

DR. C. J. ABRAHAM

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CERTIFICATIONS

- P. E. - Licensed Professional (Specialty-Safety Engineering, CA)
- P.E. - Licensed Professional Engineer (State of Mississippi)
- DFE, Board Certified Diplomat in Forensic Engineering, The National Academy of Forensic Engineers, (Senior Member)
- National Society of Professional Engineers-Member
- New York State Society of Professional Engineers-Member
- Queens Chapter, Society of Professional Engineers-Member
- CPC, CCHE - Certified Professional Chemist & Chem. Engineer (National Inst. of Chemists & Chemical Engineers)
- FRSC, CCHEM - Chartered Chemist and Fellow (Royal Institute of Chemistry, London, England)
- LFAIC-Life Fellow, The American Institute of Chemists
- DEE, Board Certified Environmental Engineer (American Academy of Environmental Engineers and Scientists)-Life Member
- IH, Board Certified Industrial Hygienist (American Academy of Environmental Engineers)
- FTI, Ctext-Fellow, The Textile Institute (Manchester, England)
- BCEE - Board Certified Environmental Engineer
- BCFE - Board Certified Forensic Examiner
- Certified - Arson Detection by the Federal Bureau of Alcohol, Tobacco and Firearms (U.S. Dept. of the Treasury)
- Certified - Chemical Engineer, Senior Member: #0118-003-3, The American Institute of Chemical Engineers
- Certified by The Steel Erectors Association of America in Connector Safety (OSHA Subpart R 1926.761(c)(2)) and Fall Hazards Safety (OSHA Subpart R 1926.761(b))
- Certified - Warnings & Instructions Specialist (University of Wisconsin-Madison, College of Engineering-1988)
- Certified in Motorcycle & Motor Scooter Safety and Operation
- Licensed Fire Safety Examiner - Arson Investigation and Prevention Unit, Virgin Islands Fire Service, Department of Licensing and Consumer Affairs
- Fellow - American College of Forensic Examiners
- Permanent Certification, University of the State of New York - Chem., Physics, Math, Gen. Science
- Board Certified Forensic Examiner in Chemistry and Chemical Engineering (American Board of Forensic Examiners)
- Board Certified Forensic Examiner in Safety Engineering and Design (American Board of Forensic Examiners)
- Board Certified Forensic Examiner in Fires and Explosions (American Board of Forensic Examiners)
- Board Certified Forensic Examiner in Industrial Hygiene (American Board of Forensic Examiners)
- Board Certified Forensic Examiner in Sports Safety (American Board of Forensic Examiners)
- Fellow of the Board—American Board of Forensic Examiners
- Diplomat in Forensic Engineering—American Board of Forensic Engineering and Technology (Lifetime)
- Professional Member - American Society of Safety Engineers

- Senior Grade - Systems Safety Society
- MS, PhD, DSc, JD
- Certified-Safety and Field Management Consultant, US Virgin Islands; License No: 1-31246-1L, Business No: 31246
- Technical Director-Risk Analysis & Safety, Amateur Athletic Union (AAU) Men and Women's Basketball (Former)
- Certification-Measurement in Residual Strains in Transparent and Translucent Materials, Strainoptic Technologies, Inc.: April 23, 1987
- Certification - University of Wisconsin-Madison, College of Engineering: Product Safety and Liability: The Role of Warnings: March 22-23, 1988 (Graduate Credit/Certification).
- Certification in Fires and Arson Accelerant Detection by the Bureau of Alcohol/Tobacco/Firearms, Sponsored by the Northeastern Association of Forensic Scientists and the Suffolk County Crime Laboratory, October 14-18,1991.

AREAS OF EXPERTISE (Technical)

- Experience in new product development, manufacturing, packaging, standards, warnings and instructions.
- Extensive experience in the identification, elimination and control of hazards to people and property. This includes the development, establishment, manufacturing, construction, assembly, testing, operation, training and procedures including manuals, environmental engineering and industrial hygiene, warnings & instructions for consumer and industrial products.
- Authority in the fields of products liability, OSHA, Labor Law (Industrial Code), architectural safety, safety engineering and construction accidents.
- Lectured and taught at various universities in the United States and Europe.
- Evaluated the cause of many brain injuries as a result of accidents nationally and internationally.
- Published and presented papers in the areas of fires, explosions (gas, bottle, battery), plastics, toxic torts, flammable fabrics, safety engineering and design, sports safety, household and industrial product safety, industrial equipment, warnings and instructions for both industrial and consumer products.
- Patentee of many products, including protective headgear (face mask used in football - licensed to Riddell), enhancement of energy absorption for protective headgear and equipment, safety shields for batteries, insulation materials used on missiles, household products, and non-toxic insect repellents worldwide. Copyright Registrations in the areas of battery warnings and instructions, toxic materials, household products and insect repellents.
- Experienced in animal and human health products, new product development, EPA, product data specifications, testing and analysis.
- Diplomate-American Board of Forensic Examiners in Safety & Safety Engineering.
- Member (former) of the Advisory Board -World Congress on Industrial, Technical, and High-Performance Textiles (Great Britain); former member of the Advisory Board - American Board of Engineering and Technology (USA).
- Member, Architectural Review Board, Village of Great Neck, Great Neck, NY.
- Member-ISO/TC 181/SC: Safety of Toys.
- Member of the ASTM, (1964-present).
- Over 100 publications and presentations.
- Patentee of products produced and used throughout the world (over 47).
- Consulted to ABC and CBS News, Eyewitness News (ABC), USA Today and the Discovery Channel.
- Consulted to the Department of Agriculture (Bureau of Mines).
- Consulted to the National Highway Traffic Safety Administration (NHTSA).
- Consulted to the Department of Labor (OSHA).
- Consulted to NIOSH (National Institute for Occupational Safety and Health).

- Consultant on Warnings & Instructions to the Unified Abrasives Manufacturer's Association.
- Consultant to Microsoft-Kinesiology Studies, Human Movements and Muscle Activity Impacts, Warnings and Instructions
- Consulted to Wave Loch, Inc. (manufacturer of the Flow Rider)
- Consulted to Hudson Bay stores, Canada in risk assessment and human factors.
- Consulted to Home Depot in risk assessment and human factors.
- Consulted to Big Lots Stores, Inc. on display safety.
- Consulted to the American Textile Company (warnings & instructions).
- Consulted to Estwing Manufacturing Co. (warnings and instructions).
- Consulted to the Long Island Railroad
- Consulted to the New York Transit
- Consulted to the Queensborough Bridge Authority
- Consultant for the Kaprun fire disaster case (Austria)
- Consultant to Intamin AG (Switzerland-roller coasters)
- Consulted to Family Dollar Stores (safety of products)
- Consulted to Northern Lights (mfg. of fitness equipment – safety engineering & design)
- Consulted to Sherwin Williams
- Consulted to Walter Kidde (fire extinguishers)
- Consulted to Kohl's Department Stores (retail displays and safety)
- Consulted to Bed Bath & Beyond, Inc. (retail displays and safety)
- Consulted to The Thompson's Company-Water Seal Product
- Consulted to The London Hotel, NYC, ADA (American Disability Act) evaluation
- Consulted to Reliable Bakery (Brooklyn) - Safety & OSHA
- Consulted to US Department of Justice, Eastern District of New York
- Consultant to Win Win Printing, Inc. – OSHA compliance and employee training
- Consulted to Hamaco Industries Corporation. A Japanese manufacturer of material handling equipment such as mechanical and electric lift tables. Preparation of warnings and instructions for lifts and creations of warnings and instructions for service and user manuals
- Consulted to CBS TV News, New York on 10-15-2013. Analysis of the safety protocol related to retail stores and stacking helms with merchandise. (televised 10-31-13, 11 p.m.)
- Consulted to Tylo Helo (Tylö AB), the largest sauna (dry and steam) company in the world
- Consulted to EBRU TV: Fresh Outlook, 05-17-14, Soma, Turkey (Mine Explosion in Turkey)
- Consulted to Transpo Industries, Inc.
- Consulted to Landscape Forms, Inc.
- Consulted to the Office of the United States Attorney
- Consulted to Tuff Stuff Fitness Equipment, Inc.
- Consulted to City of San Diego, CA (Playground safety)
- Consulted to Blue World Pools
- Consulted on the Vortex amusement ride accident at the North Carolina Fair (10-24-2013)
- Consulted to the City of Fort Lauderdale, Florida School District on Sports Injuries
- Consulted to the CalSpan (California Department of Transportation)
- Consulted on the cause of iPhones catching on fire, leaking, and exploding.
- Consulted to the New York City School Construction Authority
- Consulted to the New York City Department of Education, City of New York, and the New York City Board of Education
- Consulted to a number of State Attorney General's offices-NY, LA, CA, & UT.
- Biomechanical analysis and reconstruction of accidents involving impacts in all sports, playgrounds, snowmobiles, bicycles, motorcycles, scooters, automobiles, bobsleds, skiing, snowboarding, sleigh riding, snowtubing, slips, trips & falls.

PROFESSIONAL EXPERIENCE (Sports & Recreation)

- Diplomat-American Board of Forensic Examiners in Sports and Recreational Safety
- Former Technical Director & Director of Sports, Recreation & the Athletics Division of Inter-City Testing & Consulting Corporation for twenty-eight years.
- Experienced in the identification, elimination, and control of hazards in recreation facilities, parks and school environments.
- Directly involved with sports & recreation safety standards, safety and design analysis of protective equipment, consumer products, warnings and instructions.
- Evaluated and tested every type of protective headgear in contact and collision sports.
- Consulted on a large number of brain injury cases in contact and collision sports and have made presentations at national and international conventions in the area of concussive and sub-concussive brain injuries.
- Member of the Executive Committee and consultant in the area of engineering and human factors to the Hockey Equipment Certification Council (HECC) (1980-1998)
- U.S. Delegate-International Standards Organization (ISO) (1988-1998)
- Member Safety & Protective Equipment Committee (SPEC) of USA Hockey (1996-2008)
- Member of the ASTM, (1964-present).
- Inventor of the Bio-Lite football facemask licensed to Riddell
- Inventor of the ForceField FF Headband (www.forcefieldheadbands.com)
- USPTA-certified tennis instructor (United States Professional Tennis Association)
- Creator of warnings and instructions for many sports products
- Consulted to municipalities on park & recreation facilities, and Set Makers, Inc., the manufacturer of recreation facilities for Burger King and McDonald's restaurants.
- Technical Director-Risk Analysis & Safety, Amateur Athletic Union (AAU) Men and Women's Basketball
- Consulted to Lobster, Inc. on safety and warnings (High speed tennis machine)
- Consulted to various municipalities on park, recreation safety and swimming pools relating to the designs of the activities including, but not limited to, general and hands-on supervision for challenged, handicapped and special needs children
- Tested and evaluated every type of protective sports head gear
- Consultant to Microsoft-Kinesiology Studies, Human Movements and Muscle Activity Impacts, Warnings and Instructions
- Consulted to Wave Loch, Inc. (manufacturer of the Flow Rider)
- Consultant to Intamin AG (Switzerland-roller coasters);
- Consulted to Northern Lights (mfg. of fitness equipment – safety engineering & design)
- Consulted to ABC and CBS on Amusement Park accidents
- Consulted on safety of activities on amusement parks including water parks (Splish Splash, Suffolk County, NY, Coney Island, Six Flags and Disney World)
- Consulted on cruise lines with safety of their recreational activities and exercise equipment
- Consulted to Chuck E Cheese on the safety of their amusement facility
- Consulted to ABC affiliates, KGTV News, in West Palm Beach, Florida and San Diego, California on the Safety of Playgrounds and Playground Activities
<http://www.10news.com/news/investigations/safety-consultant-finds-various-problems-at-san-diego-public-parks> and <http://www.10news.com/news/investigations/10news-report-spurs-changes-at-san-diego-public-parks>
- Consulted on cases involving amusement parks, roller coasters, tennis pitching machines, exercise machines, recreational facilities for McDonalds and Burger King, lazar facilities, residential playgrounds, safety in indoor and outdoor basketball courts, bleacher safety, natural versus synthetic surfaces, headgear for sports, baseball base design, golf carts, ice hockey facilities, cruise line recreational activities (i.e. wave runners, track and exercise equipment), and many others.
- Consulted to City of San Diego, CA (Playground safety)

- Consulted on the Vortex amusement ride accident at the North Carolina Fair (10-24-2013)
- Consulted to the City of Fort Lauderdale, Florida School District on Sports Injuries
- Consulted to the Salvation Army (Wooden Surfaced Skating Rinks)
- Consulted on trampoline park accidents throughout the United States involving trampoline and foam
Over 45 years of experience in creating, reviewing and critiquing waivers, disclosures, disclaimers, warnings and instructions for a variety of products including, but not limited to: sports, recreational activities; household, commercial and industrial products.

QUALIFICATIONS AS A SAFETY SPECIALIST

- a. Certified Safety Engineer
- b. Licensed Professional Engineer with a specialty in Safety Engineering and Design (P.E.)
- c. Diplomate in the American Board of Forensic Examiners
- d. Fellow in the American College of Forensic Examiners
- e. Board Certified Forensic Examiner in Safety Engineering and Design
- f. Senior Grade and Diplomat in Forensic Engineering (DFE)
- g. Professional Member of the American Society of Safety Engineers
- h. Senior Grade Level in the Safety System Society
- i. Member of the ASTM from 1964 to the present time involved directly in the creation of safety standards for all types of pedestrian walkways, stairs, etc.
- j. Board Certified as an Environmental Engineer and a Board-Certified Industrial Hygienist
- k. Specialist in ADA requirements
- l. Certified in Warnings and Instructions
- m. Over 45-years of experience in building codes and construction
- n. US Delegate for thirteen years to the International Standards Organization creating international safety standards.
- o. Board Certified Forensic Examiner in Safety Engineering and Design (American Board of Forensic Examiners)
- p. Senior Classification-Systems Safety Society
- q. Certified-Safety and Field Management Consultant, US Virgin Islands; License No: 1-31246-1L, Business No: 31246
- r. Consulted to the Department of Labor (OSHA) in Safety.
- s. Consulted to NIOSH (National Institute for Occupational Safety and Health).
- t. Consultant to Microsoft-Kinesiology Studies, Human Movements and Muscle Activity Impacts, Warnings and Instructions
- u. Consulted to Transpo Industries, Inc.
- v. Consulted to Blue World Pools
- w. Diplomat-American Board of Forensic Examiners in Sports and Recreational Safety
- x. Over 45 years of experience in evaluating, testing and consulting on every type of walking surface with reference to safety and the coefficient of friction (slipperiness).
- y. Presented seminars to the graduating class of mechanical engineers at Columbia University School of Mechanical Engineering covering subjects relating to safety and design (2005-2018).
- z. Consulted to CBS News ABC News, and Eyewitness News, the Department of Agriculture, National Highway and Traffic Safety Administration and CalTrans (California Department of Transportation).
- aa. Member of the Architectural Board in the Village of Great Neck, Great Neck, New York for 15 years and was directly involved in the examination and approval process of the architectural design of both residential and commercial buildings, relating to local, state and national codes.

EXPERIENCE IN HEAD & BRAIN INJURIES

1. Extensive experience in the impact and dissipation of forces to the head and brain.
2. Experience extends over 49 years in sub-concussive and concussive brain injuries to children and adults in contact and collision sports.
3. Over 49 years of training and experience in sub-concussive and concussive brain injuries to children and adults involved in slip, trips and falls and other types of personal injuries.
4. Former experience as one of three delegates to the ISO (International Standards Organization) with 15 other countries that created safety standards for protective helmets in the sport of hockey worldwide.
5. Former guest speaker to many national conventions involving head and brain injuries in sports.
6. Has presented scientific papers at international and national technical meetings involving concussions and sub-concussive brain injuries.
7. Sole author of several peer reviewed articles on concussive brain injuries.
8. Inventor and provider of the leading protective headgear used in soccer, basketball, cheerleading, curling, Veteran's hospitals for the traumatically brain injured veterans, for seniors prone to falling in nursing homes, for seniors prone to falling, dwarfs and young children learning to walk, children in playgrounds, challenged and handicapped children, and many more applications.
9. Consults on one or more brain injury accidents per week over the last 10+ years.
10. Member of the ASTM (American Society for Testing and Materials) from 1964 to the present time creating safety standards for every type of contact and collision sport.
11. Observed a number of autopsies in which head and brain injuries were involved with the demise of the individual.
12. Directly involved with the creation of every safety standard relating to protective headgear used in both contact and collision sports and every type of recreational activity involving the use of headgear.

INDUSTRIAL EXPERIENCE

1. Director, Scientific Advisory Services, Ltd., Great Neck, NY & Boca Raton, Florida 1998-present
www.scientificadvisory.com
2. Technical Director and President of ForceField FF (NA) Ltd. 2004-present
(www.forcefieldheadbands.com)
3. President and Technical Director of Repello Products Ltd., Mineola, New York, 1998-2002. Inventor of patented non-toxic insect repellent products including, but not limited to the wristband, tablecloths, candles, outdoor sprays, garbage bags, hand and body lotion. Company sold in 2002. (wristband developed into a billion-dollar industry after sale)
4. V.P. & Tech. Dir - Surface Restorations, Inc., Greenwich, Ct.; Welford on Avon, England; Oslo, Norway, 1998-2001 Proprietary formulations in restoring all building surfaces including, for example, the indoor surfaces throughout the 42nd Street underground train stations & the Queens Midtown Tunnel. Also, the removal of graffiti.
5. Founder ,CEO and Technical Director of Inter-City Testing & Consulting Corporation, Mineola, NY; Boca Raton, FL; Sacramento, CA; San Francisco, CA 1970-1998 (sold September 1998) 100+ PhD's with full laboratory facilities covering every engineering discipline.in addition to all contact and collision sports, playgrounds, parks, and amusement parks.
6. President, Athletic Safety Products, Inc. Mineola, NY, 1983-1999 (Sold 9-1999) Invented the protective face mask that changed the sport of football. Eliminated quadriplegic and paraplegic injuries in children.
7. Vice President & Technical Director of Polyphase Chemical Service, W Hempstead, NY 1968-1970 Responsible for the development of products used for reacting with coal and oil in reducing the

pollution, acid rain and maintaining a more efficient burning of fuels used in power plants including the super heater areas.

8. Director of Research and Development & Manufacturing. of Mansol Ceramics Co., Belleville, NJ, 1967-1968

In charge of all research and development, and production relating to ceramics used in the glass-to-metal-seal industry

Developed the testing protocol for evaluating new products.

In charge of formulating glass formulations and processing the glass to manufacture preforms.

In charge of the processing, molding, and sintering preforms for the glass to metal seal industry.

9. Materials Specialist - J.P. Stevens & Co., Corporate Research Lab., Garfield, NJ, 1966-1967
(United States Government Secret Clearance)

In charge of setting up a complete research testing and analytical laboratory. This involved ordering all the expensive instrumentation used for the analysis of all types of textile materials including, but not limited to determining the impurities in high silica and carbonaceous materials. This included the screening out and determining what instrumentation to purchase and the setting up of the laboratories that encompassed every aspect of the analytical process in addition to the high temperature testing facility which incorporated plasma arc testing at approximately 10,000 degrees Fahrenheit.

In addition, the undersigned was responsible for the safety and welfare of all employees and invitees who performed testing using the equipment that the undersigned was responsible for setting up. Prior to invitees using the equipment, they were required to go through a whole protocol to determine that all of the equipment installed was installed safely and securely and that all of the invitees would be provided with all of the necessary and required personal safety equipment.

In charge of creating high temperature silica and carbonaceous textiles that were used in missiles protecting inert parts during the exposure to ablative temperatures of over 10,000 degrees Fahrenheit.

Trouble shooting problems in production facilities in the South for the weaving and warping machines.

10. Research Engineer and Research Chemist - Aerojet General Corp., Sacramento, CA, 6/61-9/61, 1963-1965 (United States Government Confidential Clearance)

In that capacity, I was the supervisor and responsible for setting up a complete testing and analytical laboratory in performing plasma arc testing of every type of polymer manufactured in the United States as applicants for the protection of inert parts of the Polaris A-3 and Minuteman missiles. That involved the installation of all types of equipment both light and extremely heavy that were used to perform research on the ablative characteristics of the polymeric materials. In addition, the undersigned was also in charge of static testing of the actual parts on missiles on the grounds of the facility.

In addition to the responsibilities stated above, the undersigned was also responsible in the creation of new and unique polymeric systems for the same objectives as those polymers that were in existence in the United States. All responsibilities included, but were not limited to, the safety and welfare of all employees and invitees. Many of the invitees were scientists who were required to possess Confidential and Secret Clearance like the undersigned. The invited scientists used our equipment to also perform studies on ablation. They had their own protocol in verifying that all equipment they were going to be exposed to and use was installed and setup in a safe manner prior to getting involved with their own testing.

The undersigned supervised and was directly involved in the creation of mathematical solutions to predict the ablative performance and characteristics of every type of polymer when exposed to hypothermal conditions.

TEACHING EXPERIENCE

1. Columbia University, Department of Mechanical Engineering, Senior Design Course- The Integration of Law and the Mechanical Engineer, Guest Lecturer, 2- 2 hour lectures each Fall from 2003-2018.
2. Manhattan College, Department of Mechanical Engineering, Engineering Designs & The Mechanical Engineer: Responsibilities of the Engineer in the Design of Products for Consumer and Industrial Applications, Guest Lecturer October 17, 2017
3. City College of New York (CUNY), Department of Mechanical Engineering, "The Mechanical Engineer & Consumer Product Design Safety Requirements & The Law," Guest Lecturer, two-hour seminar for all of the graduating seniors in mechanical engineering, New York, NY, November 12, 2015.
4. Permanent Certification, University of the State of New York, State Education Department, in Chemistry, Physics, Mathematics, and General Science.
5. Hofstra University, Hempstead, NY: Department of Engineering - Review Course for Professional Engineering Exam, 1974-1981 (Adjunct).
6. C.W. Post College, Greenvale, NY: Lecturer - Practical Safety Engineering, "Hospital Systems Safety Implementation," Spring, 1977
7. Nassau Community College, Garden City, NY: 9/73-1/74; 9/74-1/75: Adjunct Faculty, Chemistry: 9/75- 1/76: Full-Time Faculty, Chemistry
8. Empire State College, Old Westbury, NY: 1975-1977, Adjunct Faculty, Physics.
9. University of North Carolina, Chapel Hill, NC: 9/61-2/63, Instructor/teaching fellow, General Chemistry.
10. University of the Pacific, Stockton, CA: 9/60-6/61, Instructor/teaching fellow, General Chemistry, Qualitative and Quantitative Analysis.
11. University of Oregon, Eugene, Oregon: 9/59-9/60, Instructor and teaching fellow in General Chemistry.
12. Hofstra University, Hempstead, NY: 9/56-9/57, Assistant/Mathematics: 6/55-6/59, Assistant/Chemistry.

PROFESSIONAL ASSOCIATIONS

- Member of the Human Factors and Ergonomics Society
- National Society of Professional Engineers
- New York State Society of Professional Engineers
- Queens Chapter, Society of Professional Engineers
- The National Academy of Forensic Engineers
- American Academy of Environmental Engineers, Diplomate
- American Industrial Hygiene Association (Full Membership)
- Royal Society of Chemistry (London), Fellow
- The Textile Institute, Fellow (Manchester, England)
- National Fire Protection Association
- American Society of Civil Engineers
- Human Factors and Ergonomics Society
- American Society of Safety Engineers (Professional Member)
- Systems Safety Society - Senior Grade

- American Society of Safety Professionals (ASSP), Long Island Section
 - Standards Engineering Society
 - American National Standards Institute (ANSI)
 - Society of Automotive Engineers
 - American Chemical Society (over 50 years)
 - The American Institute of Chemical Engineers (Senior Member)
 - Society of Plastics Engineers
 - American Association of Textile Chemists and Colorists (AATCC)
 - Human Factors and Ergonomics Society
 - American Society of Mechanical Engineers (9073529)
 - International Code Council
 - American Society for Testing and Materials: ASTM (1964- to present)
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| C-8 Refractories | F08-12 Wrestling and Gymnastics |
| C-14 Glass & Glass Products | F08-13 Fencing Equipment |
| C-01 Cement | F08-15 Ice Hockey |
| D-1 Paint, Varnish, Lacquer & Related Products | F08-16 Archery Products |
| D-9 Electrical Insulating Materials | F08-17 Trampolines and Related Equipment |
| D-12 Soaps & Other Detergents | F08-18 Golf Clubs and Shafts |
| D-13 Textiles | F08-19 Bicycle Accessories |
| D-13.52 Flammability | F08-21 Climbing and Mountaineering |
| D-14 Adhesives | F08-22 Camping Equipment |
| D-19 Water | F08-23 Tennis Courts and Running Tracks |
| D-20 Plastics | F08-24 Paintball and Equipment |
| D-21 Polishes | F08-25 Residential Basketball Equipment |
| D-26 Halogenated Organic Solvents | F08-26 Baseball and Softball |
| D-30 High Modulus Fibers and their Composites | F08-30 Fitness Products |
| E-5 Fire Tests of Materials and Construction | F08-51 Medical Aspects and Biomechanics |
| E-7 Non-destructive Testing | F08-52 Playing Surfaces and Facilities |
| E-15 Analysis & Testing of Industrial Chemicals | F08-52.1 Task Group Playground Surfacing |
| E-17 Skid Resistance | F08-53 Headgear and Helmets |
| E-20 Temperature Measurement, Chemicals | F08-54 Athletic Footwear |
| E-27 Hazard Potential of Chemicals | F08-55 Body Padding |
| E-30 Forensic Sciences | F08-56 Facilities-Baseball and Softball |
| E-34 Occupational Health & Safety Aspects of Materials, Physical & Biological Agents | F08-57 Eye Safety for Sports |
| E-28 Mechanical Testing | F08-61 Ice Hockey Rinks |
| F-8 Sports Equipment & Facilities | F08-63 Playground Surfacing Systems |
| F-9 Tires | F08-64 Natural Playing Surfaces |
| F-13 Safety & Traction of Footwear | F08-65 Artificial Turf Systems |
| F-15 Consumer Product Safety | F2374- Standard Practice for Design, Manufacture, Operation, and Maintenance of Inflatable Amusement Devices |
| F-23 Protective Clothing | F24 on Amusement Rides and Devices |
| F-27 Snow Skiing | F24-10 Test Methods |
| F-08 on Sports Equipment and Facilities | F24-20 Specifications and Terminology |
| F08-Main Committee | F24-24 Design and Manufacture |
| F08-10 Bicycles | F24-30 Maintenance and Inspection |
| F08-11 In-Line Skating | F24-40 Operations |
| | F24-60 Special Rides & Attractions |
| | F15- Consumer Products |

F15- Aquatic Play Equipment
F15-29 Public Playground Equipment
F15-36 Soft Contained Play Equipment

F15-44 Play Equipment for Children Under
Two

EXPERIENCE IN THE AREAS OF FIRES AND EXPLOSIONS

- a) Kaprun fire disaster case in Austria
- b) Coal barbeque starter
- c) Cigarette lighters
- d) Paint thinners
- e) Flammable sprays
- f) Hair sprays
- g) Hair treatment
- h) Flammable fabrics
- i) Automobile battery explosions
- j) Gasoline fires and explosions
- k) Dust explosions
- l) Spontaneous combustion cases
- m) Gas tank explosions
- n) Propane tank- truck supply fires
- o) Vapor explosions from varnishes, paints, floor finishers
- p) Total release sprays
- q) 55-gallon drums/cutting them in ½ explosions filled with explosive vapor
- r) Exploding automobile tires with temporary isopropane/butane
- s) Aerosols - flash back
- t) Paints
- u) Dept. of Agriculture Bureau of Mines
- v) Spontaneous combustion
- w) Exploding automobile batteries
- x) iPhones, cell phones leaking, catching on fire, and explosions
- y) Fireworks
- z) Fireworks manufacturing facility
- aa) Gasoline tanks explosions
- bb) Gasoline containers
- cc) Propane tank explosions (pool heater and household use)
- dd) Chemical tanker explosions
- ee) Power plant explosions
- ff) Ship explosions
- gg) House explosion due to natural gas leaking from supply pipes from street to basement
- hh) Static electricity discharge- fires and explosions
- ii) High voltage discharge
- jj) Household product fires
- kk) Natural gas leaks- fires and explosions
- ll) Trailer home fires and explosions
- mm) Deflagration of plastic containers containing flammable liquids
- nn) Mobile phone and iPad lithium battery explosions

PATENTS

1. High temperature carbonaceous and siliceous materials in aerospace fields assigned to corporations; dental and medical fields-assigned to corporations, industrial formulations for air and water pollution fields-assigned to corporations; polymers and novel adhesives-assigned to corporations; formulations for cleaning - industrial and consumer applications-assigned to corporations; glass and coating formulations-assigned to corporations.
2. Head Gear in Sports – C. J. Abraham, U.S. Patent No. 4,342,122, August 3, 1982. (Licensed to Riddell - BIOLITE face masks, a new generation of protective equipment).
3. Flexible Face Mask Improvement – C. J. Abraham, U.S. Patent No. 4,631,758, dated December 30, 1986.
4. Storage Battery Having a Protective Shield – C. J. Abraham, U.S. Patent 4,699,855 granted June 1987; issued October 13, 1987
5. Storage Battery Having a Protective Shield, C. J. Abraham, Canadian Patent, issued May 14, 1991, No. 1284174.
6. Storage Battery Having a Protective Shield, C. J. Abraham, Japanese Patent Application No. 60888/1987
7. Storage Battery Having a Protective Shield – Improvement, C. J. Abraham, U.S. Patent No. 4,770,958, September 13, 1988.
8. Storage Battery Having a Protective Shield, C. J. Abraham, West German Patent Application No. P38 04 447.1.
9. Protective Shield for Battery, C. J. Abraham, Great Britain Patent No. 2208032, dated May 31, 1988
10. Protective Shield for Battery, C. J. Abraham, Italian Patent Application, No. 67503-A/88
11. Protective Shield for Battery, C. J. Abraham, French Patent Application No. 88 10747
12. Storage Battery Having a Storage Battery Having a Protective Shield - Deflectable Battery Shield, U.S. Patent No. 4,952,468, August 28, 1990
13. Storage Battery Having a Protective Shield for Battery, C. J. Abraham, Spanish Patent No. 2,021,505, March 21, 1992
14. Storage Battery Having a Protective Shield for Battery, C. J. Abraham, British Patent, issued September 7, 1989, No. 2,235,085
15. Storage Battery Having a Protective Shield Italian Patent Application 68583-A/89.
16. Storage Battery Having a Protective Shield, French Patent Application No. 89 17442/140644.
17. Storage Battery Having a Protective Shield, West German Patent Application No. A228P102.
18. Flame Retardants for Linseed Oil: Formulations and Applications - C. J. Abraham, et al. U.S. Patent. 5,540,762, issued July 30, 1996.
19. Non-Toxic Animal Repellent: C. J. Abraham, U.S. Patent 5,554,377, September 10, 1999.
20. Apparatus for Enhancing Absorption and Dissipation of Impact Forces for All Protective Headgear: C. J. Abraham, U.S. Patent 6,272,692, Aug. 14, 2001.
21. Fog-Free Protective Glasses, Goggles, and Non-Protective Glasses: C. J. Abraham. U.S. Patent applied for in June 2001.
22. Enhanced Impact and Energy Absorbing Product for Footwear, Protective Equipment, Floors, Boards, Walls, And Other Surfaces, U. S. Patent applied for in November 2001.
23. Enhanced Impact and Energy Absorbing Product for Footwear, Protective Equipment, Floors, Boards, Walls, And Other Surfaces", U. S. Patent applied for in May 2002.
24. Animal Repellent, U.S. Patent 5,554,377, September 10, 1996.

25. Non-Slip Shoelaces, C.J. Abraham and Kimti Lal Gandhi, U.S. Patent 5,673,546, October 7, 1997
26. Self-Locking Adjustable Bracelet, U.S. Patent 5,603,231, February 18, 1997.
27. Self-Locking Breakaway Band, U.S. Patent 5,657,645, July 19, 1997.
28. Solid and Liquid Compositions for Dispersion of Insect Repellent Based On DEET, U.S. Patent No.: 2,738,862, April 14, 1998.
29. Insect Repellent Candle and Method of Making Same, U.S. Patent No.: 5,854,284, December 29, 1998.
30. Apparatus for Enhancing Absorption and Dissipation of Impact Forces for All Helmets and Protective Equipment, filed February 21,2001,
31. Impact and Energy Absorbing Product for Helmets and Protective Gear (filed September 7, 2001 Appl. No. 09/949,237), C. J. Abraham, US Patent No.: 6,378,140, April 30, 2002.
32. Apparatus for Enhancing Absorption and Dissipation of Impact Forces for All Protective Headgear (filed January 4, 2001 Appl. No. 09/754/472), C. J. Abraham, US Patent No.: 6,272,692, August 14, 2001.
33. Apparatus for Enhancing Absorption and Dissipation of Impact Forces for All Helmets and Protective Equipment for All Helmets and Protective Equipment, (filed August 22, 2002 Appl. No. 10/225,866), C. J. Abraham, U.S. Patent No.: 6,282,724, September 4, 2001.
34. Impact and Energy Absorbing Product for Floors, Walks, And Other Flat Surfaces, C. J. Abraham, Filed October 12, 2001, U.S. Patent 6,598,365 July 29, 2003.
35. Apparatus for Enhancing Absorption and Dissipation of Impact Forces for Sweatbands Used in Connection with Helmets (filed June 10, 2003 Appl. No. 10/457,856), C. J. Abraham, U.S. Patent No.: 6,978,487, December 27, 2005.
36. Apparatus for Enhancing Absorption and Dissipation of Impact Forces for Sweatbands (filed August 22, 2002, Appl. No. 10/225,866), C. J. Abraham, U. S. Patent No.: 6,675,395, Jan.13, 2004.
37. Apparatus for Enhancing Absorption and Dissipation of Impact Forces for Sweatbands (filed November 17, 2005 Appl. No. 11/281,073, published March 30, 2006) C. J. Abraham, U.S. Patent No.: 7,234,174 issued June 26, 2007 (Continuation-in-Part claiming the benefit of the filing date of the August 22, 2002 non-provisional patent application No. 10/225,866).
38. Impact and Energy Absorbing Mouth Guard, C. J. Abraham, Applied for U.S. Patent December 12, 2002. Publication No. US-2004-0112389-A-1, 6/17/2004.
39. Fog-Free Protective Glasses, Goggles, And Non-Protective Glasses, C. J. Abraham, Filed January 2, 2001, U. S. Patent 6,450,639 September 17, 2002.
40. Apparatus for Enhancing Absorption and Dissipation of Impact Forces for Sweatbands Used in Connection with Helmets, C. J. Abraham; Application No. 10-457856, Notice of Allowance, August 8, 2005.
41. Apparatus for Absorbing and Dissipating Forces for Sweatbands, International Patent applied for, September 2005. Patent applications in Italy, England, Canada, South Africa and Australia (C. J. Abraham)
42. Focus Enhancing Blinders, C. J. Abraham, U.S. patent 7,322,693, January 29, 2008.
43. Registration Certificate No.: 2008/03600 covering APPARATUS FOR ENHANCING ABSORPTION AND DISSIPATION OF IMPACT FORCES FOR SWEATBANDS (South Africa): Accepted and issued on February 25, 2009.
44. Apparatus for Enhancing Absorption and Dissipation of Impact Forces for Sweatbands PCT/US2005/034267 (pending) C.J. Abraham.

45. Apparatus for Enhancing Absorption and Dissipation of Impact Forces for Sweatbands South Africa Patent No.: 2008/03600 C. J. Abraham
46. Universal Protective Headgear, C. J. Abraham U.S. and International Patent applied for, April 2015.
47. Universal Chest and Breast Protector, C. J. Abraham, U.S. and International Patent applied for, August 2015.
48. Protective Headgear for Insertion within a Helmet, C. J. Abraham Provisional Patent Application, February 8, 2016, 62/292,601
49. Universal Protective Headgear, C.J. Abraham, U.S. Patent Application Publication No.: 2016/0286888 A1, October 6, 2016; U.S. Patent No. 10,383,386, August 20, 2019
50. Golf Cart Sunshield Device, C.J. Abraham, U.S. Patent Application No.:16/789,680
51. ForceField FF, US Patent and Trademark Office Registration No. 6,571,892, By C. J. Abraham
52. Universal Non-Helmeted Protective Facemask, Sept. 6, 2022, US 11,432,601, by C. J. Abraham
53. Universal Non-Helmeted Protective Facemask, Nov. 8, 2022. US 11,491,387, by C. J. Abraham
54. Universal Non-Helmeted Protective Facemask, Nov. 1, 2022, US 11,484,084, by C. J. Abraham
55. Universal Non-Helmeted Protective Facemask, Feb. 14, 2023, US 11,577,148 by C. J. Abraham

PRESENTATIONS AND PUBLICATIONS

- Peer reviewer of manuscripts for the American Society for Testing & Materials (ASTM) 1991-Present
 - Peer reviewer of manuscripts for the Journal of Forensic Examiners, 1994-Present
 - Peer reviewer of manuscripts for Inter Science Publishers: Int. J. of Entrepreneurial Venturing (IJEV)
 - Numerous papers written and/or presented during 1961-1965 under confidential and/or secret clearance in areas of ablation, insulation, material evaluation, fiber analysis in hyper-thermal environments.
1. A Survey of Insulation Materials, by C. J. Abraham, R. L. Keller and A. A. Stenersen, Report No. 339, Aerojet Corporation, August 1961.
 2. Evaluation of specific DuPont Research Fiber Reinforcing Agents, C. J. Abraham and A. A. Stenersen, Report No.MF-525; Aerojet General Corporation, November 1963.
 3. The Treatment & Analysis of Power Plant Operations, by C. J. Abraham, Engineering Society of Power Plant Engineers, Suffolk County, 1967.
 4. Chemical Defense of Drugs and Narcotics, by C. J. Abraham, Suffolk County Criminal Bar Assoc., 9/74.
 5. Forensic Evaluation and Defense, by C. J. Abraham, Suffolk County Criminal Bar Assoc., 1975.
 6. Used of Experts in Forensic Sciences, C. J. Abraham, Queens County Criminal Bar Assoc., Jan. 1976.
 7. Adaptation of Testing Standards to Practical Requirements, C. J. Abraham & F.L. Ryder, Nat'l Symposium on Technical Standards in Products Liability Litigation, American Society for Testing & Materials, Toronto, Canada, May 5, 1977.
 8. Hazards Relating to Hospital Procedures and Standards of Care, by C. J. Abraham & F.L. Ryder, *ibid.*
 9. Safety Design in Plastic Sports Equipment, by C. J. Abraham & F.L. Ryder, Nat'l Technical Conference on Safety and Health with Plastics, Denver, CO., November 8, 1977.
 10. Product Liability and Negligence Within the Hospital Environment, by C. J. Abraham, Nassau Bar Assoc. June, 1978.
 11. The Law and Use of Videotaping Depositions, by C. J. Abraham, NY State Trial Lawyers Assoc., NYC, October 1978.
 12. An Analysis of a Defective Product from the Manufacturer to the Consumer, by C. J. Abraham, NY State Trial Lawyers Assoc., *ibid.*
 13. Product Liability & the Expert's Role, C. J. Abraham & F. L. Ryder, NY State Trial Lawyers Assoc.

14. The Importance of Discovery in Handling Cases Prior to the Deposition, by C. J. Abraham, John Jay College of Criminal Justice, NYC, March 27, 1979.
15. An Overview of Ford Transmissions from 1971-1979, by C. J. Abraham presented at the DOT's public proceeding, Aug. 21, 1980, on Initial Determination of a Safety Related Defect in Ford Vehicles with C-3, C-4, C-6, FMX and Jatco Transmissions, (NHTSA Proceedings).
16. Products Liability Aspects of Asbestos, presented to the Toxic Tort Section of the American Trial Lawyers Association, Hilton Head, SC, October 1981.
17. Flammable Fabrics - A Critique, presented to NY State Trial Lawyers Association., October 23, 1982.
18. Explosion Accidents, by C. J. Abraham, *ibid*.
19. Labeling Liability in the Toxic Tort Case, by C. J. Abraham, et al., 1983 Annual Convention, Assoc. of Trial Lawyers of America, July 15-22, 1983, Washington, DC; Trial Lawyers Quart., Vol. 15, No. 4, 1983, NY State Trial Lawyers Assoc., pp.19-35; presented 5th Int'l Conf. on Toxic Products, San Francisco, CA, June 4, 1984.
20. Foreseeable Fire Hazards in Mobile Home Construction, C. J. Abraham, et al., Proc. 5th California Conf. on Product Toxicity, Vol. 5, 1984, pp. 68-72; presented to the 9th Int'l Conf. on Fire Safety, San Francisco, CA, January 17, 1984.
21. Systems Safety Approach Relating to Fire Hazards in Mobile Homes, C. J. Abraham, Joint Meeting - Systems Safety Society and American Society of Safety Engineers, East Meadow, NY February 9, 1984.
22. Labeling Liability Standards and Household Products, C. J. Abraham, Joint Meeting-Systems Safety Society and American Society of Safety Engineers, East Meadow, NY, 2/9/84.
23. Warnings with Respect to Swimming Pools and Sports Equipment: Are They Effective? C. J. Abraham, et al, NYS Trial Lawyers Assoc., NY, March 10, 1984.
24. Household Products - Drain Cleaners, C. J. Abraham, Product Defect Handbook, Lawyers Cooperative Publishing Company, Rochester, NY 1984.
25. Controlling Fires in Buildings and Products, C. J. Abraham, et al., 10th Int'l Conf. on Fire Safety, San Francisco, CA, 1985. (Paper presented by C. J. Abraham)
26. Product Toxicity - Warnings and Instructions, by C. J. Abraham, et al., Proc. 5th California Conf. on Product Toxicity, Vol. 5, 1985, pp. 25-48.
27. Fire Safety Aspects of Battery Explosions, C. J. Abraham, et al., 11th Int'l Conf. on Fire Safety, 1986 (San Francisco, CA).
28. Drain Cleaners - Warnings, C. J. Abraham, et al., Product Defect Handbook, Lawyers Cooperative Publishing Company, Rochester, NY, May, 1986.
29. Methylene Chloride: Toxicology, Detection and Tort Experience, C. J. Abraham, et al., 2nd Conference on Current Concerns on Toxicology, October 6-7, 1986 (San Francisco, CA).
30. Analysis of Standards and Testing of Fireman's Protective Clothing, C. J. Abraham, et al., 2nd Int'l Symposium on Performance of Protective Clothing sponsored by ASTM Committee F-23, American Industrial Hygiene Assoc., and the Royal Institute of Technology, Stockholm, Sweden. Jan. 1987, Tampa, FL.
31. State-of-the-Art Technology of Firemen's Protective Clothing, C. J. Abraham, et al., 12th International Conference on Fire Safety, January, 1987 (San Francisco, CA).
32. Liabilities in Sports and Recreational Accidents, C. J. Abraham, et al., Trial Lawyers Association of Metropolitan Washington, DC, April 7, 1987.
33. Assumption of Risk - Hockey Injuries, C. J. Abraham, et al., ASTM Symposium on SAFETY IN ICE HOCKEY, October 27, 1987 (Montreal, Canada); published in Safety in Ice Hockey, pp. 44-51, ASTM Publication Code Number (PCN) 04-01050-47, September, 1989.
34. The Forensic Implications of a Gasoline Spill Caused by a Leaking Underground Storage Tank, C. J. Abraham, et al., Int. Assoc. of Forensic Sciences, 11th Meeting, Aug. 2-7, 1987, (Vancouver, BC, Canada).
35. Mannequin Simulation Studies in the Flammability Evaluation of Garments, C. J. Abraham, et al. 13th Int'l Conference on Fire Safety, January 11-15, 1988 (San Francisco, CA).

36. A Protective Shield for Prevention of Battery Explosion Injuries, C. J. Abraham, et al., 13th International Conference on Fire Safety, January 11-15, 1988 (San Francisco, CA).
37. Battery Explosions - Cause and a Solution, C. J. Abraham, Presented to U.S. DOT National Highway Traffic Safety Administration, Washington, DC, February 19, 1988.
38. Automotive Battery Explosions-A Solution, C. J. Abraham, et al., SAFE Symposium, Las Vegas, December 1988.
39. Methods of Controlling Lead-Acid Battery Explosions C.J. Abraham, International Conference on Fire Safety, 1988 San Francisco, CA
40. Design Criteria for Footwear and Functional Testing on Artificial and Natural Surfaces, C. J. Abraham, et al., ASTM Symposium on The Characteristics and Safety of Playing Surfaces (Artificial & Natural) for Field Sports, Phoenix, AZ, Dec. 6, 1988. ASTM STP1073 Publication, 1990.
41. Analysis of Standards and Testing for Firemen's Protective Clothing, C. J. Abraham, et al., Performance of Protective Clothing-Second Symposium, ASTM Pub. Code 04-989000-55, p. 422- 439.
42. Standards and Flammability Characteristics of Blankets and Sheets, C. J. Abraham, et al., 14th International Conference on Fire Safety, Jan. 9-11, 1989, San Francisco, CA.
43. Automobile Battery Explosions: A New Standard of Care, C. J. Abraham, et al., 46th Annual Belli Seminar, July 15, 1989, Boston, MA (The Melvin Belli Society).
44. Development of the International Standard for Aircraft Batteries, C. J. Abraham, et al., 1989 SAFE Symposium, New Orleans, LA, December 5-8, 1989.
45. A New Standard of Care for Wearing Apparel, Blankets and Sheets, C. J. Abraham, et al., 15th International Conference on Fire Safety, January 8-10, 1990, San Francisco, CA.
46. Tracking the Source of a Gasoline Storage Tank Leak, C. J. Abraham, et al., The Society of Forensic Toxicologists, Huntington, NY, September 11-15, 1990.
47. Automotive Battery Explosions: A Solution, C. J. Abraham, Adelphi University Chemistry Faculty, Garden City, New York, October 1, 1990.
48. Flammable Fabrics: Populations at Risk - A Solution, C. J. Abraham, et al., Conference on Fire Safety and Thermal Insulation, Nov. 5-6, 1990, St. Petersburg, FL.
49. Flammable Fabrics: New Standards of Care for Populations at Risk, C. J. Abraham, et al., Textile Institute World Conference, Dundee, Scotland, November 19-22, 1990.
50. Flammable Fabrics: New Standards for Populations at Risk, C. J. Abraham, et al., Trial Lawyers Quarterly, Fall 1990, Vol. 21, No. 1.
51. Toxic Exposures in Industry: A Case Study, C. J. Abraham. American Chemical Society, Hofstra University, Hempstead, NY, December 6, 1990.
52. Flame Retardancy Technology and Standards for Wearing Apparel - A Time for Upgrading, C. J. Abraham, Conference on Recent Advances in Flame Retardancy of Polymeric Materials, Stanford, CT, May 14-16, 1991.
53. Technical Investigations for the Claims Adjustor, C. J. Abraham, Akron Claims Assoc, Akron, OH, February 12, 1992.
54. A Critique of Ice Hockey Equipment and Facilities, C. J. Abraham and J. P. Doolan, 2nd International Symposium on Safety in Ice Hockey sponsored by ASTM Committee FO8 on Sports Equipment & Facilities, F.08.15 on Ice Hockey and The Hockey Equipment Certification Council, Pittsburgh, PA, May 20-21, 1992.
55. Battery Explosions - Status and Solutions, C. J. Abraham, International Electronics Council, 56th IEC General Meeting, September 29, 1992, World Trade Center, Rotterdam, The Netherlands.
56. Protection of The Manufacturer, Or Protection of The Consumer, C. J. Abraham, 5th Fire Safety Conference, Clarion Plaza Hotel, Orlando, FL, Feb. 15-17, 1993 (Session Chairman: Fire Risk Assessment/Training).
57. The Flammable Fabrics Act: An Unreasonably Dangerous Act, C. J. Abraham, Standards Engineering, May/June 1993, pp. 1 & 3-7 (Presented at the Belli Seminar, July 31, 1993, San Francisco, CA).

58. Death in The Campgrounds, A Forensic Investigation, C. J. Abraham, et al., Canadian Society of Forensic Science and the Association of Official Analytical Chemists (Mid-Canada Regional Section), Winnipeg, Manitoba, September 8-11, 1993.
59. The Forensic Investigations of Death in The Campgrounds, C. J. Abraham, S.O.F.T/C.A.T. 1993 Joint Meeting, Phoenix, Arizona, October 10-16, 1993.
60. The Flammable Fabrics Act: An Unreasonably Dangerous Act, C. J. Abraham, Trial Lawyers Quarterly, Vol. 23, No. 4, Summer 1993.
61. Tent Design-The Hidden Dangers, C. J. Abraham, et al., 6th Fire Safety Conf./Exhibition, Orlando, FL, Feb 14-16, 1994. (Session III Chairman, Fire Risk Assessment/Training).
62. Tent Design- The Hidden Dangers, C. J. Abraham, et al., 1994 Annual BCC Conference, Recent Advances in Flame Retardancy of Polymeric Materials, Stamford, Connecticut, May 24-26, 1994.
63. Linseed Oil - A Hazardous but Necessary Ingredient? C. J. Abraham, et al, 1994 Annual BCC Conference, Stamford, Connecticut, May 24-26, 1994.
64. Chemical Safety and the Law, C. J. Abraham, American Chemical Society (Long Island Subsection), Hofstra University, Hempstead, New York, March 9, 1995.
65. Recommended Design Factors for The Ideal Sports Sneaker, C. J. Abraham, et al., Conference on Textiles in Sports and Sportswear, The University of Huddersfield, Queensgate, Huddersfield, Great Britain, April 10-11, 1995.
66. Tent Fabric - Design Defects and Recommended Solutions, C. J. Abraham, et al., Conference on Textiles in Sports and Sportswear, The University of Huddersfield, Queensgate, Huddersfield, Great Britain, April 10-11, 1995.
67. A Solution to Spontaneous Combustion in Linseed Oil Formulations, C. J. Abraham, International Conference on Fire Retardant Polymers, 5th European Conference, University of Salford, Salford, England, Sept. 4-7, 1995.
68. A Solution to Spontaneous Combustion in Linseed Oil Formulations: C. J. Abraham, Adelphi University, Department of Chemistry, Garden City, New York, October 19, 1995.
69. A Solution to Spontaneous Combustion in Linseed Oil Formulations, C. J. Abraham, Polymer Degradation and Stability, Elsevier Applied Science, Vol. 54, 1996.
70. The Flammable Fabrics Act: Legal and Technical Analysis, C. J. Abraham, Hispanic National Bar Association 1996 Convention, Miami, Florida, October 3-5, 1996.
71. A Viable Product vs. The Legal System, C. J. Abraham, Safety in Ice Hockey, Third International Symposium, sponsored by ASTM and supported by HECC and USA Hockey, May 4-5, 1997, St. Louis, Missouri, Session Chairman of Session VII, May 5, 1997.
72. A Viable Product vs. The Legal System, C. J. Abraham, Connecticut Bar Association, New Haven, Connecticut, May 15, 1997. (presentation)
73. Enhancing the Flame Retardancy of Natural and Natural-Polymer Fibers, C. J. Abraham, World Textile Congress on Natural and Natural Polymer Fibers, The University of Huddersfield, Huddersfield, England, July 9-11, 1997.
74. A Solution to Prevent Spontaneous Combustion in Linseed Oil Formulations; C. J. Abraham, 6th European Meeting on Fire Retardancy of Polymeric Material, Lille, France, Sept. 24-26, 1997.
75. Reduced Flammability Fibers, C. J. Abraham, World Textile Congress on Industrial, Technical & High-Performance Textiles, The University of Huddersfield, Huddersfield, England, July 15 & 16, 1998.
76. Reduced Flammability Fibers, C. J. Abraham, Seventh International Symposium on Performance of Protective Clothing Issues and Priorities for the 21st Century, June 28-30, 1999, Seattle, WA.
77. A Viable Product vs. The Legal System, C. J. Abraham, Trial Lawyer's Quarterly, 2001
78. Site Monitoring, C. J. Abraham, Emergency Preparedness and Response, Educational Program Innovations Center, Toronto, Canada, February 6, 2001 (presentation).
79. Hazard Communication-Manufacturer, Importer, Distributor, Employer and Employee, C. J. Abraham, Emergency Preparedness and Response, Educational Program Innovations Center, Toronto, Canada, February 6, 2001(presentation).

80. Characteristics of Hazardous Materials, C. J. Abraham, Storage and Handling of Hazardous Materials, Educational Program Innovations Center, Toronto, Canada, March 20, 2001.
81. Fire Protection, C. J. Abraham, Storage and Handling of Hazardous Materials, Educational Program Innovations Center, Toronto, Canada, March 21, 2001
82. A New Standard of Care in Absorbing and Dissipating Forces, C. J. Abraham, Fourth International Symposium on Safety in Ice Hockey, May 5-6, 2002, Pittsburgh, Pennsylvania.
83. Correcting the Flaws in The Flammability Testing of Woven and Knitted Apparels, C. J. Abraham and Sanjeev Gandhi, International Conference on Textiles, Manchester, England, October 5-6, 2002.
84. Correcting the Flaws in The Flammability Testing of Textiles, C. J. Abraham and Sanjeev Gandhi, The 3rd International Conference on Safety & Protective Fabrics, Charlotte Convention Center, Charlotte, N.C., Oct. 23-24, 2002.
85. Environmental Forensic Techniques - The Investigator/Scientist - An Overview, Abraham, C. J., Conference on Environmental Litigation: Advanced Forensics and Legal Strategies, EPIC Educational Program Innovations Center, Toronto, Canada, Nov. 19-20, 2002.
86. Product Safety-Product Liability and Torts, C. J. Abraham, Glasgow School of Law, Glasgow, Scotland, March 16, 2004.
87. Reducing the Impact Force on Hockey Helmets, C. J. Abraham, Safety & Protective Committee, USA Hockey 2005 Annual Congress, Miami, FL, January 19, 2005.
88. Subdural Hematoma and the Sport of Hockey: A Case Study, C. J. Abraham, Safety & Protective Committee, USA Hockey 2006 Annual Congress, Miami, FL, January 20, 2006.
89. Risk Analysis in Product Design, Columbia University, School of Engineering, New York, March 31, 2009; C. J. Abraham
90. Risk Analysis of Horizontal Ladders Above Another Playground Activity, ASTM, Tampa, Florida, January 29, 2008.
91. The Design Criteria for a Safe Design of Products, Columbia University, Department of Mechanical Engineering, (Seniors & Masters Class), NYC, February 12, 2008.
92. Risk Analysis in Product Design, Columbia University, Department of Mechanical Engineering, New York, March 31, 2009; C. J. Abraham
93. Points of Law Associated with Mechanical Engineering and Designing Products, C. J. Abraham, Columbia University School of Mechanical Engineering, November 3, 2009
94. Your Body Is Nothing Without A Brain, C. J. Abraham, Forensic Examiner, Spring Issue, 2011, pp. 109-113.
95. Mechanical Engineering: The Product & The Law, C. J. Abraham, Columbia University School of Engineering, Department of Mechanical Engineering, March 24, 2011 (Seminar)
96. Concussions, Head Injuries and the Textile Industry, C. J. Abraham, The Textile Institute in Manchester, UK, November 30, 2011 (International Conference)
97. Concussions and Head Injuries in Soccer, C. J. Abraham. Testimony before the Senate and Congressional Representatives of the Commonwealth of Massachusetts, Committee on Education
98. Concussions and Head Injuries - interview on Mind Games Radio in St. Louis, Missouri on November 5, 2011.
99. Concussions, Head Injuries and The Textile Industry, C. J. Abraham, The Textile Institute, Managing Innovation in Textiles, Manchester, United Kingdom on November 30, 2011.
100. US Youth Soccer Workshop, February 16-18, 2012, at the Hynes Convention Center in Boston, Mass. Head Injuries and Concussions
101. Propellant Systems for Household Spray Products, C. J. Abraham, American Institute of Chemical Engineers, Houston Texas, April 2, 2012.
102. Sub-Concussive Head Impacts in Soccer and a Method for Significantly Reducing and Dissipating Those Forces, Abraham, C. J. and Abraham, S. R., presented at the ASTM International Symposium on the Mechanism of Concussion in Sports, November 13, 2012, Atlanta, Georgia.

103. Sub-Concussive and Concussive Head Impacts in Soccer and a Method for Significantly Absorbing, Reducing and Dissipating Those Forces, C. J. Abraham, Expo Soccer, Montreal, Canada, March 31, 2013.
104. Concussive and Sub-Concussive Brain Injuries in Soccer, C. J. Abraham, 2013 Soccer Expo, Lake Tahoe, Nevada, April 12, 2013
105. Facts, Myths and Misconceptions in Concussive and Sub-Concussive Brain Injuries, C. J. Abraham, Lake Tahoe, Nevada, April 13, 2013
106. Failure Analysis of a PVC Bottle Containing a Fire Starter Gel Designed for Wood and Wood Pellet Stoves, C. J. Abraham, Columbia University School of Engineering, Department of Mechanical Engineering, October 15, 2013 (Graduating Senior Seminar).
107. Structural Forensic Engineering: Using Forensic Engineering Information in Litigation, C. J. Abraham, HalfMoon Education, Nashville, TN January 22, 2014
108. Structural Forensic Engineering: Understanding the Forensic Engineering Process, C. J. Abraham, HalfMoon Education, Nashville, TN January 22, 2014
109. Determining the Liability of a Fire-Starting Product, C.J. Abraham, 2014 AIChE Spring Meeting, New Orleans, LA, April 1, 2014
110. Total Fog Release Chemical Products: The Hidden Dangers and Enhanced Risks, C.J. Abraham, AIHCE (American Industrial Hygiene - Conference and Exposition) 2014, San Antonio, TX June 5, 2014
111. A Brief Outline of Tort Law and the Mechanical Engineer, C.J. Abraham, The City Univ. of New York, (CUNY), Department of Mechanical Engineering, New York, October 21, 2014
112. A Brief Outline of Tort Law and the Mechanical Engineer, C.J. Abraham, Columbia University, Department of Mechanical Engineering, New York, October 23, 2014
113. The Mechanical Engineer & Consumer Product Design Safety Requirements & The Law, C.J. Abraham, Columbia University, Department of Mechanical Engineering, two-hour seminar for all of the graduating seniors in mechanical engineering, New York, NY, November 5, 2015.
114. The Mechanical Engineer & Consumer Product Design Safety Requirements & The Law, C.J. Abraham, City College of New York (CUNY), Department of Mechanical Engineering, two-hour seminar for all graduating seniors in mechanical engineering, New York, NY, November 12, 2015.
115. University of the Pacific presentations to faculty and graduate students in (a) Chemistry & Chemical Engineering, (b) Coaching Sports & Recreational Activities (c) Challenged, handicapped activities, and learning (e) Opportunities by applying various aspects of learning through experience, education and work ethic. (f) Entrepreneurial endeavors, C.J. Abraham, February 9 & 10, 2016.
116. Chemistry & Alternative Career Opportunities, C.J. Abraham, 44th ACS Middle Atlantic Regional Meeting the College of St. Vincent, Riverdale, New York, June 10, 2016 (2-hour presentation)
117. Brain Injuries in Recreational & Competitive Basketball, C. J. Abraham, 125th AAU National Convention in San Antonio, Texas, October 13, 2016
118. The Mechanical Engineer & Product Design Safety, Risk Analysis & The Law, C.J. Abraham, Manhattan College School of Engineering, October 18, 2016
119. Product Designs, Risk Analysis & Standards, The Legal Responsibilities of Mechanical Engineers, C.J. Abraham, Columbia University, Department of Mechanical Engineering, November 10, 2016
120. The Law & Mechanical Engineering Responsibilities, C.J. Abraham, Manhattan College Department of Mechanical Engineering, January 24, 2017
121. The Law & Mechanical Engineering Responsibilities, C.J. Abraham, Columbia University Department of Mechanical Engineering, January 26, 2017
122. Engineering Designs & The Mechanical Engineer: Responsibilities of the Engineer in the Design of Products for Consumer and Industrial Applications, C.J. Abraham, Manhattan College Department of Mechanical Engineering, October 17, 2017

123. Industrial Accidents, Types and Causes Integrating Mechanical Engineering and The Law, C.J. Abraham, Columbia University, Department of Mechanical Engineering, October 19, 2017
124. Engineering Designs & The Mechanical Engineer: Responsibilities of the Engineer in the Design of Products for Consumer and Industrial Applications, Columbia University, Department of Mechanical Engineering, September 28, 2017
125. The Most Common Indoor Volleyball Injuries and the Non-delegable Responsibilities of Coaches, Schools and Leagues with Reference to the Safety and Welfare of Players, C. J. Abraham, 2017 American Volleyball Coaches Association, Kansas City, Kansas, December 16, 2017
126. Engineering Designs & The Mechanical Engineer (Part I): Responsibilities of the Engineer Involved in the Design of Products for Consumer and Industrial Applications, C. J. Abraham, Columbia University, Department of Mechanical October 11, 2018
127. Engineering Responsibilities & The Mechanical Engineer (Part II): Responsibilities of the Engineer Involved in the Design of Products for Consumer and Industrial Applications, C. J. Abraham, Columbia University, Department of Mechanical Engineering, October 23, 2018
128. The Kaprun Ski Train-A Disaster Waiting to Happen, C.J. Abraham, National Academy of Forensic Engineers (NAFE), Orlando Florida, January 5, 2019
129. Sub-concussive and Concussive Brain Injuries in Soccer, C.J. Abraham, Dublin Soccer League Coaches, Dublin California, July 22, 2019
130. Product Designs, The Mechanical Engineer & The Law, by C. J. Abraham, Columbia University, Department of Mechanical Engineering – October 15, 2019
131. Risk Analysis of Products, the Law and the Mechanical Engineer, by C. J. Abraham, Columbia University, Department of Mechanical Engineering – October 29, 2019
132. WDHD Channel 7 News Boston- Collapse of Government Parking Garage in which a crane operator and the crane fell 6 stories. Interview-March 27, 2022.
133. NBC Channel 10 Providence- Collapse of Government Parking Garage in which a crane operator and the crane fell 6 stories. Interview-March 28, 2022.
134. NBC Channel 10 Boston- Collapse of Government Parking Garage in which a crane operator and the crane fell 6 stories. Interview-March 28, 2022.
135. A Forensic Engineering Approach In The Reconstruction Of A Head-On Collision Between Two Snowmobiles, National Meeting of the National Association of Forensic Engineers: Toronto, Canada, July 22, 2022



Dr. C.J. Abraham

Ph.D., JD, PE, DPE, CPC, FRSC, DEE, IH
FTI, BCFE, DCEE, CChE, CChem

Dr. Abraham is a licensed P.E. and a Senior Member and a Diplomat in The National Academy of Forensic Engineers. Over the last 45 years, C. J. Abraham has created warnings and instructions for many products and protocols applied and used worldwide. He has consulted to major news channels, NHTSA, OSHA, NIOSH, State of California (CaITrans), Microsoft, New York Transit, Queensborough Bridge Authority, Department of Agriculture, the Federal Government, office of the United States Attorney, State Attorney General's Offices, and municipalities throughout the United States, Canada, and Europe in a variety of technical areas.

Dr. Abraham is also the author of over 125 publications and presentations. His current interests are in the areas of head and brain protection in sports and recreation and personal injury accidents and litigations. In addition, he is also involved in the reconstruction of all types of sports injuries in a large variety of recreational and sports activities, amusement parks, sports facilities, as well as accidents involving a variety of products and vehicles. His background may be found at www.scientificadvisory.com. He has also invented and commercialized many products.

In the past, Dr. Abraham was a United States representative to the International Standards Organization (ISO), a member of the Executive Board of the Hockey Equipment Certification Council (HECC), a member of the Safety and Protective Equipment of USA Hockey. He has also been an active member of the American Society of Testing and Materials (ASTM) from 1964 to the present time participating in the creation of safety standards for all types of recreational activities, sports, and a variety of products. He is also a Diplomat in Sports and Recreation. As a result of Dr. Abraham's involvement in personal injury and litigation cases, many products, including recreational and sports activities, have been made safer.

In 2020 Dr. Abraham was awarded the Distinguished Scientist Award by the Engineering, Science and Medicine Organization in India.

Dr. Abraham was awarded first prize by the Textile Institute in Manchester, England for the best designed textile product in 2011. Dr. Abraham has been a Fellow in the textile institute for over 40 years.

In 2021, Dr. Abraham was nominated by the Royal Institute of Chemistry in London, England, as one of the top 3 products that were created all through chemical applications. Dr. Abraham has been a Fellow in Royal Institute of Chemistry for over 40 years.

Most recently, Dr. Abraham created the patented the Universal GameFace which has created a new standard of care and technology for facemasks in softball and baseball. The announcement was made in conjunction with his partnership with Markwort Sporting Goods.

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