

KEY PERSONNEL - AHMAD BAYAT, P.E.



Ahmad Bayat is the founding principal of Vibro-Acoustic Consultants, with more than 25 years of extensive design and management experience. Mr. Bayat has worked on the design of low-vibration facilities for many microelectronics clients, R&D facilities, universities, and specialty structural dynamics projects. His design expertise includes finite element modeling and analysis (time history, frequency response function, modal analysis) of structures, dynamic soil-structure interaction analyses, design and specification of vibration isolation systems, and noise specification and design.

As the principal structural dynamicist, he has been responsible for developing new concepts affording robust design and major cost savings. He has published many peer-reviewed articles.

Project Positions Held: Project Manager; Senior Consulting Engr., Lead Senior Engr., and Structural Engr.

Work Experience: 2000 - present – Vibro-Acoustic Consultants (San Francisco, CA)
1993 - 2000 – Colin Gordon & Associates (San Mateo, CA)
1986 - 1993 – ABB Impell Corporation (Lincolnshire, IL)
1985 - 1986 – Sargent & Lundy (Chicago, IL)

Education: M.S., Civil Engineering with emphasis in finite element analysis and structural & soil dynamics, University of Houston (Houston, Texas)
M.S. Thesis: "Dynamic Two-Parameter Soil Model for Soil-Structure Interaction"
B.S., Civil Engineering, (w/honors), University of Houston (Houston, Texas)

Honors / Societies: Registered Professional Engineer in California
Member, Structural Engineering Association of Northern California (SEAONC)
Member, American Society of Civil Engineers

Publications: "Vibration Impact of a 150-MW Cogeneration Plant on a Semiconductor Fab", (with B. Davis), presented at ASA/INCE Baltimore, April 2010.
"Conversion of Old Fabs/Labs - The Vibration Design Perspective", (with B. Davis), presented at IEST ESTECH 2004 Conference, April 2004.
"Vibration Control in Nanotechnology Research Environments", (with B. Davis), Cleanrooms Magazine (November 2003).
"Dynamic Characteristics of Structures Extracted from In-situ Testing", (with H. Amick and M. Gendreau), Presented at International Society for Optical Engineering (SPIE) Conference on Current Developments in Vibration Control for Optomechanical Systems, Denver, CO (July 1999).

Tom Kaytt



Tom Kaytt joined VACC in 2016 as a Senior Associate. He joins the firm with 13 years of experience in noise & vibration engineering and acoustical consulting. His prior experience includes a wide array of corporate, residential, hospitality, research, and construction projects and an extensive experience in hands-on testing for the evaluation & solution of noise, vibration, and acoustical privacy problems. As a project manager and engineer, Tom's focus is on understanding and working with the client to meet the demanding needs of the modern design & construction industries.

Work Experience: 2016 - Present – Vibro-Acoustic Consultants (San Francisco, CA)
2005 - 2016 – Cerami & Associates, Inc. (New York, NY)
2003 - 2005 – General Dynamics Electric Boat (Groton, CT)

Education: BSE, Acoustics Engineering & Music, University of Hartford, 2003

Notable Projects: **University of Michigan Ross School of Business*:** *Ann Arbor, MI*
Provided acoustical design consultation for the creation of highly functional yet flexible learning and assembly spaces.

Thurgood Marshall US Courthouse*: *New York, NY*
Provided acoustical testing and design consultation for the rehabilitation and modernization of the courthouse to improve interior acoustics and maintain low interior HVAC noise & vibration levels within a program of HVAC equipment upgrade & expansion.

Confidential High Rise Luxury Hotel & Condominium*: *New York, NY*
Provided detailed noise & vibration testing and consultation from early concept design through construction of a prestigious supertall mixed use skyscraper while meeting demanding standards for interior noise & vibration as well as stringent community noise regulations.

Confidential Medical Center*: *Chicago, IL*
Conducted extensive benchmark noise & vibration testing to establish design requirements appropriate to compensate for extensive environmental noise & vibration from street, train & air traffic.

Confidential Medical Center*: *New York, NY*
Developed proprietary vibration monitoring systems to monitor construction impacts to sensitive University research facilities and vivariums.

*Project work completed under prior employer

MATT SNEDDON - SENIOR ASSOCIATE



Matt Sneddon joined VACC in 2015, bringing over thirty years' experience conducting a broad variety of acoustics and vibration consulting, research, and testing activities.

He is equally at home managing the activities of project teams, mentoring technical staff, and working hands-on in direct technical roles. Major project experience includes an extensive range of acoustic test & measurement programs, transportation and community noise studies, as well as modeling, simulation, & software development tasks. Recent activities include developing improved methods for modeling elastic wave propagation through soils, and characterizing the behavior of high transmission-loss acoustic metamaterials.

Work Experience:	2015-Present	<i>Consultant, Vibro-Acoustic Consultants</i>
	2009-2014	<i>Visiting Scholar, University of Southern California</i>
	2011-2013	<i>Principal Consultant, ATS Consulting</i>
	2008-2009	<i>Visiting Faculty, University of Southern California</i>
	2001-2014	<i>President, Wavefront Scientific</i>
	1991-2001	<i>Senior Scientist, Bolt Beranek and Newman</i>
	1989-1991	<i>Staff Scientist, Bolt Beranek and Newman</i>
	1986-1989	<i>Senior Consultant, Bolt Beranek and Newman</i>
1978-1986	<i>Staff Consultant, Bolt Beranek and Newman</i>	

Education: B.S., Physics, University of California, Santa Barbara, 1978

Honors/Societies: Member, Acoustical Society of America
Member, Institute of Noise Control Engineering

Recent Notable Projects: US Navy: Testing of advanced sonar window materials
AiResearch Mfg.: Gas centrifuge fault implant testing
Metrolink: Subsurface vibration propagation testing
Hitco: Measurements of the dynamic properties of fiber-reinforced composites
Caltrans: Indoor & outdoor highway noise monitoring
Caltrans: Adverse noise reflections from highway soundwalls
Corps of Engineers: Noise control for airblast circuit breakers
US Navy: Modal analyses of Trident sound isolation couplings
BBN: Design and construction of the BBN Sonic Boom Test Facility
City of Millbrae: SFO airport low-frequency noise studies
Chicago O'Hare: Benchmarking noise event classification performance
Cessna: Community noise predictions for engine run-up facility
US Dept. of Justice: Aircraft noise modeling at NAS Oceana
Adams County, CO: Denver International Airport Noise Impact Analysis
US Air Force: Laboratory studies of Sonic Boom structural damage

ALANA G. DELOACH



Alana DeLoach is an Associate at Vibro-Acoustic Consultants. As a project manager and engineer, her work since joining the firm in 2016 has included coordination and engineering work on over 30 projects spanning corporate, mixed use, residential, hospitality, and education market sectors. She is experienced in NIC/ASTC, IIC, RT, Long-Term Noise Monitoring, and Background Noise Level testing. Her background in professional dance, theater, and audio engineering (mastering, commercial editing, sound design/composition, and live mix) informs her keen interest in architectural acoustics and noise and vibration control.

Work Experience: 2016 - Present – Vibro-Acoustic Consultants (San Francisco, CA)
2015 – Cerami & Associates, Inc., Junior Associate (New York, NY)
2013 – Sound Solutions, LLC, Assistant Acoustical Consultant (Tucson, AZ)

Education: M.S., Architectural Acoustics, Rensselaer Polytechnic Institute, 2015
B.Sc., Applied Mathematics, University of Arizona, 2014

Notable Projects: **Comcast: Pittsburgh, PA** – Assisted with noise control for building/ mechanical system design, Fitness Room design, and sound masking schemes for new 50-story tower in Pittsburgh, PA.

Facebook: New York, NY – Assisted with existing AC unit mechanical assessment, formal mechanical review of additional building system components, acoustical advice for rooftop mechanical layout and barrier selection.

Bond St. Hotel: New York, NY – Assisted with rooftop mechanical system design, advised on in-unit heat pumps, and performed IIC test on proposed flooring to assess suitability.

New Museum of Contemporary Art: New York, NY – Performed feasibility study for installation of an anechoic room for art exhibition, assisted in room design, coordinated install labor and correspondence with design team regarding HVAC concerns and fire code compliance.

John F. Kennedy Airport: New York, NY – performed noise measurement and site survey report for new hotel at TWA Terminal 5.

Tucson International Airport: Tucson, AZ – performed interior noise measurements to assess new construction of government monitoring facility with respect to aircraft noise.

Google: New York, NY – performed noise and vibration analysis for wellness suite, advised on noise control for mechanical systems and provided architectural recommendations for all office spaces in two new buildings.

Other Projects: MoMA (*arts, New York*); Dataminr (*corporate, New York*); NIST (*research, Boulder*); Lexus (*corporate, New York*); St. Anne's School (*education, New York*); Troutman Sanders (*corporate, New York*); CBS (*corporate, Washington D.C.*);

ELIAS MONTOYA G.



Elias joined VACC in 2016 as a Consultant after earning his Bachelor in Engineering Science, mention in Acoustics, at Universidad Tecnologica de Chile (Vi.P.Ro.). Elias' skills as an Electrical Technician are put to good use in the maintenance of our sound & vibration instrumentation used for testing and monitoring.

Elias has worked in the Universidad Catolica de Chile, supervising electrical installations in several projects. In acoustics, he worked in the Monte Redondo Wind Farm, Chile, carrying out an important noise measurement project, according to ETSU-R-97.

Work Experience: 2016 - present – Vibro-Acoustic Consultants (San Francisco, CA)
2016 – Acoustical Engineer; Monte Redondo Wind Farm (Ovalle, Chile)
2007 – Electrical Technician; DICTUC S.A. (Santiago, Chile)

Education: B.E.Sc , Universidad Tecnologica de Chile (Santiago, Chile), 2015
Electrical Technician, Liceo Domingo Matte Mesias, (Santiago, Chile) 2006

Members/Societies: Member, Acoustical Society of America

Publications: "Guidelines for developing regulations for acoustic impact, based on the stage of operation of wind farms in Chile", (with I. Gomez), presented in the 171st Meeting of the Acoustical Society of America. Salt Lake City, Utah. May 2016.