

# HEIDI ELDRIDGE

## Research Forensic Scientist

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### Education

- 1997                    **Bachelor of Arts** – Speech and Theatre, Minor in Biology  
Wagner College, Staten Island, NY
- 2002                    **Master of Science** – Biology  
Duke University, Durham, NC
- 2013 – Present        **PhD Candidate** – Forensic Science  
University of Lausanne, Lausanne, Switzerland

### Professional Experience

- July 2015 – Present    **Research Forensic Scientist**  
RTI International, RTP, NC
- Jan. 2014 – Dec. 2014 **Adjunct Instructor**  
College of Southern Nevada, North Las Vegas, NV  
**CRJ165 Criminalistic Science**
- Nov. 2012 – July 2015 **Forensic Scientist II**  
Las Vegas Metropolitan Police Department, Latent Print Detail, Las Vegas, NV  
**Forensic Areas:** Latent print processing, latent print comparison, AFIS entry  
**Additional Duties:**  
*January – July 2015: Quality Manager Back-up*
- Jan. 2007 – Oct. 2012 **Forensic Analyst**  
Eugene Police Department, Forensic Evidence Unit, Eugene, OR  
**Forensic Areas:** Technical Leader in Latent print processing and comparison, AFIS entry, crime scene processing and reconstruction, shooting reconstruction, serial number restoration, blood stain pattern interpretation
- Feb. 2004 – Jan. 2007 **Forensic Scientist**  
Oregon State Police Forensic Laboratory, Springfield, OR  
**Forensic Areas:** Drug chemistry, latent print processing, AFIS entry, trainee in latent print comparison

## Heidi Eldridge, Research Forensic Scientist, Continued

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- 1999-2002                    **Lab Instructor / Teaching Assistant**  
Duke University Department of Biology, Durham, NC
- Summers 2001-2003        **Instructor, *Examining the Evidence***  
Center for Talented Youth, Johns Hopkins University, Baltimore, MD

### Grants

- 2018                            Coping with Close Non-Matches in Latent Print Comparison  
(re-)Training, 24 months, \$616,407  
National Institute of Justice, Research and Development  
Award Number: 2018-DU-BX-0227
- 2017                            Testing the accuracy and reliability of palmar friction ridge  
comparisons: a black box study, 24 months, \$370,454  
National Institute of Justice, Research and Development  
Award Number: 2017-DN-BX-0170

### Select Professional Affiliations

- August 2017 – Present    International Association for Identification (IAI) Board Member
- June 2016 – Present      Academy Standards Board (ASB) Friction Ridge Consensus Body  
Member and Vice-Chair
- Feb. 2016 – Present      Human Factors in Forensic Practice Sourcebook Working Group  
Member and Leadership Team Member
- Sept. 2015 – Sept. 2016   Statistical and Applied Mathematical Sciences Institute (SAMSI)  
Working Groups on Pattern Evidence and Statistical Evidence - Member
- October 2014 – Present   Organization of Scientific Area Committees (OSAC) Friction Ridge  
Subcommittee – Member
- August 2014 – Present    Forensic Sciences Education Programs Accreditation Commission  
(FEPAC) – On-Site Evaluator
- Mar. 2012 – Oct. 2014\*   Scientific Working Group on Friction Ridge Analysis, Study, and  
Technology (SWGFAST) – Member  
\*(until dissolution of SWGFAST – date not precisely determined)
- Jan. 2012 – Present      Journal of Forensic Identification (JFI) – Editorial Board member

## Heidi Eldridge, Research Forensic Scientist, Continued

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2009 – Present	American Academy of Forensic Sciences – Criminalistics Section Full Member (2015), Fellow (2018); number – 128254
2005 – Present	International Association for Identification membership number – 21153

### **Publications**

Eldridge, H. (2019). “Juror comprehension of forensic expert testimony: A literature review and gap analysis” *JFI: Synergy*, doi: <https://doi.org/10.1016/j.fsisyn.2019.03.001>.

Eldridge, H. (2017). “The Shifting Landscape of Latent Print Testimony: An American Perspective” *J Forensic Sci Med* 3(2):72-81.

Eldridge, H. (2017). “A Case of Striking Sibling Similarity and a Scene Impression” *J. For. Ident.* 67(2):176-9.

Ropero-Miller, J.D., Daye, C.M., and Eldridge H. (2015). *Conference Proceedings: 2015 Impression, Pattern, and Trace Evidence Symposium*. RTI Press Publication No. CP-0001-1512. <http://dx.doi.org/10.3768/rtipress.2015.cp.0001.1512>.

Eldridge, H. (2012). “I am 100% certain of my conclusion. (But should the jury be certain?)” *Evidence Technology Magazine*, 10(2): 8.

Eldridge, H. (2011). “Meeting the fingerprint admissibility challenge in a post-NAS environment.” *Journal of Forensic Identification*, 61(5): 430-446.

Eldridge, H. (2009). “Perspectives from the NAS Report conference at ASU.” *IDentification News*, Vol.39, No. 3.

Fraser, H. (2006). “AFIS 101: A brief summary.” *Dactylogram*, Vol.1, Issue 8.

Fraser, H. (2005). “Oregon CSI: the real forensic science.” *The Oregon Police Chief*, Winter 2005.

### **Certifications and Awards**

2017	Distinguished Individual Service Award, OSAC
2011	International Association for Identification – Latent Print Examiner Certification Number 11-28 Initial expiry date: 11/28/2016 Recertification expiry date: 12/28/2021

## Heidi Eldridge, Research Forensic Scientist, Continued

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2011 Distinguished Service Award, Eugene Police Department

### University Guest Lectures

**Guest Q&A on Paper “The Shifting Landscape...”** – 2 hours  
Duke University School of Law  
March 25, 2019

**Latent Print Testimony: What Lawyers Should Know to Ask and Examiners Should Know How to Answer** – 0.5 hour  
University of Washington School of Law Forensic course LAW B548  
February 19, 2014

**Fingerprint Comparison (science)** – 1.5 hours  
Law 610 Forensic Science in Criminal Law, University of Oregon  
February 23, 2010

**Crime Scene Investigation (Gathering Physical Evidence)** – 1.5 hours  
Law 610 Forensic Science in Criminal Law, University of Oregon  
January 26, 2010

### Select Presentations Given

**Latent print reliability: behind the curtain** – 1.25 hr  
NACDL and Cardozo Law’s National Forensic College, New York, NY  
June 3, 2019

**Variability and Foundational Validity – emerging research in latent prints** – 1 hr  
North Carolina Division IAI, Asheville, NC  
May 22, 2019

Rocky Mountain Division IAI, Denver, CO  
May 16, 2019

South Carolina Division IAI Educational Conference, Greer, SC  
April 11, 2019

**Human Factors in Forensic Science Practice Sourcebook – Beyond Bias** – 0.25 hr  
American Academy of Forensic Sciences, Baltimore, MD  
February 23, 2019

**Twice Bitten – The Lecture! Latent Print Perspectives on the PCAST Report** – 0.5 hr

## Heidi Eldridge, Research Forensic Scientist, Continued

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North Carolina Division IAI, Asheville, NC  
May 22, 2019

Rocky Mountain Division IAI, Denver, CO  
May 16, 2019

South Carolina Division IAI Educational Conference, Greer, SC  
April 11, 2019

New York Division IAI Educational Conference, Hauppauge, NY  
October 2, 2018

Western States Joint Conference IAI – Las Vegas, NV  
May 1, 2018

### **How do you solve a problem like variability? Assessing Factors and Building a Model to Reduce Variability in Suitability Determinations – 1 hr**

New York Division IAI Educational Conference, Hauppauge, NY  
October 2, 2018

Cogent Users' Group International meeting, Chantilly, France  
September 20, 2018

18<sup>th</sup> Annual Meeting of the European Fingerprint Working Group,  
Lausanne, Switzerland  
September 7, 2018

103<sup>rd</sup> Annual Educational Conference of the International Association  
for Identification, San Antonio, TX  
August 2, 2018

Western States Joint Conference IAI – Las Vegas, NV  
May 1, 2018

Impression Pattern and Trace Evidence Symposium – Arlington, VA  
January 24, 2018

### **Understanding and calculating error rates in pattern evidence – 1hr**

North Carolina Division IAI, Asheville, NC  
May 22, 2019

Rocky Mountain Division IAI, Denver, CO  
May 16, 2019

South Carolina Division IAI Educational Conference, Greer, SC

## Heidi Eldridge, Research Forensic Scientist, Continued

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April 11, 2019

New York Division IAI Educational Conference, Hauppauge, NY  
October 2, 2018

Western States Joint Conference IAI – Las Vegas, NV  
May 1, 2018

101<sup>st</sup> Annual Educational Conference of the International Association  
for Identification, Cincinnati, OH  
August 10, 2016

North Carolina Division IAI Educational Conference – Raleigh, NC  
May 11, 2016

Impression Pattern and Trace Evidence Symposium – San Antonio, TX  
August 26, 2015

**Assessing and reducing variability in friction ridge suitability determinations** – 20 minutes  
Impression Pattern and Trace Evidence Symposium – Washington, DC  
January 25, 2018

11<sup>th</sup> International Fingerprint Research Group Meeting, Beijing, China  
October 18, 2017

17<sup>th</sup> Annual Meeting of the European Fingerprint Working Group,  
Pontoise, France  
September 15, 2017

**Finger versus Palm Comparisons: are examiners equally skilled at both?** – 20 minutes  
103<sup>rd</sup> Annual Educational Conference of the International Association  
for Identification, San Antonio, TX  
July 31, 2018

**Panel Discussion: Twice Bitten – Finding a path forward in the wake of the PCAST Report**  
– 1.5 hours  
102<sup>nd</sup> Annual Educational Conference of the International Association  
for Identification, Atlanta, GA  
August 9, 2017

**One Man's Trash: A white-box study into the factors driving latent print suitability  
decisions** – 30 minutes  
102<sup>nd</sup> Annual Educational Conference of the International Association  
for Identification, Atlanta, GA  
August 8, 2017

**Demolishing Divides: A Discourse on the Dearth of Discipline Differences between DNA and Dactyloscopy** – 15 minutes

American Academy of Forensic Sciences 69<sup>th</sup> Annual Scientific Meeting  
Criminalistics Section – New Orleans, LA  
February 18, 2017

**The evolution of latent print testimony** – 15 minutes

American Academy of Forensic Sciences 69<sup>th</sup> Annual Scientific Meeting  
Criminalistics Section – New Orleans, LA  
February 17, 2017

**The shifting landscape of latent print testimony: An American perspective** – 20 minutes

2<sup>nd</sup> International Symposium on Sino Swiss Evidence Science,  
Lausanne, Switzerland  
September 8, 2016

**Can you live with uncertainty? Certainly!** – 25 minutes

101<sup>st</sup> Annual Educational Conference of the International Association  
for Identification, Cincinnati, OH  
August 12, 2016

**The suitability spectrum in latent prints** – 25 minutes

101<sup>st</sup> Annual Educational Conference of the International Association  
for Identification, Cincinnati, OH  
August 11, 2016

**I know it when I see it – is complexity the key to creating a workable documentation policy for latent prints?** – 30 minutes

101<sup>st</sup> Annual Educational Conference of the International Association  
for Identification, Cincinnati, OH  
August 10, 2016

American Academy of Forensic Sciences 68<sup>th</sup> Annual Scientific Meeting  
Criminalistics Section – Las Vegas, NV  
February 26, 2016

International Symposium on Forensic Science Error Management –  
Detection, Measurement and Mitigation  
July 23, 2015

**When expert opinion is no longer a fact: the shifting landscape of latent print conclusions**  
– 1 hour

2016 Forensic Conference for Criminal Attorneys – Chicago, IL  
June 3, 2016

**Generic Principles for the Selection of Databases to Represent the Background Population**

– 30 minutes

SAMSI Forensics Transition Workshop – RTP, NC

May 9, 2016

**Articulating the Identification Decision** – 20 minutes

Impression Pattern and Trace Evidence Symposium

August 27, 2015

**Suitability and Sufficiency: One Size Fits All?** – 1 hour plenary session

Impression Pattern and Trace Evidence Symposium

August 27, 2015

**Bridging the Gap Between Black Box/White Box Research and Implementation in Latent Print Casework** (Panel Participant)

International Symposium on Forensic Science Error Management –

Detection, Measurement and Mitigation

July 21, 2015

**The Emperor's New Clothes: A Guide to Latent Print Testimony** – 1.25 hour webinar

RTI International

August 27 and September 9, 2014

**Transparent Latent Print Testimony: When the Basics Are No Longer Basic** – 0.5 hours

American Academy of Forensic Sciences 66<sup>th</sup> Annual Scientific Meeting

Criminalistics Section – Seattle, WA

February 22, 2014

**Latent Print Testimony: What Lawyers Should Know to Ask and Examiners Should**

**Know How to Answer** – 20 minutes

American Academy of Forensic Sciences 66<sup>th</sup> Annual Scientific Meeting

Jurisprudence Section– Seattle, WA

February 20, 2014

**CSI: Science/Fiction** – 2 hours

Oregon Museum of Science and Industry's Eugene Science Pub

August 13, 2009

**In-Services and Multi-Day Courses Provided**

**Latent Print Expert Testimony: Can they say that?** – 30 minutes

NC Indigent Defense In-Service Training, Raleigh, NC

October 21, 2016



## Heidi Eldridge, Research Forensic Scientist, Continued

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### **Current Topics in Latent Prints: A guide for public defenders** – 8 hours

Cook County Public Defender Office Forensic Science Division  
April 22, 2016

### **Can't I Just Take the Fifth? Testifying without Terror** – 16-hour course

King County Regional AFIS, Burien, WA  
June 13, 14, 2011

Portland Police Bureau, Portland, OR  
January 24, 25, 2011

### **Anatomy of a Daubert Hearing** – 1.5 hours

Oregon State Police Latent Print In-Service, Clackamas, OR  
October 8, 2010

### **Workshops Taught**

### **Crawl before you walk: public speaking in preparation for testimony** – 4 hr

Rocky Mountain Division IAI, Denver, CO  
May 16, 2019

### **Behind the Curtain: Understanding the basic science and testimony of latent prints** – 4 hr

American Academy of Forensic Sciences 69<sup>th</sup> Annual Scientific Meeting  
Jurisprudence Section – New Orleans, LA  
February 13, 2017

### **Latent Print Testimony: How to be Transparent Without Feeling Naked** – 4 hr

New York Division IAI Educational Conference, Hauppauge, NY  
October 1, 2018

103<sup>rd</sup> Annual Educational Conference of the International Association  
for Identification, San Antonio, TX  
July 31, 2018

Western States Joint Conference IAI – Las Vegas, NV  
May 3, 2018

102<sup>nd</sup> Annual Educational Conference of the International Association  
for Identification, Atlanta, GA  
August 9 and 10, 2017

North Carolina Division IAI Educational Conference, Raleigh, NC  
May 11, 2016

Minnesota Division IAI Educational Conference, Minneapolis, MN  
September 17, 2015

## Heidi Eldridge, Research Forensic Scientist, Continued

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100<sup>th</sup> Annual Educational Conference of the International Association for Identification, Sacramento, CA  
August 3 and 6, 2015

Pacific Northwest Division of the International Association for Identification 51<sup>st</sup> Annual Educational Conference  
May 20, 2015

**Development of a Reasonable Minimum Documentation Standard in Latent Prints** – 4 hr  
American Academy of Forensic Sciences, Las Vegas, NV  
February 22, 2016

Impression Pattern and Trace Evidence Symposium, San Antonio, TX  
August 25, 2015

100<sup>th</sup> Annual Educational Conference of the International Association for Identification, Sacramento, CA  
August 5 and 7, 2015

**Can't I Just Take the Fifth? Testifying without Terror in a Post-NAS Environment** – 4 hr  
6<sup>th</sup> Annual Tri-Division Educational Conference, Tucson, AZ  
October 5, 2011

96<sup>th</sup> Annual Educational Conference of the International Association for Identification, Milwaukee, WI  
August 9, 10, and 12, 2011

### **Training Received**

#### *Latent Print Examination*

May 1, 2018 (4 hours)	<b>What if I Don't Agree? Approaches to Conflict Resolution in Latent Print Analysis</b> Penny Dechant and Heather Conner – Western States Joint Conference, IAI
January 23, 2018 (4 hours)	<b>Statistical Interpretation Software for FRStat Workshop</b> Henry Swofford and Tom Wortman - IPTES
January 22, 2018 (8 hours)	<b>Foundations of the interpretation of pattern and trace evidence (source and activity level) Workshop</b> Inman, Rudin, Langenburg, and Neumann - IPTES

## Heidi Eldridge, Research Forensic Scientist, Continued

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August 11, 2017 (6 hours)	<b>Making Optimal Decisions in Identifications and Exclusions – A Scientific Approach</b> Tom Busey and John Vanderkolk – IAI Educational Conference
July 23, 2014 (1.25 hours)	<b>Understanding Basic Statistical Concepts: Fingerprints</b> Michele Triplett – Online Webinar (RTI International)
June 24, 25 2014 (16 hours)	<b>Universal Latent Workstation (ULW) Software Training Program</b> Patricia Mason – FBI CJIS Las Vegas, NV
April 15, 2014 (1 hour)	<b>Sure Footing: Fundamental Forensic Science Research – Part II</b> Cedric Neumann, Tom Busey – Online Webinar (RTI International)
March 3-7, 2014 (40 hours)	<b>Advanced ACE-V Applications for Fingerprint Examiners</b> Glenn Langenburg – Las Vegas, NV
November 6, 2013 (8 hours)	<b>CJIS Terminal Operator Certification</b> Alan Peto – Las Vegas Metropolitan Police Department, NV
May 2-6, 2011 (40 hours)	<b>IAI Latent Print Certification Test Preparation Training</b> Debbie Benningfield / Charles Richardson – RS&A. Miamisburg, OH
March 21, 22, 2011 (16 hours)	<b>Complex Latent Print Sufficiency: The Threshold?</b> Julie Brownfield – Spokane, WA
March 1-5, 2010 (40 hours)	<b>From Fingerprint Individualisation to Fingerprint Statistics</b> Glenn Langenburg / Cedric Neumann – OSP. Clackamas, OR
February 19-20, 2009 (16 hours)	<b>Analysis of Distortion in Latent Prints</b> Alice Maceo – OSP. Clackamas, OR
November 12-14, 2008 (24 hours)	<b>Adobe Photoshop Forensic Techniques Workshop</b> George Reis – OSP. Eugene, OR
May 5-9, 2008 (40 hours)	<b>Latent Print Examinations - Preparing for a Daubert Hearing</b> Melissa Gische / Heather Webster / Robin Ruth – FBI. Huntington, WV
December 10-14, 2007 (40 hours)	<b>Ridgeology Science Workshop – Plus!</b> Glenn Langenburg / Josh Bergeron – Mesa, AZ
Jan. – November, 2007	<b>Latent Print Comparisons</b> Jason Petersen – Internal Training Program, Eugene Police Department
April 30-May 11, 2007 (80 hours)	<b>Latent Print Photography</b> Bob May – FBI Academy. Quantico, VA

## Heidi Eldridge, Research Forensic Scientist, Continued

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- February 12-16, 2007 **Forensic Ridgeology**  
(40 hours) David Ashbaugh – RS&A. Largo, FL
- August 29-31, 2006 **Advanced Palm Print Comparison Techniques**  
(24 hours) Ron Smith – RS&A. Kansas City, KS
- April – October, 2006 **Advanced Latent Comparisons** (Beginning Level Completed)  
Bonnie Marchant – Internal Training Program, Oregon State Police
- September 12-13, 2005 **Courtroom Testimony Training**  
(16 hours) Ron Smith – RS&A. Monmouth, OR
- April 11-22, 2005 **Digital Imaging of Evidentiary Photography**  
(80 hours) David Witzke / Bob May – FBI Academy. Quantico, VA
- April 5-8, 2005 **Basic Latent Print Analysis & Comparison**  
(24 hours) Jon Stimac – OSP. Eugene, OR
- April 4-5, 2005 **Postmortem Identification Techniques**  
(8 hours) Sandy Roberts – OSP. Eugene, OR
- 2005 **Latent Fingerprints Primary Examinations**  
Bonnie Dalziel – Internal Training Program, Oregon State Police
- Crime Scenes*
- May 11-15, 2009 **Advanced Bloodstain Pattern Analysis & Expert Witness Workshop**  
(40 hours) Toby Wolson / Mark Seiden / Beatrice Butchko – MPI. Doral, FL
- March 2-6, 2009 **Crime Scene Reconstruction II**  
(40 hours) Ross Gardner / Iris Dalley – EPD. Eugene, OR
- January 12-16, 2009 **Crime Scene Reconstruction I**  
(40 hours) Tom Bevel / Ross Gardner – Contra Costa Sheriff's Office. CA
- September 25-26, 2008 **Identification and Recovery of Human Skeletal Remains**  
(16 hours) Dr. John Lundy / Dr. Nici Vance – OSP. Clackamas, OR
- August 4-8, 2008 **Forensic Shooting Scene Reconstruction**  
(40 hours) Michael Haag – EPD. Eugene, OR
- March 31-April 4, 2008 **Minor Crime Scene Processing**  
(40 hours) Sandy Roberts / Jason Petersen – Internal Training, Eugene Police Dept.
- January 8-10, 2008 **Serial Number Restoration**

## Heidi Eldridge, Research Forensic Scientist, Continued

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(24 hours) Jodi Marsanopoli / Kristin Gerber – ATF. Eugene, OR

July 30-August 3, 2007 **Basic Bloodstain Pattern Analysis**  
(40 hours) Tom Bevel – Anchorage, AK

### Management Training

August 2014 **Step-Up Mentoring Program**  
Mentor: Alice Maceo  
Project: development of a documentation policy – Latent Print Detail

Spring 2014 **Transition to Leadership**  
(2.32 ILUs) Online course – WVU Continuing & Professional Education

December 18, 2013 **Leadership Inside Out**  
(8 hours) Las Vegas Metropolitan Police Department, NV

October 10, 2013 **Talking Bout My Generation: Communicating With the  
Multigenerational Workforce**  
(3 hours) Las Vegas Metropolitan Police Department, NV

Sept. 11, 2013 **Stress Management for Supervisors**  
(4 hours) Las Vegas Metropolitan Police Department, NV

### Other Relevant Training

January 25, 2018 **Statistical Interpretation Software for FRStat Workshop**  
(4 hours) H. Swofford and T. Wortman – IPTES. Washington, DC

January 23, 2018 **Foundations of the interpretation of pattern and trace evidence  
(source and activity levels) Workshop**  
(8 hours) P. Buzzini, K. Inman, G. Langenburg, C. Neumann, N. Rudin – IPTES.  
Washington, DC

May 17-19, 2016 **Statistics and Applied Mathematics in Forensic Science**  
(24 hours) Cedric Neumann – FTCoE RTP, NC

Spring 2014 **Ethics in Forensic Science**  
(3.78 ILUs) Online course – WVU Continuing & Professional Education

March 26-30, 2006 **Basic Instructor Development Course**  
(40 hours) Kevin Tarkalson – DPSST. Eugene, OR

2004 **Controlled Substances**  
Traci Rose – Internal Training Program, Oregon State Police