

VITA

John Gordon Casali, Ph.D., CPE

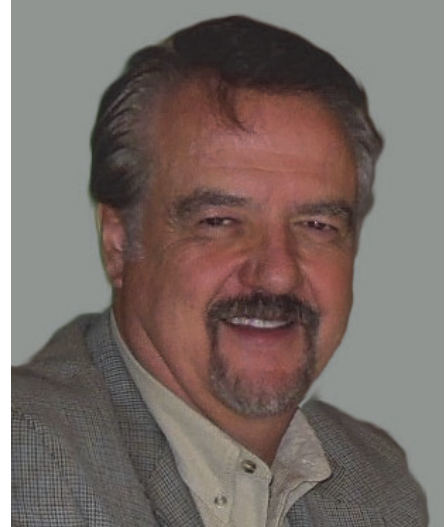
Certified Professional Ergonomist, Reg.#222

(Current as of January 1, 2021)

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Web Page-Short Vita & Lab:

<https://sites.google.com/a/vt.edu/john-g-casali-grado-chaired-professor/>



OVERVIEW:

Extensive expertise, practical experience and research accomplishment in human factors engineering, human hearing, auditory displays and warnings, earphone and 'hearables' technology, auditory situation awareness, noise measurement, hearing protection, and the solution of ergonomics and auditory problems in products, industry and military applications. Experienced in product design, patent development, teaching and professional presentations, and legal expert witness service for litigation in intellectual property, products/premises liability. Procured and completed over 115 research and 150 consulting projects for major branches of the U.S. military, government agencies, industries, and companies, with over \$17M in total funding. A research scientist, teacher, inventor, author, and speaker.

TABLE OF CONTENTS

SECTION	PAGE
I. GENERAL INFORMATION and EMPLOYMENT POSITIONS	2
• College Level Education	2
• Professional Certifications	2
• Academic Employment Experience	3
• Non-Academic Employment Experience	4
• Patents, Invention Disclosures, and Licenses	5
• Major Laboratory Development	6
II. PROFESSIONAL HONORS/AWARDS and AFFILIATIONS	7
III. CONSULTING EXPERIENCE (for corporate, legal and government, including product/system design, testing, litigation, forensics)	12
IV. FUNDED RESEARCH, FUNDRAISING, and OTHER SPONSORED ACTIVITIES	24
• Funded Research Projects	24
• Foundation Grants and Gifts procured (fundraising/development)	52
• Summary of Funded Research Contracts and Foundation Grants	59
V. PUBLICATIONS AUTHORED; PRESENTATIONS; SEMINARS, etc.	61-133
VI. MAJOR NEWS MEDIA CITATIONS	134
VII. TEACHING and STUDENT ADVISING ACTIVITIES	138
VIII. PROFESSIONAL SERVICE ACTIVITIES at VPI&SU and EXTERNALLY	149
IX. UNIVERSITY EXTENSION and OUTREACH	161
X. MINORITY RECRUITING and DEVELOPMENT	164
XI. PROFESSIONAL BOARDS & SOCIETAL-PERSONAL SERVICE	165
XII. MAJOR ACCOMPLISHMENTS while DEPARTMENT HEAD of ISE at VPI&SU	167
APPENDIX I. TEACHING EVALUATIONS	171

I. GENERAL INFORMATION and EMPLOYMENT POSITIONS

PERSONAL

Date of Birth: May 22, 1955, Bluefield, West Virginia

COLLEGE LEVEL EDUCATION

Virginia Polytechnic Institute and State University (VPI&SU), Blacksburg, Virginia:

Doctor of Philosophy in Industrial Engineering and Operations Research (Human Factors Concentration), August, 1982. Major research area (dissertation): Mental workload assessment in a moving-base flight simulator; simulator instrumentation

Master of Science in Industrial Engineering and Operations Research (Human Factors Concentration), August, 1979. Major research area (thesis): Highway driving simulator technology improvement; simulator-induced sickness

Bachelor of Science in Psychology, with Distinction, May, 1977. Major research areas: Warning devices and influences on automobile safety belt wearing

PROFESSIONAL CERTIFICATIONS

12/93-present: Certified by Board of Professional Ergonomists as Professional Ergonomist (CPE). Certification Number 222.

7/04-2010: Certified by Oxford Research Institute as Certified Industrial Ergonomist (CIE). Certification Number 000-072604.

7/04-2010: Certified by Oxford Research Institute as Certified Human Factors Engineering Professional (CHFEP). Certification Number 000-808304

NATIONAL OFFICES HELD

2006-07: President, National Hearing Conservation Association (NHCA) (national elected position)

CURRENT RESEARCH INTERESTS

Human Factors Engineering, ergonomics, acoustics, hearing conservation and hearing protection technology, auditory displays, auditory warnings, signal detection, speech communications in noise, vehicle simulation, driving and flight safety, auditory situation awareness, forensics and litigation support.

CURRENT TEACHING INTERESTS

Human factors engineering, ergonomics, engineering forensics and litigation, methods engineering, human hearing and auditory perception, sound measurement and instrumentation, noise impacts on humans.

ACADEMIC EMPLOYMENT EXPERIENCE

(In reference to the Virginia Tech listings below, in 1991, the departmental name of "Industrial Engineering and Operations Research" was changed to "Industrial and Systems Engineering.")

5/2002 - Present: ***Grado Chaired Professor of Industrial and Systems Engineering (ISE); Director, Auditory Systems Laboratory, VPI&SU, Blacksburg, VA.***

Major accomplishments: Procured over \$14.8 million in funding at Virginia Tech (see Listing V in Table of Contents); procured and directed over 100 research contracts/grants; author or co-author of over 120 refereed publications and 130 presentations; elected President of the *National Hearing Conservation Association*; recipient of major research and educator awards given by Virginia Tech, *Institute of Industrial Engineers (IIE)* and *Human Factors and Ergonomics Society (HFES)*; the *Safe-in-Sound* hearing conservation innovation award by the National Institute for Occupational Safety and Health, Fellow of *IIE* and *Human Factors and Ergonomics Society*; developed Auditory Systems Lab (a premier U.S. laboratory for hearing and acoustics research); consultant to over 70 companies, agencies, and attorneys; 7 awarded U.S. patents; advisor to 50+ M.S./Ph.D. students; Board member of *Human Factors Journal*, *U.S. Military Auditory Fitness-for-Duty*, *Personics, Inc.*, *Custom Protect Ear, Inc.* and NC A&T's ISE department, created programs/positions and serves as Chairman for Virginia Tech ISE's Faculty Mentoring Program and Corporate Foundation and Alumni Relations (CFAR).

12/1996-5/2002: ***Grado Chaired Professor and Department Head of Industrial and Systems Engineering (ISE); Director, Auditory Systems Laboratory and Co-Director, Vehicle and Aircraft Simulation Laboratory, VPI&SU, Blacksburg, VA.*** (Voluntarily resigned Department Head position to direct major research laboratory.)

Major responsibilities as Department Head included: Administration of a top-10 ranked (both graduate and undergraduate) Industrial and Systems Engineering (ISE) department; management of annual State operating and salary budget of over \$3.5 million and Foundation account holdings of over \$10 million (not including annual departmental extramural research expenditures of approximately \$5.5 million); major responsibility for fundraising of over \$7.2M in 6 years; administration of departmental personnel of approximately 28 faculty, 20 classified staff, and 25 research staff, and approximately 290 undergraduate and 300 graduate students; course staffing decisions; space allocation; leading faculty recruiting; preparation of staffing, budget, space allocation; state-supported equipment allocation, and salary proposals; preparation of faculty and staff evaluations and raises; development of ISE annual reporting procedures and Positioning Plan; oversight of 2 successful ABET accreditation reviews with Assistant Head; representing department at college, university, and professional meetings; presenting ISE Promotion and Tenure cases; assisting junior faculty in proposals and promotion dossiers; direct supervision of secretarial staff (with executive secretary), business manager, and mechanical shop manager; development of policies and procedures for faculty matters, departmental

operations, and student organizations; management (with Program Director) of ISE extended-campus faculty and master's programs in Falls Church, Virginia; oversight of Alexandria (Virginia) Research Institute efforts for ISE; liaison and benchmarking with industrial engineering programs in U.S. and foreign countries; directing all ISE fundraising efforts including management of departmental endowment investments; direction of ISE Industrial Advisory Board and Academy of Distinguished Alumni; leading ISE alumni relations and public relations efforts; service on Boards at other universities and organizations; personal teaching and research (funded at approximately \$300,000-\$400,000 per year) in human factors engineering/ergonomics option; advising of 3-6 graduate students and 1-2 professional research associates in own laboratory.

Major Accomplishments as Department Head appear in Section XII at end of Vita starting on page 161.

5/1996-12/1996: *Department Head and Professor of Industrial and Systems Engineering; Director, Auditory Systems Laboratory, VPI&SU, Blacksburg, VA.*

7/1995-5/1996: *Interim Department Head and Professor of Industrial and Systems Engineering; Director, Auditory Systems Laboratory, VPI&SU, Blacksburg, VA.*

5/1991-7/1995: *Professor of Industrial and Systems Engineering; Director, Auditory Systems Laboratory, VPI&SU, Blacksburg, VA.*

5/1986-5/1991: *Associate Professor of Industrial Engineering and Operations Research (Tenure granted 5/1986); Director, Auditory Systems Laboratory, VPI&SU, Blacksburg, VA (Founded this new facility at VPI&SU in 1983.)*

9/1982-5/1986: *Assistant Professor of Industrial Engineering and Operations Research, VPI&SU, Blacksburg, VA*

6/1982-9/1982: *Research Associate, Department of Industrial Engineering and Operations Research, VPI&SU, Blacksburg, VA*

PROFESSIONAL NON-ACADEMIC EMPLOYMENT EXPERIENCE

2015 - Present: ***Founding Partner and Chief Technology Officer of Hearing, Ergonomics and Acoustics Resources, LLC (HEAR, LLC)***, a Virginia company specializing in hearing-related, ergonomics, and acoustical consulting in product and systems design, test and evaluation, intellectual property assistance, and forensics and expert witness support. Awarded multiple corporate and military contracts, including SBIRs.

1973-1976 (summers): *Preparation Plant Associate, Hawley Coal Mining Corporation, Landgraff, WVA.* Various responsibilities in bituminous coal mining, processing, and safety practices.

PATENTS, INVENTION DISCLOSURES, AND LICENSES

2017 (issued): U.S. Patent 9,763,003: "Automotive Constant Signal-to-Noise Ratio System for Enhanced Situation Awareness," (Utility Patent), Date of Issue: September 12, 2017, J. Usher, J. G. Casali, and S. W. Goldstein.

2013 (issued): U.S. Patent 8,550,206 B2: "Method and Structure for Achieving Spectrum-Tunable and Uniform Attenuation," (Utility Patent), Date of Issue: October 8, 2013, (Utility Patent, with priority to Provisional Application #61/491,447 filed May 31, 2011) J. P. Keady, J. G. Casali, and K. Lee. Utility Application #13/485,466 (Assigned to Virginia Tech Intellectual Properties (VTIP)).

2013 (issued): European Patent EP2663470A0: "Automotive Constant Signal-to-Noise Ratio System for Enhanced Situation Awareness," (Utility Patent), Date of Issue: November 20, 2013, J. Usher, J. G. Casali, and S. W. Goldstein. Patent Application WO 2012/097148.

U.S. Patent Provisional Application #61946923 (filed): "Hearing Protection Device Real-Ear-Attenuation-at-Threshold Test System," Filing Date: March 3, 2014, K. Lee and J. G. Casali. (VTIP# 14-025 - Based on invention disclosure to VTIP (Virginia Tech Intellectual Properties) on July 29, 2013.)

2013 (issued) U.S. Patent 8,554,350 B2: "Device and Method to Reduce Ear Wax Clogging of Acoustic Ports, Hearing Aid Sealing System, and Feedback Reduction System," (Utility Patent), Date of Issue: October 8, 2013, J. P. Keady, G. Hoshizaki, and J. G. Casali, Utility Application #112/579,673, filed October 15, 2009.

2010 (issued): U.S. Patent 7,822,219: "Cartilage Displacing Bead, Ridge, or Key Projection," Date of Issue: October 26, 2010, (Utility Patent), with priority to Provisional Application #60/936,492 filed June 20, 2007), L. K. Baker and J. G. Casali, Utility Application #12/143,090.

U.S. Patent Application #11/731,760 (filed, abandoned): "Improvements for Audio Plugs For Insertion Into The Human Ear Canal," filed April 20, 2007, L. K. Baker and J. G. Casali.

U.S. Patent Application (filed, abandoned): "Patient Lift/Transport with Power Assist," filed March 15, 2002, with priority to provisional application U.S.S.N. 60/276,035 first filed March 16, 2001, J. G. Casali and R. Waldron.

1997 (issued): U.S. Patent 5,651,422: "Universal-Fit, Quick-Connect Wheelchair Power Drive/Steer Attachment for Wheelchair," (Utility Patent), Date of Issue: July 29, 1997, J. G. Casali.

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