Forensic Science Career Webinar
Digital & Multimedia Sciences

Catalin Grigoras, PhD
Mark Pollitt, PhD
Marcus Rogers, PhD
Faculty Introductions

• Catalin Grigoras, Ph.D. Director, National Center for Media Forensics, University of Colorado - Denver

• Mark Pollitt, Ph.D. Associate Professor Daytona State College, Daytona Beach, FL

• Marcus Rogers, Ph.D. – Professor/Associate Dept Head, Purdue University, West Lafayette, Indiana
Digital Forensic Examiner, Computer Forensic Examiner/Analyst, Audio-video Examiner, etc.?

• They are usually:
  – Practitioners with Law Enforcements or Corporate
  – Scientific researchers
  – Academia

• According to Rule 702 from the Federal Rules of Evidence:
  – a witness who is qualified as an expert by knowledge, skill, experience, training, or education
What Kinds of Work

**Two Dimensions:**

- **Sub-disciplines**
  - Computer Forensics (inc. networks, storage, devices)
  - Audio Analysis
  - Video and Image Analysis

- **Professional environment**
  - Traditional LE/Forensic Science/Intelligence
  - Information Security
  - E-Discovery
What Kinds of Work

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    • Information Security/Corporate Security
    • E-Discovery
Computer Forensics

• Recover, preserve, extract, and analyze digital evidence
• Focus on computing devices, operating systems, data storage devices, and networks
• Strong CS/IT technical focus as well as an investigative component
• Answers both broad and narrow questions
Audio, Video, Image Analysis

• Authentication of audio, video, and images
• Enhancement of audio, video, and images
• Speaker recognition
• Image comparisons
• Photogrammetry – height, distance, velocity
What might a typical day include for someone in this field?

• For a practitioner:
  - Work on forensic cases
  - Check for the latest scientific papers

• For a scientist:
  - Reading the latest scientific papers
  - Doing research and work on new articles
  - Work on real forensic cases
What might a typical day include for someone in this field?

• For academia, the same like a scientist plus:
  - Prepare lectures and hands-on examples
  - Meet students and coordinate their research and thesis activities
  - Peer-review proposed articles
  - Prepare presentations for forensic conferences, etc.
What attributes make someone well suited to a career in this discipline?

The most important attributes are probably:

• Education
• Training
• Skills
• Experience

Curiosity and love of problem solving
How does someone prepare for a career in this field?

- **Education:**
  - Computer science
  - Electrical/Electronic Engineering
  - Audio Engineering
  - Other related fields

- **Training:**
  - Different companies/producers offer training on their systems
  - System independent trainings, usually offered by universities
Degree Programs

- Undergraduate programs:
  - AA programs – CDFAE-CAE (major/concentration)
  - BA/BS programs – CDFAE or FEPAC accreditation
- Graduate Programs:
  - MS/MSDF/MFS/MSFS – FEPAC accreditation
  - Ph.D. – generally not accredited
- Picking a program – skills and experience
- Students NEED to get experience (internships, summer jobs, or extracurricular work)
- A “clean” background is ESSENTIAL
How do you find work/job opportunities?

• Following:
  - Internet job announcements
  - Professional websites
• Attending conferences
• During/after internships
• Following an academia career
• Or just be an independent forensic practitioner and run your own business
Networking with Other People in the Field

• AAFS Conference
• Other academic and professional conferences
• List Serves
• Online and local professional organizations (e.g., HTCIA, DFCB)
Professional Certification

• There are three types of certifications – each has its place
  – Professional certifications (DFCB, CCFP, etc.) demonstrate overall professional competence involving training, experience, and testing
  – Organizational certifications granted in a workplace environment or professional association
  – Vendor Certifications are granted for passing an exam (written and practical) on a particular product
How do you achieve membership in professional organizations

• Student Memberships AAFS
  • Student Affiliate status must be enrolled full-time in an undergraduate or graduate program that would support a forensic science career accepted by the section to which application is being made.
  • the applicant must meet these requirements at the time of application and at the time the application is being considered for approval the following February.
  • Each Student Affiliate must certify eligibility annually.
  • Student Affiliate status may be maintained for two consecutive calendar years beginning at the end of the calendar year within which graduation occurs.
  • During the two year period, once employment in a recognized forensic discipline is achieved, Student Affiliates will be required to upgrade their membership to Trainee Affiliate or Associate Member.
How do I become an active participant in my section in AAFS

- Attend the AAFS Annual Meetings
- Volunteer to help on a section committee
- Submit a paper or a poster
- Volunteer to assist with a workshop
- Volunteer to be a moderator for your section
What continuing education options are available

• Workshops at the AAFS Meeting
• Continuing Education credits through the NIJ and RTI International
• Con Ed through professional associations
• Grad certificate programs through universities
• Industry certification training
Salaries

• Depends on experience, location, and employer
  – State and local LE and forensic labs
    • Entry level ~$40-50k
    • Journey level ~50-90k
  – Federal LE/Intelligence (TS-SCI clearance req.)
    • Entry level ~$50-75k
    • Journey level ~90-125k
  – Private sector – varies with duties/client
  – Practitioner ~300-350/hr
Questions?

Catalin Grigoras catalin.grigoras@ucdenver.edu
Mark Pollitt pollitm@daytonastate.edu
Marcus Rogers rogersmk@purdue.edu