

# **AMERICAN FORENSIC TECHNOLOGIES LLC**

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## **CURRICULUM VITAE SUMMARY FOR DAVID J. LAMAGNA**

David J. LaMagna is a Forensic Scientist and Engineer, and Professional Licensed Private Investigator with training, education and experience in different areas of forensic science, engineering and investigation. He has also worked as a Police Constable in Massachusetts on assignment for certain state agencies, and at large investigating the whereabouts of fugitives from justice and arresting such individuals, performing evictions, etc. He is also a licensed private investigator in multiple states. He has worked within the law enforcement community for the last thirty-four (34) +/- years of his life. He has completed hundreds of hours of professional law enforcement training in such areas as a certified law enforcement firearms, submachine gun (including SWAT training), defensive tactics PPCT, officer survival instructor techniques, chemical munitions, and other weapon systems instructor training courses, and as a certified factory law enforcement armorer at several widely recognized law enforcement training academies.

He has also completed several hundred hours of professional law enforcement forensic training programs at the Metro-Dade Police Training Unit and the Metro-Dade Medical Examiner's Office in Miami Florida, in such subject matters as Crime Scene Investigations and Crime Scene Reconstruction, Homicide Investigations, Bloodstain Pattern Analysis, Fingerprint Technology, Fingerprint Examination and Identification, Physical Evidence, Forensic Photography, Police-Medical Investigation of Death, Use of Deadly Force Investigations, Officer Survival Instructor Techniques, Shooting Scene Reconstruction, Buried Body & Surface Skeleton Scene Investigations, etc.

In addition to the aforementioned law enforcement training programs, He has also received a few hundred hours of additional training in such specialized technical areas as Firearm Examination and

Identification, Faro Technologies 3D Laser Scanning Measurement Technology, Accident Reconstruction at the Society of Automotive Engineers in Michigan, training in forensic DNA Profiling at DNA Diagnostics Corp. in Maryland, and he received training in DNA technology at the university level as well.

He has also received training in palm print classification, fracture matching, and other forensic disciplines through the International Association for Identification (IAI). He is also a certified computer technician, with specialized certifications in A+, Network+, and MCP, which he received through training, and testing at the Intense School computer-training academy in Ft. Lauderdale, Florida. He has also received training in computer-aided design (CAD), computer-aided engineering (CAE), and computer-aided manufacturing (CAM) both at the University of Massachusetts-Lowell, and at Structural Dynamics Research Corporation (SDRC) of Milford, Ohio.

He has a formal scientific education, including a Bachelor of Science degree in Plastics Engineering, which is a sub-discipline of Chemical Engineering, with an emphasis on engineering mechanics, engineering dynamics, strengths of materials, process and design engineering, polymer science, chemistry, thermodynamics/heat transfer, engineering mathematics, etc. He also holds a Master's of Science degree in Materials Science, which is also a subdiscipline of Chemical Engineering, with an emphasis on ceramics, metals, cermets (ceramic-metal alloys), synthetic polymers, bioprocess engineering, engineering mechanics, materials science, etc., Additional emphasis was focused on learning research, and development techniques, advanced microscopy, materials development and identification, etc. in a graduate M.Sc., and D.Sc. level engineering degree program. In addition, he has completed more than 50% of the requirements for a Doctor of Science degree in Engineering. He has received training as a microscopist throughout his academic career both at the introductory and advanced levels. He performed the first Gunshot Residue (GSR) test in Massachusetts using a Scanning Electron Microscope outfitted with Energy-dispersive X-ray spectroscopy (SEM/EDX) in the case of Commonwealth v. Andre Rosado, Worcester County Superior Court,

in 1994. He minored in Biology and Biotechnology respectively. He also worked as a teaching assistant at the beginning of his tenure in graduate school, teaching engineering laboratory courses to undergraduate engineering students.

Prior to working in the law enforcement/legal/forensic fields, he was employed in the industrial machinery, mold, tool, and die field for approximately (14) years that serviced the chemical, plastics, medical device, consumer goods, firearms, and metal working industries in general. At that time he became intimately familiar with the various manufacturing processes used in the manufacture of firearms, cartridge cases, etc. He also held a federal firearms license (1982-1992) in the past. He has received specialized training in Machining Science (formation of tool marks), Surface Metrology (microscopic measurement of surface features such as tool marks), and Tribology (science of wear and friction) as part of his training, and industrial experience as a scientist/engineer.

He received this training, and experience throughout the last forty-six (46) +/- years of his professional life as an engineer and scientist in the specification, and measurement of machined surface finishes (i.e., tool mark analysis). This type of training is typical for any engineer that may be involved in the design, manufacture, and use of high precision molds, dies, cutting tools, etc. used in the plastics and metal forming industries, and the subsequent manufacture of critical parts used in the medical, optical, aerospace, and similar fields. He has also worked as an independent design engineer on several different projects, and he currently holds a patent for a Time-Temperature Gauge (US Patent No. 5662419 A).

He has been a member of several professional organizations, both past and present, including but not limited to the American Society of Mechanical Engineers, the National Society of Professional Engineers as an M.Sc. level engineer; the American Society of Biomechanics as an engineer with specialized training in biomechanics and kinesiology; the Microscopy Society of America as a trained microscopist; the American Society for Law Enforcement

Training (ASLET) as a trained and certified law enforcement instructor; the Florida Division and national organization of the International Association for Identification (FDIAI and IAI) as a trained fingerprint and firearm examiner, crime scene reconstructionist, and bloodstain pattern expert; and other professional organizations over the years.

During the last thirty-four 34+/- years he has worked on, and/or has been qualified as an expert and testified in different areas of forensic science and engineering. Including accident investigations and reconstruction, product failure/analysis and liability, slip and fall investigations and reconstruction, personal injury, crime and shooting scene investigation and reconstruction, homicide investigations, fingerprint identification and technology, firearm identification, ballistics and trajectory analysis, bloodstain pattern analysis, and DNA technology relating to crime scene evidence.

He has been working independently on introducing the use of 3D metrological engineering science into the forensic firearm and tool mark identification field since the early 1990's. He has been a leader in this field by introducing and applying the engineering sciences of surface metrology, topography, tribology, and machining science into this forensic discipline.

He has worked as forensic consultant in the following states: Maine, New Hampshire, Massachusetts, Connecticut, New York, Pennsylvania, Maryland, Washington D.C., Tennessee, Georgia, Florida, Colorado, California, Illinois, Texas, Michigan, Arkansas, and elsewhere in the USA and other countries such as Colombia.

A bound and documented copy of his curriculum vitae is available to qualified individuals on request for the cost of printing and binding.