hands-on activity, participants will be given a sample scenario, guided through the process of creating a scenario set-up and operating guide, and how facilitate the scenario operation.
Learning Objectives:
Discuss how using standardized scenario templates impacts scenario delivery.
Utilizing the scenario template the participants will be able to create a scenario set-up and operating guide based on the information provided in the template.

F7 Electronics Basics - Warming up to Soldering and Current Trends in Electricity $25 - Victor Torres
In this workshop, attendees will learn about the power requirements for their simulation equipment and the terminology and technology to keep them running. This will include a discussion about batteries and battery safety, soldering, and simple tips to keep your gear powered up and ready. Participants will have an opportunity to practice soldering and will understand different types and techniques for soldering. All participants will be provided with a mini soldering kit to use during the workshop and to take home with them to continue practicing their soldering skills.
Learning Objectives:
Understand basic concepts of battery safety, and voltage/current parameters on battery cells.
Develop the skill to use a soldering iron and soldering techniques.
Identify battery types and understand the options to replace/rebuild battery packs.

F8 Conceptos básicos de Moulage: aplicación de técnicas artísticas para mejorar el realismo del simulador $25 - Nadir Ayrad, Tatiana Torre, Diego Alvarez & Karen Vergara
Se alentará a los participantes a experimentar con diferentes materiales presentes en el mercado, revisando los conceptos básicos de las artes plásticas y aplicando dichos conceptos para realzar el realismo en una parte del simulador. El taller se impartirá en español.
Objetivos de aprendizaje:
Aplicar técnicas de las artes plásticas para ofrecer mayor realismo en simuladores.
Reconocer los diferentes materiales disponibles en el mercado, identificando sus ventajas y desventajas.
Discutir los obstáculos que encontramos al diseñar simulaciones realistas, proponer nuevos enfoques.
PLENARY ADDRESS

The Simulation Technology Specialist as a Stakeholder in Patient Outcomes

Presented By Kristina Artiles

In an era where the rate of medical errors is on the rise, it is important to appreciate how simulation technology specialists have a stake in promoting positive patient outcomes. Understanding and utilizing quality improvement strategies in the learning environment can assist the simulation program with providing the most effective learner experiences.

Kristina Artiles, MBA, MSN, RN, CHSOS

Kristina Artiles is a Miami-native and first began her career in simulation at Florida International University's Nicole Wertheim College of Nursing as a Support Specialist for the Simulation Teaching and Research (STAR) Center in January 2012. It is there where her passion for simulation, operations, and learning first sparked. Kristina had the opportunity to move to the Caribbean and served at Ross University School of Medicine's Simulation Institute as a Simulation Lab Specialist. In 2015, Kristina acquired the Certified Healthcare Simulation Operations Specialist (CHSOS) certification. After moving back stateside, Kristina transitioned into Chamberlain College of Nursing in Miramar, Florida as a Clinical Learning Lab Specialist in the SimCARE Center. She became the SimCARE Center Manager in 2017 and is now the presiding Assistant Dean of Student Learning at Chamberlain College of Nursing, Miramar.
CONCURRENT SESSIONS

BLOCK G

G1 Ocular Ultrasound Task Simulator: Journey from Invention to Patent Using 3D Printing - Yixing Chen, Dan Brainard & Kelley Stanko
Ocular ultrasound is a skill that is required for field of emergency medicine. It is an important and a common skill that is overlooked by the simulation community. Using 3D FDM printing, we have invented a task trainer that is ultrasound-able. With the help of our academic institution, we are securing our patent and able help learners understand how to do oculus ultrasound effectively and correctly.
Learning Objectives:
Identify the need for oculus ultrasound simulator.
Review alternatives method for oculus ultrasound simulation.
Discuss the invention and patent process of simulation task trainer

G2 Implementation of in situ simulation in two district general hospitals - Natalie Shields, K Redington & Angela McCallum
We designed and implemented two novel emergency scenarios to be run in situ at two district general hospitals in the UK as well as in the simulation suite. In both scenarios nurses, allied health professionals and doctors took part. A structured feedback form was developed using Sørensen JL, et al. (1) Both in situ and in suite simulation were well received but in situ reached a higher number of participants. (1) Sørensen JL, et al. BMJ Open 2015;5:e008344. doi:10.1136/bmjopen-2015-008344
Learning Objectives: To develop and implement interdepartmental and interprofessional in situ simulation.
To explore aspects of multidisciplinary learner satisfaction with in situ simulation.
To examine the potential benefits of in situ simulation.

G3 A Year of Firsts - Simulation Professionals in the First Year Working in Simulation - Matt Stieber, Mitchell Burris, Adam Fischer, Lauren Young, & Gavin Lehmann
A Panel discussion surrounding the challenges and unknowns of a person’s first year in a new position in healthcare simulation. In a variety of roles, from quite diverse backgrounds, this year our staff has grown and changed. Hear from a Paramedic with experience participating in sims as a learner, working in her first year as a Simulation Technologist. A recent college graduate with experience in medical research with strong technical skills who took on a simulation role despite never having previously considering it as a potential career option, an experienced nurse expanding in to simulation, and a simulationist newly appointed to a manager role.
Learning Objectives: Define the challenges of taking on a new, unfamiliar role in the simulation field.
Describe transferable skills from other fields that may aid those in simulation roles.
Apply advice and recommendations from peer experience to improve transitions into new roles.

G4 Preparing for tomorrow’s A/V Technology, Today - Evan Bartley & Jeremy Smith
This discussion will cover some of the innovative technology seen in simulation labs, how to leverage infrastructure to accommodate future technology improvements, and how to communicate with an A/V integrator when planning for a technology upgrade. Although there is no way to truly future-proof a technology design, there are ways to prepare an environment for upgrading to newer versions of devices down the road.
Learning Objectives: Prepare and plan for A/V technology upgrades. Understand how to leverage existing infrastructure for future upgrades. Communicate with A/V integrators regarding design decisions for simulation lab technologies.
BLOCK G

G5 Operational Considerations for Standardized Patient Programming - Matt Charnetski & Lori Lioce
Planning and operating standardized patient programs present unique considerations to this form of simulation based education. The presenters will discuss their experiences planning, starting, implementing, maintaining, and funding their standardized patient programs in several different cultural and healthcare contexts.
Learning Objectives:
Discuss the financial considerations unique to standardized patient education.
Discuss the unique logistics of standardized patient education.
Discuss models of return on investment and translational outcomes.

G6 FIU STAR Center Tour
Exceptional healthcare begins with a strong education background. The vision of the Nicole Wertheim College of Nursing and Health Sciences is to be globally recognized as the higher education destination organization that is innovative, inquiry-driven and technologically advanced; drawing diverse top-class faculty, students, staff and others for positive transformation of society with a focus on the health care needs of underserved populations.

The Simulation Teaching and Research (STAR) Center is a 20,000 square foot learning space at the educational core of the Nicole Wertheim Nursing & Health Sciences Building. It offers students, faculty and community partners one of the most technologically innovative advanced healthcare teaching and research facilities in the region and is the only simulation center in South Florida that is fully accredited by the Society for Simulation in Healthcare.

During the SimGHOSTS 2019 event, participants will have opportunity to take a guided tour of the STAR Center. Tour highlights include two fundamental skills learning labs, eight fully functional simulation suites encompassing medical-surgical, critical/emergency care, obstetrics, pediatrics, clinic examinations and home settings, three control rooms, dedicated debriefing spaces, and a mobile simulation unit.

G7/H7 Desarrollo de Programas de Simulación Desde una Perspectiva de Trabajo en Red - Nadir Ayrad, Natacha Crudi, Tatiana Torre, Karen Vergara & Eliana Escudero
Este taller proporcionará una visión integral del desarrollo y la gestión de un programa de simulación de atención en salud en red. Se alentará a los participantes a discutir las implicaciones de un programa sustentable que de respuesta a diversas necesidades. Finalmente, presentarán una propuesta de hoja de ruta para el abordaje de las mismas.Este curso se impartirá en español.
Objetivos de aprendizaje:
Identificar los diferentes componentes que se requieren para desarrollar un programa de simulación de salud sostenible.
Discutir las fortalezas, debilidades, ventajas y desventajas que pueden estar presentes en las instituciones que requieren diferentes enfoques de gestión.
Que el alumno sugiera una propuesta para desarrollar un programa, teniendo en cuenta sus múltiples implicaciones, desde la evaluación de las necesidades hasta la implementación del mismo.
CONCURRENT SESSIONS

BLOCK H

H1 Making the Connection: Managing AV Signals for the Non IT AV Simulation Tech Specialist - Ron Repasy
Together, we will cover the basic concepts of audiovisual equipment and terminology and how to manage different types of connectors and audio/video signals. This will include interconnecting various types of audiovisual and medical equipment and working with monitor resolutions and configurations. The session will conclude with an open discussion and Q&A.
Learning Objectives:
Discuss common AV equipment and terminology.
Identify common connectors and their uses.
Learn how to manage and integrate different types of signals.

H2 Ocular Ultrasound Task Simulator: Journey from Invention to Patent Using 3D Printing - Yixing Chen, Dan Brainard & Kelley Stanko
Oculus ultrasound is a skill that is required for field of emergency medicine. It is an important and a common skill that is overlooked by the simulation community. Using 3D FDM printing, we have invented a task trainer that is ultrasound-able. With the help of our academic institution, we are securing our patent and able help learners understand how to do oculus ultrasound effectively and correctly.
Learning Objectives:
Identify the need for oculus ultrasound simulator.
Review alternatives method for oculus ultrasound simulation.
Discuss the invention and patent process of simulation task trainer.

H3 Introduction to Research and Assessment for the Healthcare Simulation Technology Specialist - Matt Charnetski & Lori Lioce
Research and assessment in education are ubiquitous topics and the focus of a great deal of misunderstanding. We’re doing too much. Not enough. It’s subjective. How to assess what we do? What about art of medicine?? With an understanding of the fundamental principles of research and assessment the healthcare simulation technology specialist can make an important contribution to the quality of research and assessment undertaken at their center. Panellists will explore the essential role of the Healthcare Simulation Technology Specialist in simulation research and assessment.
Learning Objectives:
Discuss the role of the Healthcare Simulation Technology Specialist in the design, implementation, and evaluation of simulation research programs.
Discuss fundamental theories and instruments that underlie much of the current and ongoing body of research and assessment in the field of healthcare simulation.
Discuss current and past experiences related to research and assessment with colleagues and an expert panel.

H4 An Analysis of Technical, Operations and Management Roles in Healthcare Simulation - Kirrian Steer, Billie Paschal & Todd Hillman
An analysis of knowledge, skills and experience required in recruitment notices and position descriptions for HSTS (and related) positions in Australia, Canada, the UK and USA was undertaken over a three month period between September and November 2018. Positions related to simulation technologist roles were analyzed and classified as entry level, intermediate or senior. Descriptors of duties and responsibilities for each level were recorded for each of the 8 SimGHOSTS domains of practice. This analysis has aided the development of core descriptors for simulation technology roles at each of the three employment levels. Results and future implications will be shared during this presentation.
Learning Objectives:
Compare and contrast simulation technologist roles in major countries around the world.
Demonstrate evolution of the simulation technologist role in the last two years.
Develop strategies for training simulation technologists to meet current and future needs.
H5 Essential Ingredients for Inventory Management - Jessica Ockimey

This presentation will provide you with a guide of how to organize your inventory. We will discuss how to effectively maintain your inventory within your simulation center through utilizing different techniques. We will demonstrate how managing your inventory can assist with tracking supplies, equipment maintenance and sustainability within your center. At the end of this session you will be able to effectively implement an inventory management system.

Learning Objectives:
- Discuss the organizational impact of maintaining your inventory systematically.
- Identify the pros and cons of some inventory management systems.
- Demonstrate how participants can effectively implement an inventory management system.

H6 FIU STAR Center Tour

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I1/J1 Moulage Test Kitchen $25 - Billie Paschal

Not all moulage products need to come from a specialty vendor. This workshop will provide opportunity to experiment with making "homemade" moulage products from easily sourced household and laboratory supplies. Learn about the different characteristics of the ingredients and how they can be combined to create exactly the product you need. Whether the need is to save money or time, make something that isn’t commercially available, or produce a product that better meets the needs of your program, this workshop will provide the knowledge and skills to get you started.

Learning Objectives:
- Identify physical properties of different ingredients.
- Experiment with different combinations of ingredients to achieve the desired outcome.
- Compare and contrast products.

I2/J2 Advanced Moulage: Movie Materials & Techniques for Mascal Realism $25 - David Shablak & Will Enfinger

In this course we will build on moulage fundamentals to advance your skills as a moulage specialist. Using the 80-15-5 approach to moulage for large scale activities, we will use advanced techniques and materials for your 15% and the prized 5% role players that really get the buy in from the students and push the realism. Pros-aide transfers, encapsulated silicone, Silicone build-ups, Cap plastic, acrylic vinyl advanced techniques are some of the materials and techniques that we will go over.

Pre-requisite - A basic moulage class or equivalent experience. You must have an understanding of makeup and materials as well as how learning objectives affect your approach to moulage.

Learning Objectives:
- Demonstrate application of advanced materials and justification for using these time consuming and expensive approaches to moulage.
- Plan, prioritize, and manage time during scenario preparation to allow for moulage application to multiple role-players.
- Demonstrate quick-fix moulage strategies that will align visual cues with learning objectives.
**CONCURRENT SESSIONS**

**BLOCK I**

**13 Creating Methods of Organization to Simplify and Sustain Simulation Center Management - Merona Hollingsworth & Juan Gonzalez**

A review of the literature showed there is limited information on the management and sustainability for the improvement, necessary to support increased simulation utilization. As an Operational (Coordinator) Technician you are often tasked with researching purchasing decisions and producing creative ideas to meet the technical and administrative demands of a simulation center. Providing administrative support to any simulation center requires innovative approaches to create systemic methods in maintaining ongoing operations and growth of a center. The purpose of this presentation is to deliver tools that will maximize administrative resources.

**Learning Objectives:**
- Discuss multiple uses of office software to collect center consumption and utilization.
- Identify tools to streamline the tracking and management of simulation equipment.
- Analyze available web applications to aid in the organization of documentation and scheduling.

**13 Printing Pennies: 3D Printing on a Budget - Jimmy Johnson**

The recent rise in 3D printing has helped push forward medical innovation and technology. Often thought of as an expensive endeavor, this presentation will cover how attendees can begin implementing 3D printing in their simulation center. The presentation will briefly cover the history of 3D printing, basic 3D printing terminology/technology, and the different 3D printing resources that exist. This presentation will focus on budget friendly printers, materials, and resources.

**Learning Objectives:**
- Describe the 3 differences between FDM, SLS, and SLA 3D printing.
- Compare and contrast PLA, ABS, and PETG printing material.
- Determine the 3D printer that could most efficiently be used in your simulation environment at budget points ($300, $500, and $1000).

**14 FIU STAR Center Tour**

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CONCURRENT SESSIONS

BLOCK I

15 Casting Silicone Moulage for Realism and Repeatability $25 - Steven Lichtenberg
Take your moulage skills up a step by building plaster casts to use for making multiple silicone pieces that are consistent and much easier to build. This workshop will take your skill to the next level by using clay, wax, and other materials to design your original pieces. Using the original to build a plaster negative, you will have a permanent tool to use to build multiple moulage pieces. This allows you to quickly make another piece when the one being used either wears out or becomes non-functional for some reason. Additionally, making multiple pieces like lacerations, bullet wounds etc becomes easy. Make as many as you need for your scenario and be assured they will all look great. This technique can then be expanded to make full masks for your simulator to allow the manikin to become older or more decidedly female or even make it into a monster!

Learning Objectives:
Understand the reasons why making casts saves time in the long run.
Explain the skills necessary to build casts and use them repeatedly.
Demonstrate the ability to design and make multiple moulage products through these techniques.
**J3 Successful In Situs: A Simulation Specialist's Perspective - Tyler Burks & David Mathews**
The purpose of this session is to detail the equipment, staff, and logistics required to facilitate a successful In Situ from an operations team standpoint. We will discuss how to create a mobile a/v unit, how to determine the best use and placement of cameras, how to prepare to leave the sim center for specific areas, and how to communicate during the simulation and keep track of learners and simulated medications.

**Learning Objectives:**
- Describe an In Situ simulation.
- List the necessary and optional equipment for a successful in situ.
- Explain different ways in which equipment can be transported or assembled to minimize your footprint and carry out the needs of the operations team.

**Preparing for Tomorrow’s AV Today - Evan Bartley**
This discussion will cover some of the innovative technology seen in simulation labs, how to leverage infrastructure to accommodate future technology improvements, and how to communicate with an AV integrator when planning for a technology upgrade. Although there is no way to truly future-proof a technology design, there are ways to prepare an environment for upgrading to newer versions of devices down the road.

**Learning Objectives:**
- Prepare and plan for AV technology upgrades.
- Understand how to leverage existing infrastructure for future upgrades.
- Communicate with AV integrators regarding design decisions for simulation lab technologies.

**J4 Trach Model Adaptation for Realism $25 - Jane Fedoruk**
Learn how to build the skin adaptation to Dr. Kei’s and Dr. Mebust’s Trach Model, for a more realistic tactile experience when performing a tracheostomy.

**Learning Objectives:**
- Introduce the “Real Cric Trainer” created by Drs. Kei and Mebust of the Kaiser Permanente San Diego Medical Centre.
- Introduce the new skin adaptation created at the University of Manitoba.
- Provide instruction on how to build the Trach Model and the skin adaptation.

**J5 Preventive Maintenance: Developing and implementing a PM program for your simulation center - Erica Hinojosa & Matt Steiber**
A preventive maintenance (PM) program is not just important, it is essential. In this workshop you will learn how to develop and implement a preventive maintenance program for your simulation center, and get buy in from management to support the program.

**Learning Objectives:**
- Describe how preventive maintenance (and related aspects such as corrective maintenance and maintenance agreements) are essential for your simulation center.
- Develop a PM plan.
- Document PM processes and implement a PM tracking system.

**J6 Liderazgo: Una Competencia Esencial en el Facilitador - Rocio Vargas Bravo & Luis Carlos Romero Quezada**
Se desarrolló un programa de alineación de competencias en partería profesional a través de simulación de bajo costo, que como educación continua se llevó a cabo con profesionales médicos y enfermeras, con la intención de volverlos facilitadores de los procesos en sus unidades y replicarlo a otros profesionales de la salud.

A través de éste programa, identificamos al liderazgo como una cualidad, que convertimos en competencia, clave de los participantes en sus actividades diarias de docencia y de colaboración con el resto del equipo de atención.

Las habilidades desarrolladas para fortalecer un liderazgo efectivo que se analizarán son: actitud, curiosidad, saber escuchar, saber preguntar, toma de decisiones, búsqueda del triunfo, entusiasmo, inteligencia y fortaleza emocional, innovación y aprendizaje del fracaso.

**Objetivos de Aprendizaje:**
- Reconocer el liderazgo como una competencia básica en su formación como facilitador de la didáctica docente.
- Distinguir un programa de alineación de competencias en un sistema curricular con las fortalezas que cada uno tiene de acuerdo a la población blanco focalizadas en la adquisición del liderazgo.
- Analizar el uso de la simulación de bajo costo (pacientes estandarizados y moulage) como herramientas de la simulación que impulsan el aprendizaje significativo del liderazgo.