

Max M. Houck

Director, Department of Forensic Sciences, District of Columbia Consolidated Forensic Laboratories,
2012-present, 401 E Street SW, Washington, DC 20024.

- Responsible for the management and operation of the agency, which contains the Forensic Science Laboratory, Public Health Laboratory, and Crime Scene Sciences
- Primary responsibility for the Consolidated Forensic Laboratory Facility
- Independent forensic laboratory with jurisdictional responsibility for the District of Columbia; reports to the Deputy Mayor for Public Safety and Justice and member of Mayor's Senior Staff Cabinet

Vice President and Director of Forensic Services, 2011-present, Forensic and Intelligence Services, LLC, Arlington, VA

- Contractor providing subject matter expertise in intelligence analysis, forensic science, business and process improvement, and professional communications; Woman/Minority-owned small business

Principal Analyst, Forensic Enterprise Division, 2011 (April)-2012 (April), Analytic Services, Inc. (ANSER), Arlington, VA

- Thought-leader in forensics and biometrics; National-scale strategy for forensic science; Assistance to various national projects and programs in forensic-related areas

Director, Forensic Science Initiative (Research); Director, Forensic Business Research and Development (Business and Economics), 2001-2011 (April), West Virginia University, Morgantown, WV

- Direction of \$32 million in research and resource initiatives for forensic science; Developing educational and professional resources in forensic science; Developing forensic business and economic applications and research
- Lecturer in Forensic and Investigative Sciences Program, WVU

Physical Scientist, Trace Evidence Unit, Laboratory Division, 1994-2001, Federal Bureau of Investigation, Washington, D.C.

- Worked hundreds of cases in trace evidence and anthropology; Testified in local, state, and federal courts for prosecution and defense; Chairman of the Scientific Working Group for Materials Analysis; Technical Liaison Manager with federal agencies
- Research Associate at Department of Anthropology, Smithsonian Institution
- **Assisted DoD with identification of 9/11/01 Pentagon victims**

Criminalist II, 1992-1994, Tarrant County Medical Examiner, Fort Worth, TX

- Trace evidence analysis; Instituted forensic anthropology department in laboratory, including recovery of remains; **Coordinating anthropologist for the Branch Davidian Investigation, Waco, TX**

Applications Specialist, 1988-1992, Oxford Instruments, Inc., Madison, WI

Electron Microscopy Technician, 1987-1988, Michigan State University, East Lansing, MI

Archaeologist and Research Assistant, 1982-1986, Michigan State University, East Lansing, MI

Education

- 2010 PhD, Applied Chemistry, Curtin University, Perth, Australia: *Foundational Principles of Forensic Science: Using Supply Chains as a Basis for Evidentiary Significance*. Chancellor's Letter of Commendation.
- 1988 M.A., Anthropology, Michigan State University, *Individualization of Toolmarks in Bone*
- 1984 B.S., Anthropology, Michigan State University, Outstanding Senior in Anthropology

Professional memberships

- American Chemical Society
- Fellow, Royal Society of Chemistry
- American Statistical Association
- American Association for the Advancement of Science
- American Society of Crime Laboratory Directors

Awards

- Excellence in Reviewing, *Science and Justice*, 2013
- In the 1% most viewed profiles on LinkedIn in 2012 (out of over 200 million profiles)
- Best Oral Presentation, Australian-New Zealand Forensic Science Society Symposium 2010, Management and Quality Section, "The FORESIGHT Project: Collaborative Benchmarking for Effectiveness, Efficiency, and Quality"
- Mary E. Cowan Outstanding Service Award, American Academy of Forensic Sciences, 2009

- 100 Most Influential (with Clifton Bishop), *Dominion Post*, Morgantown, WV, 2004
- American Society for Testing and Materials, Forensic Sciences Award, 2001
- Quality Award, FBI Laboratory, 1999

Editorial work

- Founding Co-Editor (with Jay Siegel), *Forensic Science Policy and Management*
- Editorial Board, *Science and Justice*
- Editorial Board, *Journal of Forensic Sciences*
- Chair of the Section Editors, *Encyclopedia of Forensic Sciences* 2nd edition., Elsevier: Amsterdam.

Committees

- Entertainment Industries Council Campaign Advisory Committee Leader
- Singapore Health Sciences Authority International Advisory Panel
- Plenary Session Co-Chair, American Academy of Forensic Sciences, 2013
- American Society of Crime Laboratory Directors, Training and Education Committee (2011-present).
- Advisory Member, Executive Office of the President of the United States, National Science and Technology Council, Committee on Science, Subcommittee on Forensic Science, Education, Ethics, and Terminology Interagency Working Group (2010-2011)
- NIST Human Factors in Latent Print Analysis, Co-Chair (2009-2012)
- Interpol Forensic Science Symposium Planning Committee (2008-present)
- Forensic Educational Program Accreditation Commission (FEPAC), Chairman (2005-2011)
- Forensic Educational Program Accreditation Commission (FEPAC) 2004
- European Academy of Forensic Sciences Symposium Scientific Committee (2005-2006)
- National Academies of Science Committee on Educational Paradigms for Homeland Security (2004)
- Business Conference Advisory Panel, Nemaquin Woodlands Resort and Spa (2003-2004)
- National Library of Medicine Planning Panel, History of Forensic Science exhibit, 2002-2003
- Technical Working Group on Education and Training in Forensic Science
- ASTM Committee E 30 on Forensic Sciences
- Imaging Technology Coordination Committee (FBI), Chairman, Standards and Practices
- AEGIS Council, Support (Non Agent) Employee Advisory Committee to the FBI Director (1997 1999). Addressed and mitigated FBI employee concerns with administration and reported to Director Freeh.
- AEGIS Representative for Division 7 (Laboratory), 1995 1997, 1997 1999. Represented Division 7 employee concerns to AEGIS Council.
- Technical Advisory Panel, Revision of Standard Reference Collection of Forensic Science Materials: Status and Needs (1977), through Office of Law Enforcement Standards (OLES) and National Institute of Technology and Standards (NIST).

Keynote addresses and Invited Lectures

- Defining the forensic enterprise for an enduring strategic vision, Invited Keynote, Australian New Zealand Forensic Science Society, 2012
- Forensic science as a gateway for women into science, Oxford Round Table invited presentation, July, 2009.
- Forensic science, CSI, and education, West Virginia Science Teachers Association, October, 2008.
- Presentations to the National Academies of Science "Needs of Forensic Science" Committee on forensic science education and forensic hair comparisons
- Crime Scene Investigation, NASA Goddard Engineering Colloquium, Goddard Space Flight Center, Greenbelt, MD, November 2005
- The Role of Forensic Science and Academia, Educational Session, International Association of Forensic Sciences, 2005, Hong Kong, China.
- Forensic Science and Business, 2005, West Virginia University Alumni Association, Cleveland, OH
- Forensic Science is History, 2004 Combined Meeting of the Southern, Midwestern, MidAtlantic Associations of Forensic Scientists and the Canadian Society of Forensic Scientists, Orlando, FL, September.
- Science and the Law: Nexus of Conflict and Resolution, 2003 Forum on Crime Laboratory Management for Criminal Justice Agencies, The Performance Institute, Arlington, VA, July 30-31.
- Making Legal Evidence Count, 2003, Max Planck Institute Summer Course in Bounded Rationality, Berlin, Germany.

Books and book chapters

Houck, M. and Speaker, P. In Press. "Developing new models for forensic science: The business of forensics," in Hickman, M.

(ed) *Forensic Science and the Administration of Justice*, SAGE Publications.

- Siegel, J. and Sauko, P. 2013. *Encyclopedia of Forensic Sciences, 2nd Edition*. Elsevier: Amsterdam. *In press*.
- Crispino, F. and Houck, M.M. 192. Basic Principles of Forensic Science
- Houck, M.M. 57. Missing Persons (NameUS)
- Houck, M.M. 215. Counterfeits
- Houck, M.M. 204. Major Scene Management
- Houck, M.M. 239. Effectiveness
- Houck, M.M. 251. Analytical Light Microscopy
- Houck, M.M. 252. Microscopy (Electron)
- Houck, M.M. 279. Serial Number Restoration.
- Houck, M.M. 269. Range.
- Houck, M.M. 287. Accreditation of Educational Programs.
- Houck, M.M. 292. Research and Publishing.
- Houck, M.M. 329. Interpretation/The Comparative Method
- Houck, M.M. 330. Forensic Classification of Evidence.
- Houck, M.M. 331. American Academy of Forensic Sciences (AAFS).
- Houck, M.M. 332. Australian-New Zealand Forensic Science Society.
- Houck, M.M. 333. American Society of Crime Laboratory Directors (ASCLD).
- Houck, M.M. 334. European Network of Forensic Science Institutes (ENFSI).
- Houck, M.M. 335. International Association for Identification (IAI).
- Houck, M.M. 336. National Association of Medical Examiners (NAME).
- Houck, M.M. 337. Senior Managers of Australian-New Zealand Forensic Laboratories (SMANZFL).
- Robertson, J. and Houck, M.M. 236. Certification

Houck, M.M. 2012. "Principi fondamentali della scienza sulla scena del crimine [Fundamental principles of science at the crime scene]" in *Le investigazioni tecnico scientifiche sulla scena del crimine*, D.Curtottii and L.Saravo, (eds). Giappichelli:Torino.

Houck, M.M. 2012. "International Aspects of Forensic Science," pages 273-276, in *Fifty Years of Forensic Science: A Commentary*, Nic Daeid, N. (ed), Wiley-Blackwell: Hoboken, NJ.

Houck, M.M., Crispino, F., and McAdam, T. 2012. *The Science of Crime Scenes*. Elsevier: Amsterdam.

Taylor, M. K.; Kaye, D. H.; Busey, T.; Gische, M.; LaPorte, G.; Aitken, C.; Ballou, S. M.; Butt, L.; Champod, C.; Charlton, D.; Dror, I. E.; Epstein, J.; Garrett, R. J.; **Houck, M.M.**; Imwinkelried, E. J.; Keaton, R.; Langenburg, G.; Leben, D. A.; Maceo, A.; Martin, K. F.; Mnookin, J. L.; Neumann, C.; Polski, J.; Roberts, M. A.; Shappell, S. A.; Shaver, L.; Srihari, S. N.; Stern, H. S.; Stoney, D.; Swienton, A.; Theofanos, M. F.; Thompson, R. M.; Vanderkolk, J.; Weir, M.; Wertheim, K.; 2012. Expert Working Group on Human Factors in Latent Print Analysis. *Latent Print Examination and Human Factors: Improving the Practice through a Systems Approach*. U.S. Department of Commerce, National Institute of Standards and Technology.

Houck, M.M. and Bowen, R.T. 2012. "Teaching Ethics," in *Ethics in Forensic Science*, Downs, J. and Swienton, A. (eds). Elsevier: Amsterdam.

Houck, M.M. and Siegel, J.A. 2010. *Fundamentals of Forensic Science*, 2nd edition. Academic Press, San Diego.

Houck, MM. "Trace Evidence" in *Forensic Science Handbook*, James Fraser and Robin Williams, eds. Willan Publishing, Devon, UK, 2009.

Houck, MM, *Trace Evidence*, Facts on File, New York. 2009.

Houck, MM, *Science vs Crime*, Facts on File, New York. 2009.

Houck, MM (ed) *Fiber Identification*, Woodhead Publishing, London. 2009.

Feder, H. and Houck, M.M. *Feder's Succeeding as an Expert Witness*, CRC Press, Boca Raton, FL, 2008.

Houck, MM. *Forensic Science: Modern Methods of Solving Crime*, Praeger Publishing, Westport, CT. 2007.

Houck, MM and Siegel, JA, *Fundamentals of Forensic Science*, Academic Press, San Diego, 2006.

Houck, MM, "Preparation of Witnesses (U.S.)", *Encyclopedia of Legal and Forensic Medicine*, Payne-James, J., Byard, R.W., Corey, max.houck@dc.gov

T.S., Henderson, C. (eds). Elsevier: Oxford, UK, 2005, 490-495.

Houck, MM (editor), *Trace Evidence Analysis: More Cases from Mute Witnesses*, Academic Press: San Diego, 2003.

Grieve, M. and Houck, MM, "Introduction", in Houck, MM (ed) *Trace Evidence Analysis: More Cases from Mute Witnesses*, Academic Press: San Diego, 2003.

Houck, MM, "My Roomate is Using the Refrigerator", in Houck, MM (ed) *Trace Evidence Analysis: More Cases from Mute Witnesses*, Academic Press: San Diego, 2003.

Houck, MM (editor), *Mute Witnesses: Trace Evidence Analysis*, Academic Press: San Diego, 2001.

Houck, MM, "A Case of Cross Transfer", in Houck, MM (ed), *Mute Witnesses: Trace Evidence Analysis*, Academic Press: San Diego, 2001.

Ryland, S and Houck MM, "Only Circumstantial Evidence," in Houck, MM (ed), *Mute Witnesses: Trace Evidence Analysis*, Academic Press: San Diego, 2001.

Wiggins, K and Houck, MM, Introduction, in Houck, MM (ed), *Mute Witnesses: Trace Evidence Analysis*, Academic Press: San Diego, 2001.

Siegel, J and Houck, MM, Chapter 36: Forensic Textile Fiber Analysis, In *Forensic Sciences* (3 vol.), C. Wecht, ed., 2001.

Houck, MM, 1998, Skeletal Trauma and the Individualization of Knife Marks in Bone, in *Forensic Osteology*, 2nd ed., Reichs K (ed.), 410-424.

Journal Publications

Houck, M.M. *in press*. "Managing performance in forensic science using the balanced scorecard," *Fingerprint World*.

Tridico, S., Houck, M., Kirkbride, P., Smith, M., and Yates, B. 2014. Morphological identification of animal hairs: Myths and misconceptions, possibilities and pitfalls, *Forensic Science International* 238: 101-107.

Tontarski, R., Houck, M., Grose, W., and Gialamas, D. 2013. Alternative models promote self-regulation of the forensic enterprise. 2012. *Forensic Science Policy and Management* 3: 139-150.

Maguire, C., Houck, M., Williams, R., and Speaker, P. 2012. Efficiency and the cost effective delivery of forensic science services: In-sourcing, out-sourcing, and privatization, *Forensic Science Policy and Management*, 2 (3)28-35..

Christensen, A., Crowder, C., Ousley, S., and Houck, M. In Press: January 2014. "Error and its meaning in forensic science," *Journal of Forensic Sciences*.

Houck, M., Fleming, S., Speaker, P., Riley, R., 2012. "The balanced scorecard: Sustainable performance assessment for forensic laboratories," *Science and Justice*, 52: 209-216.

Crispino, F., Ribaux, O., Houck, M., and Margot, P. 2011. "Forensic science--A true science?" *Australian Journal of Forensic Sciences*, 43(2-3): 157-176..

Kobus, H., Houck, M.M., Speaker, P., Riley, R. and Witt, T. 2011. "Managing Performance in the Forensic Sciences: Expectations in Light of Limited Budgets," *Forensic Science Policy and Management* (2): 1-8.

Mnookin, J., Cole, S., Fisher, B., Houck, M., Inman, K., Kaye, D., Koehler, J., Langenburg, G., Risinger, M., Rudin, N., Siegel, J. and Stoney, D. 2010. "The need for a research culture in the forensic sciences," *University of California Law Review* (58) 725-779.

Houck, M.M. and Boyle, J. 2010. "A content analysis of fingerprint literature for educational curricula," *Science and Justice*, 50: 123-126.

Davis, G., Poullet, K., Houck, M., and Swan, T. 2010. "Does the technology portrayed in television crime shows have an effect on potential jurors?" *Issues in Information Systems* 11(1): 154-163.

- Houck, M.M. and Daugherty, E. 2010. "Radio frequency identification devices (RFID) as a means of evidence tracking," *Forensic Science Policy and Management* 1: 135-143.
- Houck, MM, Riley, R, Speaker, P and Witt, T. 2009. "FORESIGHT: A business approach to improving forensic services" *Forensic Science Policy and Management* 1(2): 85-95.
- Vatsa, M., Singh, R., Noore, A. and Houck, M. 2009. "Quality-augmented fusion of level-2 and level-3 fingerprint information using DS_m theory" *International Journal of Approximate Reasoning* 50: 51-61.
- Houck, MM. 2009. "Is Forensic Science a Gateway for Women into Science?" *Forensic Science Policy and Management* 1(1): 65-69.
- Houck, MM and Houck, LD. 2008. "What is Touch DNA?", *Scientific American*, 299(5): 108.
- Houck, MM and Quarino, L. 2008. "Saving Us From Ourselves: Recreating Forensic Science," *Forensic Magazine*, 5(1): 38, 40-41.
- Noore, A, Vatsa, M, Singh, R, Morris, K., and Houck, M. 2007 "Enhancing security of fingerprint images," *Journal of Documents and Identity* 22: 3-5.
- Noore, A, Singh, R, Vatsa, M. and Houck, MM. 2007. "Enhancing security of fingerprints through contextual biometric watermarking," *Forensic Science International*, 169: 188-194.
- Houck, MM, Kranacher, M, Morris, B, Riley RA, Robertson, J, and Wells, JT. 2006. "Forensic Accounting as an Investigative Tool", *The CPA Journal*, 76 (8): 68-69.
- Houck, MM. 2006. "The difference between painting and poetry", *The Science LINK* V1, N6, (September 6, 2006), published by Kimberly-Clark Professional, Roswell, Georgia.
- Houck, MM. 2006. CSI: Reality, *Scientific American*, V295 N1; 84-89.
- Houck, MM. 2006. "The growing use of accreditation standards in college-level forensic science education," *Evidence Technology Magazine*, March-April, 22-26.
- Asbaugh, D and Houck, MM (2005) "Fingerprints and Admissibility: Friction, Ridges, and Science", *The Canadian Journal Of Police & Security Services Practice, Policy & Management*, 3(2), pages not available.
- Houck, MM. (2005) DNA and the criminal justice system (book review), *The Journal of Clinical Investigations* 115 (6): 1398.
- Houck, MM, and Bisbing, RE, (2005) Forensic Human Hair Examination and Comparison in the 21st Century, *Forensic Science Review*, V17, N1: 51-66.
- Houck, MM and Bowen, R (2005) An Argument for Microscopy: A Review of Forensic Microscopy, *Forensic Science Review*, V17, N1: 1-16.
- Houck, MM (2005) Forensic Fiber Examinations and Analysis, *Forensic Science Review*, V17, N1:29-50.
- Houck, MM (2005) Editor's Introduction, *Forensic Science Review* V17, N1.
- Noore, A, Tungala, N, and Houck, MM. (2004) Embedding biometric identifiers in 2D barcodes for improved security, *Computers and Security*, 23: 679-686.
- Houck, MM, (2004) The Nature of Physical Evidence, *Law Enforcement Technology*, October, 124-133.
- Houck, MM, Bisbing, RE, Watkins, T, and Harmon, RE, The Science of Forensic Hair Comparisons and the Admissibility of Hair Comparison Evidence: *Frye and Daubert* Reconsidered, on-line at: www.modernmicroscopy.com, 02 March 2004.
- Houck, MM, 2003, Inter-comparison of unrelated textiles, *Forensic Science International*, 135(2): 146-149.
- Ubelaker, DH, and Houck, MM, 2002, Utilization of Radiocarbon Dating and Paleontological Extraction Techniques in the Analysis of a Human Skull in an Unusual Context, *Forensic Science Communications*, V4, N4, available: www.fbi.gov.
- Houck, MM, and Budowle, B, 2002, Correlation of Microscopic and Mitochondrial DNA Analysis of Hairs, *Journal of Forensic*

Sciences, V45, N5: 1-4.

Houck, MM, 2001, A bibliography of hair references for the forensic scientist, *Forensic Science Communications*, V4, N1, Available: www.fbi.gov.

Houck, MM, Menold, RE, Huff, R, and Lowe, P, 2001, Poly(trimethylene) terephthalate (PTT): A new type of polyester, *Forensic Science Communications*, V3, N3, Available: www.fbi.gov.

Houck, MM, 1999, Statistics and Trace Evidence: The Tyranny of Numbers, *Forensic Science Communications*, V1, N3, Available: www.fbi.gov.

Houck MM, Ubelaker DH, Owsley DW, Craig EA, Grant WE, Fram R, Woltanski T, Sandness KL, 1996, The Role of Forensic Anthropology in the Recovery and Analysis of Branch Davidian Compound Victims: Assessing the Accuracy of Age Estimations, *Journal of Forensic Sciences*, 41(5): 796 801.

Singer RL, Davis D, and Houck MM, 1996, A Survey of Gunshot Residue Analysis Methods, *Journal of Forensic Sciences*, 41(2):195 198.

Ubelaker DH, Owsley DW, Houck MM, Craig EA, Grant WE, Woltanski T, Fram R, Sandness KL, and Peerwani N, 1995, The Role of Forensic Anthropology in the Recovery and Analysis of Branch Davidian Compound Victims: Recovery Procedures and Characteristics of the Victims, *Journal of Forensic Sciences*, 40(3): 335 340.

Owsley DW, Ubelaker DH, Houck MM, Sandness KL, Grant WE, Craig EA, et al., 1995, The Role of Forensic Anthropology in the Recovery and Analysis of Branch Davidian Compound Victims: Techniques of Analysis, *Journal of Forensic Sciences*, 40(3): 341 348.

Houck, MM, 1994, Peak Performance Column, *The SEMinar*, FBI Publication. (Publication ended 1995).

Houck, MM, 1992, Logical Conclusions From Pattern Analysis: Matches, Non Matches and Exclusions, *Journal of the Canadian Society of Forensic Sciences*, 25(1): 25 29.

Houck, MM, 1992, Microscopy in Forensic Science, *Microscopy Today*, July.

Houck, MM, 1992, Gunshot Residue Analysis by SEM/EDS, *Microscopy Today*, August.

Houck, MM, 1989, Microanalysis of the Earliest French Issue Coins in the New World, *Midwest Microscopy*, 20(1), 24 30.

Skowronek R and Houck MM, 1989, The Non Destructive Identification of the Earliest French Issue Coins in North America, *American Antiquity*, 55(2): 337 347.

Houck, MM, 1987, Histological Analysis of Bone: 20WA176, *Michigan Archaeologist*, 33

Presentations

I have given hundreds of presentations at professional conferences and to committees on forensic science, education, business practices of forensic laboratories, philosophy of forensic science, and my research areas of hairs, fibers, and forensic anthropology. I have also taught dozens of short courses in forensic science, trace evidence, leadership, expert testimony, grants, and visualization of data.

Academic teaching

West Virginia University

FIDP 210 Introduction to Forensic Science (2004, 2005)

FIDP 401 Senior Forensic Capstone (2003, 2004, 2005)

FIDP 406 Court Testimony (2005, 2006)

FIDP 402 Forensic Professional Communications (2008-2010)

American University Washington College of Law

LAW 878 Scientific Evidence and Expert Testimony (2012)

Thesis and Dissertation Committees

Chair

- Parman, E. 2011. *Possible Presumptive Screening Tests Used for Synthetic Cannabinoids*. MS, Forensic Sciences, National University.

Reader

- Brooks, E., 2007. *An appraisal of the use of numerical features in the forensic examination of hair*. MS, School of Health Sciences, University of Canberra, Australia.
- Walbridge, S. 2002. *Determining the sheddability of various fiber types*. School of Criminal Justice, MS Forensic Science, Michigan State University.

Grants

National Institute of Justice

2001-RC-CX-K003 \$17 million
2003-RC-CX-K001 \$8 million
2008-DN-BX-K223 \$3.57 million
2009-DI-BX-K012 \$4 million
2010-DI-BX-K011 \$4 million

DEA Research DJDEA-05-C-0036 \$127,000