

## **DR. C. J. ABRAHAM**

**PHD, JD, PE, DFE, CPC, FRSC, DEE, IH, FTI, BCFE, DCEE, CCHE, CCHEM**

### **EDUCATION & CERTIFICATIONS**

- **P. E. - Licensed Professional (Safety Engineer, 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, Cttext-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)

#### **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 Herwin 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, May 17, 2014, 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 California Department of Transportation (Highway railing systems)
- 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 Bed Bath & Beyond-Retail Displays

#### **PROFESSIONAL EXPERIENCE (Sports & Recreation)**

- Diplomat-American Board of Forensic Examiners in Sports and Recreational Safety
- Former 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](http://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 pit accidents.

### Experience in Head & Brain Injuries

1. Knows more about the impact and dissipation of forces to the head and brain than most medical specialists based on 47 years of experience.

2. Training and experience extended over 47 years of national and international exposure to sub-concussive and concussive brain injuries to children and adults in contact and collision sports.
3. Training and experience extended over 47 years of national and international exposure to sub-concussive and concussive brain injuries to children and adults involved in slip, trips and falls and other types of personal injuries in the United States, Canada and Europe.
4. Involved 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. Invited as a guest speaker to a large number of national conventions involving head and brain injuries in sports.
6. 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. Number of patents involving commercialized headgear that had determined to be the most universal protective headgear ever invented.
9. 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.
10. Consults on one or more brain injury accidents per week over the last 10+ years.
11. 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
12. Witnessed a number of autopsies in which head and brain injuries were involved with the demise of the individual.
13. 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.

## **PROFESSIONAL ASSOCIATIONS**

- National Society of Professional Engineers
- New York State Society of Professional Engineers
- Queens Chapter, Society of Professional 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
- 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 Society of Civil Engineers
- American National Standards Institute (ANSI)
- American Society of Mechanical Engineers (9073529)
- 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)
- American Board of Forensic Examiners
- United States Professional Tennis Association (certified tennis instructor)
- International Code Council
- American Society for Testing and Materials: ASTM (1964- to present)
  - C-8 Refractories;
  - C-14 Glass & Glass Products;

**C-01 Cement**  
**D-1 Paint, Varnish, Lacquer & Related Products;**  
**D-9 Electrical Insulating Materials;**  
**D-12 Soaps & Other Detergents;**  
**D-13 Textiles;**  
**D-13.52 Flammability**  
**D-14 Adhesives;**  
**D-19 Water;**  
**D-20 Plastics;**  
**D-21 Polishes;**  
**D-26 Halogenated Organic Solvents;**  
**D-30 High Modulus Fibers and their Composites;**  
**E-5 Fire Tests of Materials and Construction;**  
**E-7 Non-destructive Testing;**  
**E-15 Analysis & Testing of Industrial Chemicals;**  
**E-17 Skid Resistance;**  
**E-20 Temperature Measurement, Chemicals;**  
**E-27 Hazard Potential of Chemicals;**  
**E-30 Forensic Sciences; E-34 Occupational Health & Safety Aspects of Materials,**  
**Physical & Biological Agents;**  
**E-28 Mechanical Testing;**  
**F-8 Sports Equipment & Facilities;**  
**F-9 Tires;**  
**F-13 Safety & Traction of Footwear;**  
**F-15 Consumer Product Safety;**  
**F-23 Protective Clothing;**  
**F-27 Snow Skiing**  
**F-08 On Sports Equipment and Facilities**  
**F08-Main Committee**  
**F08-10 Bicycles**  
**F08-11 In-Line Skating**  
**F08-12 Wrestling and Gymnastics**  
**F08-13 Fencing Equipment**  
**F08-15 Ice Hockey**  
**F08-16 Archery Products**  
**F08-17 Trampolines and Related Equipment**  
**F08-18 Golf Clubs and Shafts**  
**F08-19 Bicycle Accessories**  
**F08-21 Climbing and Mountaineering**  
**F08.22 Camping Equipment;**  
**F08-23 Tennis Courts and Running Tracks**  
**F08-24 Paintball and Equipment**  
**F08-25 Residential Basketball Equipment**  
**F08-26 Baseball and Softball**  
**F08-30 Fitness Products**  
**F08-51 Medical Aspects and Biomechanics**  
**F08-52 Playing Surfaces and Facilities**  
**F08-52.1 Task Group Playground Surfacing**  
**F08-53 Headgear and Helmets**  
**F08-54 Athletic Footwear**  
**F08-55 Body Padding**  
**F08-56 Facilities-Baseball and Softball**  
**F08-57 Eye Safety for Sports**  
**F08-61 Ice Hockey Rinks**  
**F08-63 Playground Surfacing Systems**  
**F08-64 Natural Playing Surfaces**  
**F08-65 Artificial Turf Systems**

**F24 on Amusement Rides and Devices**  
**F24-10 Test Methods**  
**F24-20 Specifications and Terminology**  
**F24-24 Design and Manufacture**  
**F24-30 Maintenance and Inspection**  
**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**

**Additional qualifications in the area of recreation, recreation facilities, recreational products and recreational/sports protective/exercise equipment**

- a. Licensed P. E. and Certified Safety Engineer
- b. Licensed Professional Engineer with a specialty in Safety Engineering and Design
- c. Diplomat in Sports and Recreation Safety (Over 42 years of consulting experience in the areas of safety on sports and recreation)
- d. Formerly the founder and Associate Director of the Sports and Recreation Safety Division of a national consulting company for twenty-eight years (Inter-City Testing & Consulting Corporation)
- e. Member of the ASTM from 1964 to the present time involved directly in creating safety standards for residential and commercial (public) playgrounds.
- f. Certified in warnings and instructions-created warnings and instructions for many products
- g. Consulted to municipalities throughout the United States and Canada in safety in their parks and playgrounds (Boston, MA; Brockton, MA; New York City; Brooklyn; Nassau County and London, Canada to name a few)
- h. Presented seminars to the graduating class of mechanical engineers at Columbia University School of Mechanical Engineering covering subjects relating to safety and design of playground activities and exercise equipment
- i. Consulted to ABC and CBS on amusement park accidents
- j. Consulted to WPTV, Channel 5, Florida on the safety of public recreational facilities for children
- k. Consulted on the safety of activities at amusement parks including water parks (Splish Splash in Suffolk County, Coney Island, Six Flags, Chuck E Cheese and Disney World)
- l. Consulted on cruise lines with reference to safety of their recreational activities and exercise equipment
- m. Consulted to Wave Runners (Wave Loch Inc.)
- n. Consulted on tennis pitching machines (Lobster Inc.)
- o. Consulted on McDonald's and Burger King's children's play area
- p. Member of the ASTM committee on the safety of paintball facilities
- q. Member of the Executive Committee and consultant in the area of engineering and human factors to the Hockey -Equipment Certification Council (HECC) (1980-1998)
- r. U.S. Delegate-International Standards Organization (ISO) (1988-1998)
- s. Member Safety & Protective Equipment Committee (SPEC) of USA Hockey (1996-2008)
- t. Inventor of the Bio-Lite football facemask licensed to Riddell
- u. Inventor of the ForceField FF Headband [www.forcefieldheadbands.com](http://www.forcefieldheadbands.com))
- v. Creator of warnings and instructions for many sports products
- w. Consulted to Intamin AG (Switzerland - rollercoasters)
- x. Consulted to Northern Lights (manufacturer of fitness equipment)
- y. Consulted to MicroSoft - Kinesiology Studies, Human Movements and Muscle Impacts, Warnings and Instructions
- z. Consulted on cruise ships with reference to the safety of their activity areas for passengers.
- aa. Consulted on news programs on the safety of public playgrounds
- bb. Consulted for Chuck E Cheese with reference to the safety of the activities in their activity center.

- cc. Consulted on over 100 pool accidents, diving accidents, and non-delegable duties of lifeguards relating to general and hands-on supervision.
- dd. Presentations made throughout the United States and Europe on sport injuries to both children and adults.
- ee. I was the founder and CEO of Inter-City Testing & Consulting Corp., a national company from 1970 to 1998. In that capacity I directed the consulting, testing, reconstruction and evaluation of a variety of sports and recreation facility cases. Among the cases I consulted on and evaluated were a large number of fitness equipment accidents.

#### **Dr. C. J. Abraham's experience in the areas of fires and explosions**

- a) Kaprun fire disaster case in Austria
- b) Coal barbecue 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 1/2 explosions filled with explosive vapor
- r) Exploding automobile tires with isopropane/butane emergency-temporary fill
- 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



**PATENTS, COPYRIGHTS AND PRODUCTS**

**Dr. C. J. Abraham, P.E.**

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**www.scientificadvisory.com**

- 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. **Self-Locking Adjustable Bracelet, U.S. Patent 5,603,231, February 18, 1997.**
26. **Self-Locking Breakaway Band, U.S. Patent 5,657,645, July 19, 1997.**
27. **Solid and Liquid Compositions For Dispersion Of Insect Repellent Based On DEET, U.S. Patent No.: 2,738,862, April 14, 1998.**
28. **Insect Repellent Candle And Method Of Making Same, U.S. Patent No.: 5,854,284, December 29, 1998.**
29. **Apparatus For Enhancing Absorption and Dissipation of Impact Forces For All Helmets And Protective Equipment, filed February 21, 2001.**
30. **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.**
31. **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.**
32. **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.**
33. **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.**

- 34. 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.**
- 35. 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.**
- 36. 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).**
- 37. 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.**
- 38. 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.**
- 39. 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.**
- 40. 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)**
- 41. Focus Enhancing Blinders, C. J. Abraham, U.S. patent 7,322,693, January 29, 2008.**
- 42. 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.**
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4. Registration Certificate No.: TXu 449 295 covering wording of a drain cleaner label: Oct. 9, 1990;
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6. Registration Certificate No.: TXu 700 026 covering spontaneous combustion hazards: March 18, 1996;
7. Registration Certificate No.: 74/655011 covering trademark for INSECT-A-WAY: date of filing: April 3, 1995;
8. Registration Certificate No.: 1,894,810 covering trademark for CHASE-A-WAY INC.: May 23, 1995;
9. Registration Certificate No.: 1,894,809 covering trademark for CHASE-A-WAY INC. and Design: May 23, 1995;
10. Registration Certificate No.: 1,902,112 covering BUG-ME-NOT: date of filing: June 27, 1995;
11. Registration Certificate No.: 74/712,870 covering trademark Design (Insect with Circle X): August 9, 1995;
12. Registration Certificate No.: 75/161,693 covering REPEL-GLO, date of filing: Sept. 6, 1996; recorded in the U.S Patent & Trademark Office at Reel 1525, Frames 0326;
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15. Registration Certificate No.: 75/019,832 covering REPELLO – date of filing: November 13, 1995;
16. Registration Certificate No.: 75/026,495 covering REPELLO PRODUCTS and Design: November 22, 1995;
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18. Registration Certificate No.: 819.438.529 for REPELLO PRODUCTS and Design (Brazil): August 30, 1996;
19. Registration Certificate No.: 701241 covering INSECT-A-WAY and Design (India): March 11, 1996;
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21. Registration Certificate No.: 101329 covering INSECT-A-WAY and Design (Europe): April 1, 1996;
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30. Registration Certificate No. 3,312,208 Registered October 16, 2007, "FORCEFIELD"

## PRESENTATIONS AND PAPERS

Dr. C. J. Abraham, P.E.  
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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

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.

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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**
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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.**
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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
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  122. Engineering Designs & The Mechanical Engineer: Responsibilities of the Engineer in the Design of Products for Consumer and Industrial Applications, C. J. Abraham, Columbia University, Department of Mechanical Engineering, September 28, 2017
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  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 Engineering, October 11, 2018
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## **Dr. C.J. Abraham**

PhD, 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 (Cal if Trans), 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 120 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](http://www.scientificadvisory.com). He has 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 and sports. 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.**