# Introduction - Technology for all

**9:30am**

David McLaughlin, UMass Associate Dean for Student Affairs & Administration, College of Engineering

## Panels:

### Digital Policy and Law Panel

**10:00-10:40 am**

Laura Quilter, Copyright and Information Policy Librarian at UMass – Moderator

CC Auditorium

**Tracy Mitrano** – IT Dean, Trust Assurance & Cybersecurity Programs. Special Advisor to the Vice Chancellor for Information Services & Strategy & CIO, University of Massachusetts Amherst

**Title: Multi-Stakeholder Internet Governance**

**Bio:** Formerly the Director of Information Technology Policy at Cornell University, Dr. Mitrano facilitated the creation of some of higher education’s first generation information security policies. Her expertise is widely recognized in higher education, government, and the private sector. She has acted as an expert for Internet2, University of Massachusetts, University of Delaware, Tufts University, SafeGov, New York Public Library, and many others.

Dr. Mitrano has held numerous teaching appointments, including Visiting Professor of Law and Communications at John Cabot University in Rome, Italy, and at Ithaca College’s Executive Master’s Program in Ithaca, New York. She also taught Culture, Law, and Politics of the Internet at Cornell University, Constitutional History at Syracuse University American Social History at the University of Buffalo, and Internet Law at Universita Cattolica in Piacenza, Italy.


**Title: Human Rights and Tech: Key Issues and Career Paths**

**Bio:** Ria Bailey Galvis is an International Relations Analyst on the International Policy team in Public Policy and Government Affairs in the Washington DC Google office. In this position she mainly focuses on issues of free expression, human rights and diplomatic relations, with a smaller emphasis on international trade and international organizations. Prior, Ria completed the two-year PDP analyst and auditor training program at the U.S. Government Accountability Office where she reviewed agencies such as State Department and SEC on various U.S. policies including reviewing antiterrorism compliance for development aid to West Bank & Gaza. She presented policy recommendations to congressional committees including the Senate Committee on Foreign Relations and Senate Subcommittee on Economic Policy.

Prior to GAO, Ria worked at Frontier Strategy Group in Washington DC, a startup consulting firm advising Fortune 500 companies in emerging markets. Over the course of her time at Georgetown, Ria worked for the U.S. State Department on the Colombia Desk in Washington DC, for the Colombian Government’s National Planning Department in Bogotá, Colombia and was a research intern for USAID and the Brookings Institute. Ria is a double Hoya She earned her BSFS focusing on international politics and development, and MA in Latin American Studies, focusing on human rights & business, both from Georgetown’s School of Foreign Service.

### News, Noise, Misinformation Panel

**11:30am-12:15pm**

BJ Roche, Senior Lecturer, UMass Journalism Department – Moderator

CC Auditorium

**Nabanita De,** UMass CICS Master’s Student.

**Title: FiB: Detection of Fake news from Facebook**

http://projectfib.azurewebsites.net/

Currently working on project with Professor James Allan and Brenden O’Connor.

**Abstract:** FiB is a chrome extension for Facebook, which detects Fake News on Social Media. As the user scrolls through his/her newsfeed, FiB marks every post as verified or non-verified, verified being not fake news. This chrome extension scraps the User’s Facebook Page, while he is going through his/her timeline and obtains links from the posts as well as the pictures. For each link, our algorithm first checks if its a malware or phishing or clickbait link or not, if so then marks it as dangerous, else obtains a score based on how authentic the link is, between 0 to 100. If the score is good enough, it marks it as verified. If not, it obtains the header as well
as the keywords from the link, checks on Google/Bing if anything on this content was ever shared by other sites. Each links returned by search bar goes through the same scrutiny of getting a score. If the score is good enough, we take that first verified link, get the content and show to the user as more trustable content. Our chrome extension works for images as well. Whenever someone posts a twitter snapshot, it converts the image to text, grabs the username, goes on twitter and checks if that post was ever posted by the user. If so, it tags the post as verified else non-verified. We also tag adult content/racy content/ pornographic content as non-verified, to reduce sharing of mms scandals.


**Joshua Stearns**, Visiting scholar, UMass Journalism and Communication Departments  
**Title:** *Fighting Fake News Starts by Understanding It: How Newsrooms, Technologists and Communities Can Collaborate to Combat Misinformation*  
**Abstract:** This talk will provide a framework for understanding and differentiating different kinds of fake news and provide concrete examples of how journalist, platforms and citizens can partner to give truth a fighting chance.  
**Bio:** Josh Stearns is an award-winning journalist, community builder and civic strategist who has been working at the intersection of campuses, communities, and communication for more than 15 years. As associate director of the Democracy Fund – a bipartisan foundation working to ensure that people come first in American politics, elections and journalism – his current objective is to lead the Fund’s local news and participation initiative. In addition to his work at the Fund, Stearns has helped launch the First Draft News coalition, which works on combating the spread of misinformation online, and he was a founding board member of the Freedom of Press Foundation. For the last two years, Stearns served as a mentor to startup journalism organizations with advice on how to work toward deeper community engagement, spur conversations with readers, and become more accessible communicators.

**Kate Freedman**, Undergraduate Education Librarian, W.E.B. Du Bois Library  
**Title:** *Creating Digital Citizens: Shedding Light on Fake News through Teaching Web Research Skills*  
**Abstract:** Recent studies have shown that “digital natives,” young people who learn web research skills simply through using the Internet from birth, are creatures of pure myth. Indeed, college students in 2017 are no more able to find good information on the Internet than their “digital immigrant” parents are. In reality, all individuals, no matter their age, most effectively learn how to find good information on the Web by being consciously taught critical research skills. Come to this presentation to learn ways that you can integrate web research skills into your lessons and courses to help create more informed digital citizens!

**Visualization & Communication Panel**  
**1:15-2:00pm**  
**CC Auditorium**

**Georges Grinstein**, UMass Emeritus Professor of Computer Sciences  
**Title:** *Visual Analytics: A Modern View and Opportunities*  
**Abstract:** Scientific Data Visualization, Information Visualization and Visual Analytics share the same pipeline aimed at human consumption: taking data, analyzing that data, and producing visual representations on various interactive media and for diverse applications. All three have analogous Grand Challenges (scalability, developing a theory, computing the best presentation). This talk discusses the importance of visualization and visual analytics, provides a background on perceptual and cognitive issues in visual analytics, and shows how analytics is the key to solving the difficult new data science problems, what issues are most often encountered, and how visualization is the supportive breakthrough technology.  
**Bio:** Georges Grinstein received his Ph.D. in Mathematics from the University of Rochester in 1978. His work is broad and interdisciplinary, covering the perceptual and cognitive foundations of visualization, very high-dimensional data visualization, visual analytics, and applications of visualization, all focused on the modeling, analysis, visualization and presentation of complex information with the goal to optimize human understanding, learning, memory, impact, interpretation, and decision-making. His most current work is goal directed cognition of static and interactive visualizations.

**Eli Schiff**, IBM/elischiff.com, UX/UI Designer, Design Consultant and Author *(UMass ’14)*  
**Title:** *Criticality and Formalism for the Modern Designer*  
**Bio:** Eli Schiff is a design critic, UI designer and speaker living in Austin, TX. He has worked on a range of projects for companies including IBM, MIT, TEDX and many more.

**Ryan Sandvik**, Skydance Interactive - VR designer; **Michael Reed**, Two Bit Circus - 3D Generalist; **Mike Salyh**, Age of Learning - Game Designer. **Bios:** all are UMass Alumni, 2014, now working in Los Angeles.  
**Title:** *Designing With Intent*  
A look into why & how decisions are made for different mediums, ranging from Games and Film to VR. We want to highlight the importance of understanding your audience and picking the platform best suited for your project.
**Maker Movement/Maker Culture Panel**

**2:15 – 3:15pm**

**Ludmilla Pavlova, Senior Campus Planner, UMass – Moderator**

**Charles Schweik**, Will discuss a maker class’ activities he’s been co-leading at UMass.

**Katherine Aidala**, Mt Holyoke College Chair and Associate Professor of Physics, Chair of Engineering
Will speak of her efforts to develop maker spaces at Mt. Holyoke.

**Dennis Spencer**, UMass Digital Media Lab (DML) will speak of his experience with students, faculty and business startups using 3D printers and other DML resources.

**Abstract**: The Digital Media Lab primarily supports the video, audio, and 3D printing production of UMass Amherst students, staff, and faculty. We offer production rooms, such as green screen rooms & sound recording rooms, and equipment loans (cameras, audio recorders, mics, etc.) for the UMass Amherst campus body free-of-charge. The 3D printing service is a fee based service that is available to our campus and to the public. Tours, demonstrations, and consultations are provided for on-campus departments, local institutions, private businesses, and events across Western Massachusetts.

**Bio**: Dennis Spencer is the 3D Print Services Supervisor in the Digital Media Lab of the UMass Amherst W.E.B. du Bois Library. He’s a UMass Amherst alum, BFA, with experience in digital media production such as animation, graphic design, & video production. Dennis has 11 years of customer service experience and has worked in academia for five years.

**Liz Arum**, Ultimaker, Education community specialist

**Title**: From Keychains to Multivariable Calculus

**Abstract**: As educators, we want to create learning environments and activities that engage and challenge our students. We work to tap into their curiosity, inspire them to see connections between ideas and information, and have them use their understanding to creatively problem solve with independence.

Since first encountering desktop 3D printing in 2009, I have seen how this technology inspires students to become more self-directed and curious, and I have worked in various capacities to help facilitate the integration of this technology into my own classroom as well as into others. When 3D printing first became accessible to schools, educators and students were just happy to be able to make a thing—a key fob, a chess piece or even a whistle. No one was overly critical about what came off the printer. Watching a printer in action was, and still is, pretty magical, but as the technology has improved, we are at a point where we have to ask: Now what? How does this technology actually align with and support our educational objectives, or how can it further research initiatives? In my presentation I will discuss how the Ultimaker Pioneers, a group of over 100 educators, are using 3D printing to push boundaries and go beyond the key fob.

**Bio**: Lizabeth Arum, an artist, tinkerer and educator, is Ultimaker’s North American Education Community Strategist. She works with educators to help them incorporate 3D printing into their curricula. She received a BFA from Cooper Union, an MPS from NYU’s Interactive Telecommunications Program (ITP), was Makerbot’s Education Coordinator from 2011 to 2013 and taught Physical Computing and computer science to middle and high school students from 2002-2016 at Saint Ann’s in Brooklyn, NY. [http://ultimaker.com/education](http://ultimaker.com/education)

**The Last Think (of the day)**

**3:15-4:15pm**

**CC Room 162**

- Future and possibilities of creative maker culture and collaborative, shared maker space/shop/studio. The session will be a discussion on future of Maker/Creation Space possibilities at UMass and 5 Colleges and a continuation of discussions begun in December of 2016.

**Led by**: Andrew Soules, UMass, Senior Facilities Planner; Ludmilla Pavlova, UMass, Facilities Planner

**Patricia Galvis Assmus**, IT Program Director – Moderator
Workshops:

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<tr>
<th>Workshop</th>
<th>Time</th>
<th>Room</th>
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<tr>
<td>Web Accessibility: Inclusive Practices to Enhance the User Experience</td>
<td>9:45-11:15am</td>
<td>CC Room 162</td>
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<tr>
<td>Kelsey Hall, UM Assistive Technology Coordinator</td>
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<td>Samm Delorey, Web Developer</td>
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<td><strong>Abstract:</strong> The goal of web designers is to create a product that is both useful and engaging, as well as accessible to as many people as possible. In order to achieve this goal, it is critical web developers consider accessibility at every stage of the development process to ensure quality design for all users, regardless of ability or disability. Designing for accessibility is not only best practice, but an integral part of inclusive web design. This workshop will cover several important topics regarding inclusive web design: (1) Introduction to Web Accessibility, (2) Top 5 Web Accessibility Concerns, and (3) Assistive Technologies for Access. Each of these topics will be introduced with live demonstrations and a unique emphasis on user impact and experiences. As stated by the well-known lawyer and human rights advocate Elise Roy, “When we design for disability, we all benefit.” Join us for an engaging and informative session!</td>
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<td><strong>Bio:</strong> Kelsey Hall, See below</td>
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<td><strong>Bio:</strong> Samm Delorey, has been a Web Developer for UMass IT's Enterprise Systems and Development group for almost three years. With a focus on the Drupal content management system Samm has a penchant for professional development and loves to learn new technologies. As a web accessibility ally Samm endeavors to support and educate herself and others with the goal of creating a more inclusive digital world.</td>
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<tr>
<td>iOS Accessibility</td>
<td>11:15am -12:15pm</td>
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<td>Josh Pearson, Assistive Technology Center Departmental Assistant</td>
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| **Abstract:** Have you explored the capability of your iPhone or iPad? There's so much more built-in than you may realize! iPhones and iPads have robust supports that provide greater access for individuals with varying needs and abilities. Join us for hands-on demos of iOS accessibility features! Bringing your own iOS device (iPhone, iPad) is encouraged.  
**Bio:** Kelsey Hall, Ed.M., M.S., CCC-SLP. Assistive Technology Coordinator. Kelsey has worked in public education (K-12 and post-secondary) for the past 11 years as a speech-language pathologist, assistive technology specialist, and teacher of the deaf. At UMass Amherst, she provides training to students, faculty, and staff on assistive technologies to support and enhance general curriculum access. Kelsey ensures the Assistive Technology Center (located on the lower level of the W.E.B. Dubois Library) is well-equipped with up-to-date and well-researched software and tools to support diverse learning needs. Kelsey is passionate about universal design for learning principles and celebrating neurodiversity!  
**Bio:** Josh Pearson, B.A. Assistive Technology Center Departmental Assistant. Josh Pearson is an alum of the UMass Department of Communication, graduating with a B.A. in 2015. He now works part-time as the Departmental Assistant for the Assistive Technology Center, while planning on enrolling in law school to practice Disability/Civil Rights law next fall. He has worked on campus for the past 5 years in conjunction with his studies, in various roles in both the Disability Services and IT departments with his main area of focus being championing and educating on behalf of the rights of students/faculty with disabilities and improving access to assistive technology in all areas of campus. |
| Virtual Reality for Design:                                              | 1:15-2:00pm     | CC Room 162   |
| The pros and cons of each type of VR equipment and how they can be used effectively |                 |               |
| Chantale Pitts, Cadsoft.                                                 |                 |               |
| **Abstract:** At a first glance, many feel the benefits of using a BIM model in virtual reality is purely for marketing – leveraging the 3D model for visual aids to help sell the design of a home or building. Taking a deeper and a more thoughtful look at a BIM model in VR will reveal many practical business reasons to adopt BIM and VR for residential construction. In this VR presentation, we will review different types of VR equipment and how they can be used to effectively engage homeowners, designers and onsite trades in a home building project and lead to a more efficient design/build process.  
Reviewing research by many different institutions on VR and how it has the potential to disrupt many different business models we will hone in on residential design and look at examples we have had in the last 18 months of companies adopting and using VR effectively in their business. What made them adopt the technology? How has it been effective and ineffective and what VR equipment is best for what application? Join us for this presentation as we look at practical design/build applications for BIM and VR in the residential design community and review options available for VR equipment and the best situations to use each type.  
**Bio:** Chantale Pitts is on a mission to automate the home building industry. Her presentations on BIM and Virtual Reality for Home Building have been seen around the world and she is a regular guest speaker for Cadsoft Distributors worldwide. As the Director of
Customer Service for Cadsoft Corporation for over 20 years, she oversees the educational, support, sales and marketing programs within the Cadsoft organization. Chantale is a graduate Architectural Technologist and has also been involved in the residential design and construction industry for over 22 years in Ontario, Canada. She has been a global guest speaker – throughout Canada, the United States, France, Australia and China on residential design and BIM. Her videos on BIM and the home building industry can be viewed on Youtube and Vimeo.

**TECH Fair Talks (side talks areas A & B):**

Some of these will also be represented in interactive format at the tech fair

**Journalism in the Digital Age: Technology in Mobile Journalism**

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<td><strong>Franz Strasser</strong>, BBC: Video Journalist</td>
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Abstract: Journalists these days are expected to live-stream from places without satellite trucks, to create 360-degree videos without expensive equipment and at the same time remain nimble to be able to react to the latest developments. The BBC’s Franz Strasser gives a tour of some of the gadgets he uses on his reporting trips across the continent.

Bio: Franz Strasser is a senior video journalist with BBC News and heads up the corporation’s digital video unit in the US. He has covered breaking news events from Sandy Hook to Ferguson, big media events like the FIFA World Cup and the Olympics and has travelled to 46 states, mostly as one-man-band to produce, shoot and edit feature videos for BBC News television and online.

**Designing With Intent**

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<td><strong>Mike Salyh</strong>, Age of Learning, Game Designer</td>
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Abstract: A look into why & how decisions are made for different mediums, ranging from Games and Film to VR. We want to highlight the importance of understanding your audience and picking the platform best suited for your project. If you want to make great work that connects with people, there are three simple questions you need to ask yourself. “Who is my audience? What do they care about? And how will they experience it?” Join Michael Reed, Ryan Sandvik, and Mike Salyh as they talk about these questions and their experiences in the entertainment industry.

Bio: all are UMass Alums, 2014, now working in Los Angeles.

**Usability and Training Strategies in an NSF Website on Instructional Simulations**

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<td><strong>Lynn Stephens</strong>, Postdoctoral Researcher, UMass College of Education</td>
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Abstract: This computer display and demonstration presents an online teacher’s manual that is the product of a long-term project designed to investigate teaching strategies that teachers use with simulations in the science classroom. The site contains a collection of approximately 40 strategies we observed in action in middle and high school classrooms. We highlight nine strategies that illustrate a variety of ways simulations can be used to support student learning. Many of these strategies have not been written about before. At the start of our five-year project, many of the teachers reported that they used simulations as a way to present a final, expert, scientific model to their students at the end of a lesson. However, we observed other teachers using simulations earlier in their lessons, to increase student engagement and to support student reasoning and learning. We explore different ways simulations can be used to foster active reasoning over the course of a lesson, from introducing a new topic, to stimulating whole class discussion, to lesson wrap-up. We use classroom videos to illustrate some of the strategies in action.

**Energizing Student Assessments**

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<td><strong>David Sullivan</strong>, IT Lead; <strong>Cynthia Gaudet</strong>, PhD, RN, CNE. UMass College of Nursing</td>
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Abstract: Faculty strive to update and apply state-of-the-art technology in their teaching techniques. Introducing advanced computer based technology (ExamSoft) to create and administer student assessments invigorates teaching and learning. Exam feedback is immediately available for the students and the faculty, including detailed performance metrics. The performance metrics include average score, high score, low score, point Biseral, discrimination index, KR 20, and response frequencies. Additional reports can be obtained by selecting the desired feedback. Computer based testing saves time, affords exam security, and is environmentally green. The questions and the responses are randomized and the person taking the assessment is restricted to the exam. An exam bank is created with each exam, and the performance metrics assist the faculty with future assessment development. Paper, ink, and physical storage space are not required. The College of Nursing has over 400 students and 12 faculty members using ExamSoft. The students have taken a combination of over 75 exams and quizzes. Random sampling of students and faculty has demonstrated that students find the instant feedback, including access to their preliminary score and their ability to immediately review incorrect responses, to be both timely and constructive. The nursing faculty states that advanced computer based testing has energized their assessments.
Abstract: The purpose of this presentation is to enable participants to envision the potential for infusion of telehealth teaching and learning principles and skills into healthcare curricula for interdisciplinary students at both the undergraduate and graduate levels using our innovative College of Nursing experiences as an exemplar. Description: Our current work is in embedding telehealth content into our curricula in a seamless way such that the technology becomes an integral part of the teaching/learning environment for every student. We will briefly discuss our progress toward this goal, the implications for interdisciplinary collaborative education and practice, and lessons learned. We will bring our mobile telehealth assessment unit and discuss how this unit can be used in conjunction with our Telehealth Training Laboratory in the UMass Center, Springfield, MA to advance a telehealth patient visit. Implications: Evidence shows telehealth accessibility via synchronous televised capabilities is reported by patients and clinicians to be as effective as any face-to-face encounter. With infusion of comprehensive telehealth teaching strategies into healthcare curricula, students upon graduation will have developed a cutting-edge virtual assessment skillset and the telepresence required to be on the forefront of healthcare professionals prepared to offer distance visits to patients within their own communities.

Tech Fair Exhibits:

("*" indicates an abstract is listed above for this exhibit)

Technology Education Concepts
3D Solutions used to teach today’s young people about the fields of engineering, design, manufacturing and architecture. TEC has established itself as a trusted resource for innovative, quality products for hands-on and real-world STEM, design, manufacturing and pre-engineering programs and school labs/MakerSpaces, coupled with superior customer support and service.


Nabanita De, UM Master’s Student.
* FiB: Detection of fake news from Facebook

Lynn Stephens Postdoctoral Researcher College of Education
* Usability and Training Strategies in an NSF Website on Instructional Simulations

Charles Schweik:
Several projects based on his work in maker classes with students:
1. A quadcopter flying demo simulating flying training for an Unmanned Aerial Systems course.
2. "OpenROV" demo -- an open source underwater submarine developed by engineering students.
3. Arduino-based air quality sensor for air pollution monitoring
4. 3D scanning and printing by Professor Schweik’s 1-credit Makerspace Leadership and Outreach class.
5. RACHEL PI - an open access library on a Raspberry PI that being deployed in Malawi to a rural library. UMass team members are talking to them via Twitter, and providing them with open access information that they want (not what Westerners tell them they need). For more about RACHEL PI, see WorldPossible.org description: [http://worldpossible.org/docs/wp/WorldPossible-OnePage.pdf](http://worldpossible.org/docs/wp/WorldPossible-OnePage.pdf)

Christine Hatch UMass Geosciences.
Drones for Environmental Monitoring

Dennis Spencer, UMass Digital Media Lab
* 3D Printing, DML’s 3D printing service, and applications in schools.
Food Safety from Farm and Garden to Preschool Program

Abstract: Farm to preschool programs link farmers with early childcare centers to increase the use and consumption of fruits and vegetables. While these programs offer numerous benefits, fresh produce is often an overlooked source of foodborne illness (FBI). In fact, fresh produce is responsible for 46% of all FBI. According to the Centers for Disease Control and Prevention, 1 in 6 people will develop a FBI each year, and children ages 5 and younger have the highest incidence. There is thus a great need to provide food safety training for adults working in early childcare environments. Food Safety from Farm and Garden to Preschool (www.umass.edu/safefoodfarm2kid) is a free, online, asynchronous, interactive, training program for childcare educators and foodservice staff, to help reduce the risk of FBI in young children. The program consists of five units which include videos, sharing boards, best practices training tools, and printable resources. The program was developed by the Nutrition Department in collaboration with Information Technology at the University of Massachusetts Amherst and was launched in September 2014. To date over 1,000 participants have used the website. Results from preliminary (n=433) pre- and post-surveys indicate a statistically significant (p<0.0001) increase in participants’ food safety knowledge and self-efficacy.