

**AN ANNOTATED BIBLIOGRAPHY ON PUBLICATION ON NOISE
(1985-1995)**

REG. NO.M9512

**AN INDEPENDENT PROJECT SUBMITTED AS PART FULFILLMENT OF FIRST YEAR M.Sc.
(SPEECH AND HEARING) TO THE UNIVERSITY OF MYOSRE, MYSORE**

**ALL INDIA INSTITUTE OF SPEECH AND HEARING
MYSORE 570 006
MAY 1996**

THIS PIECE OF WORK IS

DEDICATED

TO

MY MUMMY-PAPA

"YOUR BLESSINGS AND LOVE HAS MADE ME


WHAT I AM TODAY.

YOU MEAN THE WORLD TO ME"

CERTIFICATE

This is to certify that this Independent Project entitled : AN ANNOTATED BIBLIOGRAPHY ON PUBLICATIONS OF NOISE (1985-1995) is the bonafide work in part fulfillment for the First Year M.Sc, (Speech and Hearing) of the student with Reg. No. M9512.

Mysore
May 1996


Dr. (Miss) S. Nikam
Director
All India Institute of Speech and Hearing
Mysore 6

CERTIFICATE

This is to certify that this Independent Project entitled : **AN ANNOTATED BIBLIOGRAPHY ON PUBLICATIONS ON NOISE (1985-1995)** has been prepared under my supervision and guidance.

Mysore
May, 1996



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DECLARATION

I hereby declare that this Independent Project entitled : **AN ANNOTATED BIBLIOGRAPHY ON PUBLICATIONS ON NOISE (1985-1995)** is the result of my own study under the guidance of Dr. (Miss) S. Nikam, Professor and Head of the Department of Audiology; Director, All India Institute of Speech and Hearing, Mysore and has not been submitted earlier at any University for any other Diploma or Degree.

Mysore

May 1996

Reg. No. M9512

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AN ANNOTATED BIBLIOGRAPHY ON PUBLICATIONS ON NOISE (FROM 1985-1995)

INTRODUCTION

What is Noise?

Noise is defined as any unwanted sound with more/less random disturbances (Robert and Young, 1957).

Noise is also defined as random frequency current/voltage signal extending over a considerable frequency spectrum and no useful purposes unless it is generated for test purposes (**Rutus and Turner, 1980**).

Another way of defining noise is as any sounds which is unwanted either because of its effects on humans, its effects on fatigue/malfunction of physical equipment, or its interference with the perception/detection of other sounds. (**McGraw Hill Dictionary of Scientific and Technical Terms, 2nd Edition**).

We can also define noise as any sound undisired by recipients. Sound which is harmful/which interferes with normal activities, particularly communication and efficiency.

Why are we interested in noise?

Since time immemorial, noise has been an are of great importance and interest. Even the holy Bible highlights the hazardous effectsif noise on human functioning. With the increase in awareness about the hazardous effect of noise on humans, this interest has further increased.

One of the major hazardous nature of noise is that it can result in hearing loss. There is no doubt that hazardous noise condition produce destruction of auditory sensory cells and hair cells in cochlea and that suffe, ng destruction of these elements would produce hearing loss (**Sataloff and Michael, 1973**)

This type of hearing loss is called **Noise Induced Hearing Loss** (NIHL).

Hearing loss caused by continuous noise exposure is called occupational disturbances and hearing loss due to impact of noise is called instantaneous occupational injury (Newell, 1987).

What are the effects of noise on humans?

Although the most obvious effect of noise exposure on humans is the auditory effect of hearing loss, yet there are many non-auditory effects of noise such as that affecting the individual's personality, his ability to function independently, in social and business life, his natural optimism in his personal competence to deal with his fellow men... etc. thus, the effect of noise on humans could be both **auditory and non-auditory**.

What is the nature of hearing loss due to noise?

Coming to the hearing loss caused by continuous exposure to loud/intense noise for prolonged period (**occupational hearing loss**), this type of hearing loss has following features.

- > The loss is sensorineural.
- > There is a history of long term exposure to intense noise.
- > Hearing loss is developed gradually (NIHL) or suddenly due to exposure to a sudden, loud, impulse noise (acoustic trauma).

Thus, the auditory effects of noise on human hearing vary across a wide range, i.e. from little perceived noisiness to a permanent shift in the threshold of hearing on continuous exposure to loud hazardous noise.

What is the need of Bibliography on noise?

The **dictionary definition of Bibliography** calls it a descriptive list of books /in regard to their outward form, authors, editions etc. An Annotated one, include a note of

explanation/information regarding the published material, along with the rest of the information.

In general, there could be a lot of benefits in having a bibliography on any area of study. It is very useful for scanning through the available literature in a particular area. An annotated one, is further useful because it not only provides the outward form of the article/the book, but also provides the abstract/in brief the contents of the article/book.

What is the aim of present piece of work?

While numerous articles on the subject (noise) have appeared in various articles for more than a century, information has not been sufficiently tied together in a single publication.

Thus, the aim of the present bibliography is to update the information in selected areas of noise.

Moreover, the present bibliography being anannotated one, would also provide, in brief, the contents of the article.

JUSTIFICATION

The above mentioned aims of this project could be justified by the following facts:

NOISE is a **HAZARD** to human hearing and if uncontrolled, may lead to permanent hearing loss. Thus, this bibliography would provide easy access to the available information, by not only providing the details about the author, edition etc. but also in brief the contents of the articles and various chapters in books.

Therefore, **this project would be a contribution to battle against preventable fora of hearing loss.**

METHODOLOGY

In order to list down articles and books in selected areas of noise, relevant leading journals and books published between 1985-1995 were scanned.

The following four categories were selected :

- Damage risk criteria
- Noise measurement
- Noise control
- Hearing conservation programs.

The published materials were listed under one of these 4 categories chronologically, and within each year, alphabetically to ease out the task of searching through the literature between 1985-1995.

Also, as mentioned earlier, the present bibliography being anannotated one, a brief description regarding the contents of articles and chapters in various books shall also be included.

This brief description regarding the content of article shall include information like:

- Whether study was experimental/was it a survey?
- What was the purpose of the study?
- What were the variables used in the study?
- What was the kind of statistical analysis used?
- What were the results of the study?

Thus, in the above described way, an annotated bibliography on publications on noise was created.

DAMAGE RISK CRITERIA

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Davis, J.M. (1981)	Rehabilitation Audiology for children and adults, 1, 395- 396, John Wiley and Sons New York.	Communication Problems of audits	The present article studied communication problems of adults and they concluded that daily exposure of noise of 90 dB A/higher is injurious, however noise levels exceeding 80 dB A also could be harmful to some people. It also highlights that United States Department of Labor requires employers to maintain HCP for workers in areas exceeding the 90 dB A level.
Report, A (1985)	Hearing Journal 38(1), 7-10.	Court Voids OSHA Hearing Conserv- tion Amendment.	In this article, the still prevailing old noise standards were highlighted. The impact of hearing conservation amendment' on the industry was mixed. Also the state programs getting affected by this was also highlighted. Finally it was concluded that the job of hearing conservationists appears tough keeping in mind the present context.

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Edelman, P S (1985)	The Noise Hand book, 1, 337- 376, Academic Press, Florida	Noise and the Law in the USA	The Chapter throws light on the following issues noise as a nuisance, workmen's compensation and industrial protection of workers, followed by information on federal and state control of noise and New York city noise control code. It also highlight issues like local ordinance, building and construction codes and airport noise.
Grime, R (1985)	The Noise Hand book 1,303-335 Academic Press, Florida	Noise and the Law in the UK	This chapter deals with noise and the law in UK and issues like Legislation, liability and national insurance, (civil claims for compensation, negligence, awards, protective legislation, natural insurance for industrial injuries) and also ways of controlling environmental noise which includes information on public, private and statutory noise nuisance, planning and noise abatement zones, miscellaneous provisions, residual powers.

Author/Editor and Year	Journal, Vol. No. Page No. Edn..Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Hay, B (1985)	The Noise Hand book 1, 377-396 Academic Press Florica.	EEC Directives on noise in the environment	The chapter provides information on the EEC (European Economic Community) directives on noise in the environment. National Laws on external industrial noise in various countries (Belgium, Denmark, France, Federal Republic of Germany, Greece, Republic of Ireland, Italy, Lexembourg, the Netherlands, United Kingdom) and also the proposed directives on noise exposure in the work place. Followed by comparison of national laws on noise exposure in the work place.
Alberti P W (1987)	Occupational Hearing Loss 1, 597-604 Marcel Dekker New York.	Occupational Hear- ing loss in Canada	The chapter throws light on the workers compensation board, occupational hearing loss in general, establishment of eligibility, adjudicating a claim, traumatic hearing loss, tinnitus compensation the kinds of appeal mechanisms, rehabilitation for the occupationally handicapped, and finally about hearing conservation.

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Dear, T A (1987)	Occupational Hearing Loss, 1 485-507, Marcel Dekker, New York	Noise criteria regarding risk and prevention of Hearing Injury in Industry.	In this chapter, the following issues were highlighted - history of damage risk percentage of risk and factors contributing to pyramiding of noise measurement numbers. Various reasons to avoid proposed changes from 5 dBA to 3 dB A exchange rate are provided and how to carryout simultaneous assessment of exposure to impulse/impact and steady state noise and high crest factor instrumentation. Finally reduction in performance values for personal HPD. In the end OSHAs amendment is provided from role reliance on DRC, major benefits of HCP for individual employee.
Flood, L.M (1987)	Occupational Hearing loss, 1, 605-612, Marcel Dekker New York.	Occupation Hear- ing loss in the U.K.	The chapter deals with history and dimensions of of problems in the UK, hearing loss compensation, hearing conservation. Criticisms about this issue and summary are provided in the end.

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Irvin, S (1987)	Occupational Hearing loss 1, 563-570 Marcel Dekker New York.	Formulae differen- ces in State and Federal Hearing Loss Compensation	In this chapter formulae differences in State and Federal hearing loss compensation are studied. Wide divergence in state compensation rates and benefits and disparity in standards and criteria for determining hearing impairments is observed. The study puts forth a proposal of establishment of Federal minimum standards in all aspects of workers' compensation systems.
Mouique J.B. (1987)	Hearing Journal 40(6), 30-32	OSHA, B.L.S Official address NHCA Annual meeting.	In this paper, various issues dealt with in XII Annual Conference of the National Hearing Conservation Association are focused on : OSHA's role in hearing conservation and noise control, followed by growing importance of record keeping. Also, reporting criteria for hearing loss and prevention of noise induced hearing loss. Finally information is provided on OSHA noise standards and worker protection and hearing loss evaluation.

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Postol L.P (1987)	Occupational Hearing loss, 1 585-596 Marcel Dekkar New York.	The United States The Longshore and Harbor Workers' Compensation Act	This chapter focuses on causes of occupation induced hearing loss, determining extent of hearing loss, compensatory hearing loss victims as well as other areas of interest such as OSHA, ERISA, and handicap discrimination.
Rice, C.G (1987)	British Journal of Audiology, 21, 279-288.	Damage risk from personal cassette player	This article is about a study of comparing listening habits of personal cassette players carried out in Southampton and Turin were compared with that in London and Nottingham. Estimates of Damage risk were proposed. Habitual users could suffer adverse effects and should be aware of the symptoms associated with TTS on hearing.
Sataloff, R.T. (1987)	Occupational Hearing loss, 1, 531-540 Marcel Dekkar, New York.	Occupational Hear- ing Legislation and compensation	In this chapter, various aspects of occupation hearing loss were studied such as its economic impact, compensation for occupational deafness, abuses of noise standard, and legislation for workers' compensation and its concepts are dealt. - Finally the

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Sataloff, R.T. (1987)	Occupational Hearing Loss 1, 541-562 Marcel Dekkar, New York	OSHA Noise Regula- tions	<p>author provides his views on impairment and disability and compensation variability.</p> <p>The following information on noise standards is provided in :</p> <p>Appendix A : Noise Exposure computation.</p> <p>Appendix B : Methods for estimating adequacy of hearing protector attenuation.</p> <p>Appendix C : Audiometric measuring instruments.</p> <p>Appendix D : Audiometric test rooms</p> <p>Appendix E : Acoustic calibration of audiometers.</p> <p>Appendix F : Calculations and applications of age correlations to audiograms.</p> <p>Appendix G : Monitoring noise levels non-mandatory information.</p> <p>Appendix H : Definitions.</p>
Suter, A.H (1987)	Ear and Hear- ing 8(4), 188- 191	Tutorial : Noise and Public Policy	This article highlights the Impetus for noise regulation observed in recent years. It also deals with

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Stander I (1987)	Occupational Hearing Loss, 1, 613-622 Marcel Dekker, New York.	Workers' Compensa- tion presenting Medical Evidence In Hearing Loss cases.	<p>prevalence of noise exposure and federal regulation regarding occupational and environmental noise.</p> <p>CONCLUSION: Uniform standards regarding noise effects and noise exposure assessment, with the dissemination of this knowledge to public can help keep environmental noise control alive without governmental leadership.</p> <p>In the present chapter on workers compensation presenting medical evidence in hearing loss cases, preparation and presentation of claimant's case - function of claimants' attorney are highlighted and preparation and presentation of the defense and adjudicator's point of view are presented.</p>
Lipscomb D.M. (1988)	Hearing Conser- vation in Industry Schools and the Military 1, 35-44	Determination of Noise Exposures	<p>In this chapter on determination of noise exposures, information on hearing damage risk is provided along with the applications of DRC. The other issues focused are</p>

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
	Taylore and Francis, London		impulse noise exposure assessment, combining steady state and impulse noise exposure, influence of other auditory factors. Finally, boundary noise assessment sleep environment assessment are provided. A table for recommended noise criterias for offices and rooms is also provided.
Suter, A.H (1988)	Hearing Conser- vation in Industry, Schools and the Military. 1, 45-66, Taylor and Francis, London.	The Development of Federal Noise Standards and DRC	This chapter provides information need for noise standards, its history, early noise standards, federal regulations, revising OSHA noise standards, hearing conservation amendment, its requirements, the court challenge. It also provides information on analysis of DRC, amount of hearing to be preserved and determination of acceptable risk. Lastly, risk and studies related to NIPTS are provided and information on NIOSH is given.
Clymont L.G (1989)	Journal of Laryngology and Otology, 103,	Noise levels and exposure patterns to do - it yourself	In this paper, noise levels and exposure patterns were measured in real life situations. Most

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
	1140-1141	power tools.	produced 100 dB A/greater noise at user's ear. The group of users who may be more at risk from using power tools in home are those who are / who have been exposed to occupational noise.
Joos, V (1990)	JASA, 88 (2) 883-893	On the level dependent penalty for impulse sound.	<p>Aim : To find whether the decrease of penalty with increasing Leq is a consequence of the use of 10 point rating scale.</p> <p>Results : At lest for gun fire sounds, the penalty is level dependent. Especially at indoor Leq values higher that about 45-50 dB (A), application of a negative penalty is relevant for sounds produced by machine gun. Therefore acoustic measures from which to predict the value of the penalty are highly needed.</p>
Kryter, K.D (1991)	JASA 90(6) 3180-3195	Hearing loss from gun and railroad noise relations with ISO standard 1999.	In the present study pure tone hearing thresholds and anamnestic data pertaining to nosocusis and exposure to gun noise were analyzed for 9778 male rail road traincrew

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Dancer, A.L (1992)	NIHL 1, 513-520 Mosby Yearbook St. Louis	Status and short- comings of Military Noise Standards.	<p>workers. The effect Leq 8h exposure level of trainmen to rail road noise is about 92 dB A and 87-89 dB A to gun noise.</p> <p>Asymmetries in losses between two ears, effects of ear protection, losses from nosocosis and losses from sport, as compared to military, gun noise exposures are examined.</p> <p>In the present study shortcomings of the criteria used in military noise standards were analyzed on issues like large caliber vs. small caliber weapons, daily exposures to noise, spacing between impulses and finally about hearing protective devices.</p>
Lutman, M.E (1992)	British Journal of Audiology, 26(5),307-319	Apportment of Noise Induced Hearing Disability and its prognosis In a medico-legal context - A Modelling study.	<p>In the present study, the model combines existing models of relationships of hearing-impairment to noise exposure and age, and the relationship of hearing disability to impairment. The model shows that disability due to noise</p>

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Melnick, W (1992)	NIHL, 1, 521- 530, Mosby Year Book, St. Louis.	Occupational Noise Standards :Status and Critical issues.	<p>exposure generally increases slightly with increasing age even after noise exposure has ceased.</p> <p>This chapter focuses on the various US occupational noise standards, OSHA hearing conservation amendment, other noise standards. Also deals with critical issues (fragmentation, prevalence. compliance, enforcement, procedural focus, evaluating HCP, impulse and impact noise, risk and finally provides a conclusion regarding the chapter.</p>
Newby, H.A (1992)	Audiology, 6, 349-363, Prentice Hall, New Jersey.	Industrial Audiology	<p>This chapter provides information on DRC & its importance, review of literature since last four decades including studies by Rosenblith and Steven's DRC (1953); Glorig, Ward, Nixon (1961); Under the Walsh Healey Act DRC (1969), Also summary of predicted effects of various A-weighted exposure to continuous noise is provided - Johnson (1973).</p>

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Pekkarinen J.O.(1992)	JASA, 91(1) 196-202	Hearing Protection against high level shooting impulses in relation to hearing DRC.	The present study examined hearing protection against high level shooting impulses in relation to DRC, the risk limits for hearing loss from a single impulse were exceeded inspite of use of earmuffs when criteria of CHABA (USA)/Pfander (Germany) were applied.
Morrison, A.W. (1992)	Deafness, 5, 206-211 Whurr Publishers, UK	Trauma	This chapter on trauma includes information on factors to be considered for NIHL/intensity, acuteness/chronicity of exposure and the duration and noise levels of over 90 dB for at least 6 hours a day which are considered injurious. It also highlights professionals at risk for developing NIHL. It also states that impulse noise with 150 dB/200 dB are sure to cause permanent threshold shift.
Smootenburg G.F. (1992)	Noise Induced Hearing Loss 313-323	Damage risk for low frequency Impulse Noise -	This study examines spectral factors in permanent NIHL due to industrial noise, spectral factors

Author/Editor and Year	Journal, Vol. No. Page No. Edn-., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
	Mosby Yearbook St.Louis	The spectral factor in NIHL	in TTS due to exposure to steady state noise. It also deals with measurement of impulse noise and spectral factor in animal and human exposure to impulse noise.
Mishra S (1994)	An Independent Project sub- mitted as part fulfillment for the first year M.Sc, (Sp.& Hg) to the Univer- sity of Mysore	A course on Noise pollution -Audio and Visual Resource Material Slide No.33 P.15-16.	This chapter throws light on existing laws restricting noise pollution, criteria by OSHA, Airforce Regulation Act 1630/3, followed by International Standards Organization (ISO), OSHA, laws regarding noise pollution.
Pekkarinen J (1994)	British Journal of Audiology 27 (3), 175-182	Hearing loss risk from exposure to shooting impulses in workers expo- sed to occupa- tional noise.	In this study, the effect of shooting impulses on hearing was analyzed in 150 professional forest workers exposed to noise. The evaluation of NIHL for exposure to shooting impulses should be determined since they increase the extent of hearing loss. The Leq method, described in the /Study, more accurately evaluates harmful effects of shooting noise impulses on hearing.

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the Article/Title of the Chapter	Abstract of the article/ Chapter's content
Kryter, K.D (1994)	The Handbook of Hearing and the Effects of Noise: Physio- logy, Psychology and Public Health, 1, 376- 388, Academic Press, California.	The assessment of hearing and damage risk from noise	This article deals with comparing proposed and AAO guides for the evaluation of hearing handicap for everyday speech and also comparison of assessment by different procedures of risk of hearing damage and handicap. It also highlights that highest exposure levels exceed the maximum proposed value. It also deals with the NIPTS and percent handicap from specific exposures, percent at risk in screened and unscreened population and differences in database of AAO ISO 1999 (1990) proposed procedures were provided. Other criteria for hearing- impairment were also dealt with.
Bloom S (1995)	Hearing Journal 48(5), 13-22	Recreational Audiology. Is it Bite Sky or Golden opportunity?	A report on efforts to help consumers protect their hearing and to establish contact with prospective hearing aid users is presented. Decibel level of some recreational environmental noises is provided. Finally safety limits of noise exposures are provided.

Author/Editor and Year	Journal, Vol. No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Kuruvilla M (1995)	An Independent Project sub- mitted in part fulfillment of first year MSc. (Sp. & Hg) to the University of Mysore.	Audiovisuals on auditory effects, non-auditory effects and legi- slation aspects of noise, P.21-22	<p>In this article, legislative aspects of noise are presented on various slides.</p> <p>Slide 40 - 1980 Workmen's Compensation Law, 1948 - NIHL awarded compensation.</p> <p>Slide 41 - American Medical Association Method.</p> <p>Slide 42 - American Academy of Ophthalmology and Otolaryngology Method.</p> <p>Slide 43 - Committee on hearing, bio-acoustics, bio-mechanics.</p> <p>Slide 44 - Walsh Healey Act.</p> <p>Slide 45 - Federal Register.</p>

NOISE MEASUREMENTS

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Flynn, D.R (1985)	JASA, 77 (4) 1436-1446	Relations among different frequency rating procedures for traffic noise	<p>In the presented study a series of calculations were performed to ascertain how well one frequency-weighted rating (sound level, loudness level/perceived noise level) may be predicted from another such rating. A total of 103 average sound level spectra measured at several distances from different types of highways, was used in these calculations.</p> <p>CONCLUSION : If human response criteria/stimulus response relationships have been developed in terms of 1 frequency weighting procedure, these may be translated into equivalent criteria expressed in terms of a metric that is easier to measure and predict.</p>

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Tempest W (1985)	The Noise Hand Book, 1, 3-26 Academic Press Florida	Noise Measurement	The chapter focuses on noise measurement, use of various capacitors, piezo-electric microphones and microphone performance in general. It also provides information on SLM its use and calibration, measurement and evaluation of time varying noise, followed by information in impulsive and impact noise. In the end, noise and loudness evaluation (weighting procedures) are dealt with.
Bowlby W (1986)	JASA, 80(3), 865- 868	A model for inser- tion loss degrada- tion for parallel highway noise barriers.	The study focuses on the use of a model for insertion loss degradation, for parallel highway noise barriers. The resultant model can accommodate any number of source lane/receivers, 3 vehicle categories and independently variable barrier heights and absorption coefficients. The model was validated against mathematical data received from other researchers and the present

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Greene, C.R (1987)	JASA, 82 (4) 1315-1324	Characteristics of oil industry dredge and drilling sounds in the Beaufort sea.	<p>model proved to be a good good predictor of insertion loss degradation.</p> <p>In the present study, sounds from drilling and dredging operations were measured in the shallow waters (< 50m) of the Canadian Beaufort sea during August of each year from 1980- 1984. Results are presented in graphs. Most energy from the sources was below 1000 Hz.</p> <p>Weakest sounds came from drillship performing logging operations. Strongest sound came from a hopper dredge underway with a damaged propeller. In shallow waters, the overall noise (20-1000 Hz band) from most drilling and dredging operations would be at level below the median ambient noise (99 dB) at ranges greater than 30 Km.</p>

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Paul, J. R (1987)	JASA, 81 (6) 1805-1823	Wheel/rail rolling noise I:Theoretical analysis.	In this particular study, comprehensive analytical model of the wayside noise generated by the railroad wheel rolling on straight track is presented. The method assumes that the small scale roughness on the running surfaces on the wheel and the rail is the primary mechanism for noise generation.
Paul, J.R (1987)	JASA, 81 (6) 1824-1832	Wheel/rail rolling noise II: Validation of the theory.	In this study, an analytical model for the prediction of wheel/rail noise is validated through comparison with measurements made using the state of the art car (SOAC) on a test track. Predictions of wheel and rail vibrations and wayside noise are seen to agree reasonably well with measurements, although areas of uncertainty remain. Model improvements to reduce discrepancies between theory and measurement are discussed.

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Sataloff, R.T (1987)	Occupational Hear- ing loss. 1, 437- 462, Marcel Dekker, New York.	Noise Measurement	The chapter on noise measurement provides information on the instruments such as, SLM, microphones, frequency analyzer, dosimeters. It also deals with impulse/impact noise measurement, magnetic field and vibration effects on noise measurement, tape recording of noise, graphic level recording, followed by information on instrument calibration, noise surveys, and noise specifications.
Dan, Y.M, (1988)	JASA, 83 (4) 1414-1419	Sound power emission in rreverberation chambers.	The present study is on sound power emission in reverberation chambers. Both pure tone and noise sources are considered. A statistical formula is derived for the power emission as a function of the space coordinates in the room. It is found that the power emission is maximum on the boundary and undulates about the free field

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Greene, C.R (1988)	JASA, 83 (6) 2246-2254	Characteristics of marine seismic survery sounds in the Beaufort sea.	<p>value when the source is moved toward the center of the room.</p> <p>This study probes into geophysical survey vessels, which emit very intense pulses of under water sound at intervals of several seconds; these noise pulses are sometime detectable at very long ranges. In the study, sound pulses from geophysical surveys were recorded in shallow parts of the Beaufort sea during August and September of 1980-1984. The water borne energy showed that the geometrical dispersion that results from the summation of many sound rays that are reflected between the surface and bottom; high frequency (> 500 Hz) arrived first, followed by gradually lower frequency. At short ranges, the signal energy was concentrated at frequencies below 100 Hz.</p>

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
LiDScomb, D.M (1988)	Hearing Conser- vation in Industry, schools and the military. 1, 21-34, Taylor and Francis, London.	Basic principles of sound measurement	This chapter focuses on basic principles of sound measurement. It provides background information on sound measurement the principles and procedures, instrumentation for noise measurement (including Type 2 SLM, calibrator, octave band analyzer). It also provides information on impulse/impact noise measuring equipment. Finally the chapter deals with integrating SLM, noise exposure dosimeters, input output capability procedure of noise measurement.
Sevbert, A.F (1.988) '	JASA, 83 (6) 2233-2239	Two sensor methods for the measurement of sound intensity and acoustic pro- perties in ducts.	In this paper a unified theoretical approach to the development of 2-sensor method is presented. Experimental data are presented showing the application of the decomposition theory to acoustic property determination, sound intensity measurements, and the

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Shirahatti, U.S.(1988)	JASA, 84 (2) 629-638	Finite difference approximation errors in sound intensity estimation of interfering sources.	estimation of sound pressure and particle velocity in a duct. In this paper finite approximation errors in sound intensity estimation of interfering sources is presented from the sample calculations (to show the effects of the microphone separation distance, the distance of measurement location from the source, etc.), it is observed that increasing the microphone spacing, increases the magnitude of the error level. Also, the geometrical arrangement of the sources has a considerable effect on the error levels.
Zeng, L.J. (1989)	JASA, 8 5 (1) 178-184	The calculation of sound power emission of sources in rever- beration chambers.	In this paper, the sound powers radiated by a monopole source and a dipole source in a reverberation chamber have been calculated, which shows that

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Hickllng, R (1990)	JASA, 87 (3) 1182-1191	Narrow band indoor mesurement of the sound power of a complex mechanical noise source.	the sound power emission of an ideal sound source is greater in reverberant than free field conditions. The smaller sound power radiation of an actual sound source in reverberant conditions has been shown to be due to the non-ideal internal resistance of the source.
Gannelli, G.B. (1991)	JASA, 90 (3) 1464-1468	Microprocessor based apparatus for direct evaluation of environmental impul- sive sounds.	The paper microprocessor based apparatus for direct evaluation of environmental impulsive sounds is studied on the basis of an improved formulation of the noise disturbance level. It was indicated that the time. LDI

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Jorasz, V (1991)	JASA, 90 (5) 2517-2520	The influence of atmospheric absorp- tion of loudness and the A-weighted sound pressure level.	and by a suitable digital Technique constant is a critical parameter in measuring the impulse component of a sound. The study should be extended toward the investigation of a subjective "cut off frequency" related to the noise fluctuation sensitivity.
Gupta, V.H. (1992)	JASA, 92 (5) 2716-2725	On numerical prediction of the acoustic source	In this paper, for a wide' range of temperatures and relative humidity variations, the source receiver distance at which atmospheric absorption becomes significant is studied. It is found that both criteria are nearly equivalent. For the majority of environmental noise sources, including motor vehicles and trains, air absorption cannot be neglected at distances beyond a few, hundred meters.
			In this paper, 2 new computational methods (load methods) for obtaining the

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Hellstrom P.A. (1992)	British Journal of Audiology 26 (5), 267- 270	<p data-bbox="929 456 1261 548">characteristics of an engine exhaust system.</p> <p data-bbox="929 716 1261 873">Noise levels from toys and recrea- tional activities for children and teenagers.</p>	<p data-bbox="1410 456 2015 678">source characteristics have been described. These are much simple, and computationally more economical than the complete time-domain simulation, which makes use of the method of characteristics.</p> <p data-bbox="1410 716 2015 873">In the present study noise levels from toys and recreational activities for children and teenagers were studied.</p> <p data-bbox="1410 911 2015 1326">Results indicate that many of the items emit sufficiently intense noise to be a source of NIHL in school age children. While the baby toys provided noise exposure within the limits of national regulations. they are most intense in a frequency range that corresponds to the resonance frequency of the external auditory canal "of very young children.</p>

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Kumar, S. (1992)	An Independent Project submitted as part fulfill- ment of First year M.Sc, (Sp. & Hg) to the University of Mysore, Mysore.	Guidelines for the Purchase of instru- ments for the speech and hearing centers p.76-84	The independent project includes a section on the instruments used for noise measurements : which includes microphone and its various types, SLM - purpose, types, its purchase, power supply, Level recorder, read out device, Electronic counter/ frequency counter, magnetic tape recorder, dosimeter, pocket sized dosimeter.
Laville, F (1992)	JASA, 91 (4) 2042-2055	A computer simulation of sound power deter- mination using 2- microphone sound intensity mesurement.	In this paper computer simulation of sound power determination was developed to reach a better understanding of the accuracy issue and to develop standards and the training of practioners and also to investigate the accuracy of sound power determination and use of indicators to assess this accuracy.

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Newby, H.A (1992)	Audiology, 6 340-348 Prentice Hall, New Jersey	Industrial Audiology	In the present chapter on industrial audiology, information is provided on the importance of accurate noise measurements. Various equipments used like SLM, noise analyzer, noise surveys. Finally information on recording the data obtained is provided. Active control of far field sound is analyzed.
Pan, J. (1992)	JASA, 91 (4) 2056-2066	Active control of far field sound radiated by a rectangular panel - a general analysis	In this analysis, the panel vibration, may be generated by either air borne sound or by structure borne vibrations, The physical mechanisms involved for different control sources are demonstrated analytically.
Bong-Kikim (1993)	JASA, 93 (5) 2726-2731	In-situ estimation of an acoustic source in an enclosure prediction of interior noise by using the principle of vibro acoustic reciprocity.	In this paper, with the obtained vibroacoustic transfer functions, the interior noise field in an enclosure is predicted. The predicted internal pressure in an enclosure is in good agreement with the measured internal

Author/Editor and Year	Journal Vol. No. Page No. Edn.Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapters content
Bradley, J.S (1993)	JASA, 93 (4) 1978-1986	Disturbance caused by residential air conditioner noise.	<p>pressure even in the presence of sound absorbers inside the enclosure.</p> <p>In this study on disturbance caused by residential air conditioner noise, field survey for 550 subjects was done. Questionnaire responses along with integrated air conditioner and ambient noise levels were obtained. Results showed that residents of noisier neighborhoods were less disturbed by neighbors air conditioner noise. Owners of air conditioners were less disturbed by their neighbors¹ air conditioner noise by an amount equal to an approximate 7 dBA difference in noise levels.</p>
Mishra, S (1994)	An Independent Project submitted in part fulfill- ment of first year M.Sc., (Sp.	A course on noise pollution - Audio and visual resource material, p.10-12	<p>In this project, different slides on noise measurement were prepared, Slide - 21 : Demonstated in set up.</p>

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	and Hg.) to the University of Mysore, Mysore.		Slide - 22 : Various equipments for noise measure- ments. Slide - 23 : Showed block diagrams of basic instrumentation. Slide - 24 Highlighted various accessories used with an instrumen- tation system.
Menon, S (1995)	An Independent Project sbumitted in part fulfill- ment of first year M.Sc., (Sp. and Hg), to the University of Mysore, Mysore.	Handouts on Noise Instrumentation	In this project handouts on noise instrumentation were prepared which includes information on Instrumentation for noise measurements; including SLM; Microphone, and noise dose meter. It also provides information on use of tape recorders and read out devices such as frequency analyzers; graphic level recorder, and oscilloscope.

NOISE CONTROL

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Abel, S.M. (1985)	Scandinavian Audiology 14 (3), 161-173	Signal detection in industrial noise, effects of noise, exposure history, hearing loss and the use of ear protection.	<p>In the present article, the detection of 1/3 octave signals superimposed on backgrounds of steady-state and intermittent industrial noise of 84 dB A was investigated for observers with normal hearing/moderate-severe NIHL.</p> <p>Variables in the study were age, noise exposure, history, configuration of the audiogram, wearing of insert hearing protectors.</p> <p>Results showed unprotected listeners a masked threshold of 80 dB A for 1/3 octave band centered at 3.15 KHz.</p> <p>Using hearing protectors Observers with normal hearing showed an advantage of 3 dB.</p>

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Mulholland K.A. (1985)	The Noise Hand- book, 1, 281- 301, Academic Press, Florida	Noise Control	<p>Those with NIHL - gave masked thresholds greater than 100 dB A.</p> <p>A model of the detection process was developed and evaluated.</p> <p>The chapter on noise control includes information on general noise control factors, noise control at the source including machinery design and specifications and vibration insulation and damping. This was followed by information on outdoor noise control and noise reduction along sound paths; and at receiver end, also in large rooms with many sources.</p>
Paul, J.R. (1985)	JASA, 78 (6) 2017-2033	Prediction of the effectiveness of noise control treatments in urban rail elevated structures	<p>The present paper, prediction of the effectiveness of noise control treatments is studied, The analytic model is found to be reasonably accurate, predicting an A-weighted sound level reduction of approximately 2 dB less than actually occurs. It is used to estimate the noise</p>

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Atwal, M.S (1987)	JASA, 82 (4) 1342-1348	Light aircraft sound transmission studies : Noise reduction model.	reduction achievable through a variety of noise reduction techniques. Resilient rail fasteners offer A-weighted sound level reduction of 10 dB. This is an experimental study on light aircraft sound transmission suggesting that cabin interior noise can be reduced by increasing cabin interior sound absorption. Validity of the model is also presented. The room equation model is presented, which were considered good enough to be used for preliminary acoustic design studies.
Hong, W.K.W (1987)	JASA, 81 (2) 376-388	The tight coupled monopole and the tight coupled tandem attenuator. Theoretical aspects and experi- mental attenuation in an air duct.	In the present study, active noise attenuators have been developed for use in an industrial air duct. Theory is presented for calculating attenuation, Results : The attenuators could provide significant attenuation

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Ivey, E.S (1987)	JASA, 81 (2) 370-375	Measuring helmet sound attenuation characteristics using acoustic manikin	in the presence of airflow and there was good agreement between the measured attenuation and the computed results, which validates the proposed theory and the model for the calculation of the attenuation from tight coupled systems. In the present paper, helmet sound attenuation characteristics were measured. The manikin results are compared to results of attenuation measurements made on human subjects wearing identical helmets. Procedures in ANSI S3.19-1974 were used in (REAT) real ear attention at threshold. Result : The manikin may be used in place of penal of human subjects to evaluate the hearing protection characteristics of military headgear.
Sataloff, R.T (1987)	Occupational Hearing loss 1, 463-484	Noise Control	In the present study, information is provided on reduction of radiated noise, vibration

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	Marcel Dekkar, New York.		isolation and reduction of noise away from source. It also provides information on noise barriers and enclosures (noise absorption) and specifications for purchasing equipment. Examples of noise control are also provided.
Ylikoski, J (1987)	Scandinavian Audiology, 16 (2), 85-88	The efficiency of earmuffs against impulse noise from firearms.	In the present study, efficiency of earmuffs against impulse noise from firearms is studied. The standard tests to determine attenuation values of hearing protectors cannot be applied to high intensity impulse noise from firearms, but the protectors should be evaluated under actual firing conditions, which was found to be good for pistol shots, moderate for rifle shots and very poor for cannon fire. The tested earmuffs gave only minimal protection against low frequency impulse energy.

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Bernhard, R.J (1988)	JASA, 83 (6) 2224-2232	A finite element procedure for design of cavity acoustical treatments	In this article, the finite element method is used to model the acoustic behavior. In such situations, additional calculations are made to compute the sensitivity of certain acoustical design objective functions. The article illustrates 2 examples of the application of the design sensitivity information to an automated design optimization.
Jiang, J.K (1988)	JASA, 83 (4) 1420-1430	A parametric study of acoustical fields of vibrating structures for noise control applications.	Aim : To obtain a better understanding of the influence of structural design parameters on acoustic near field and farfield. Studies have shown that design parameters (structural geometry, discontinuities, and boundary effects for a given vibration response) have considerable influence on acoustic fields. The studies have yielded some new observations in the application of the boundary element methods to noise control at the design stage.

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Lipscomb, D.M. (1988)	Hearing Conserva- tion in Industry schools and Military, 1, 83-92, Tayor and Francis, London.	Principles of Noise Control	The chapter provides background information on noise control and & principles of noise control. It also includes information on compound strategies for noise control and anecdotal examples of noise control activities.
Tarnow, V (1988)	JASA, 83 (6) 2240-2245	Attenuation of sound mufflers with absorption and lateral resonants.	In this study, a new method of calculating the effect of damping material placed in a sound muffler without flow and with arbitrary geometry is presented. Using plane-wave theory for the inlet & outlet tube, the damping effect of the muffler is calculated for two different fiber absorbers. A good agreement between experiments and calculated values is achieved for all experimental values.
Wassilieff C. (1988)	JASA, 84 (2) 645-650	Improving the noise reduction of picket barriers.	In the present study, improving the noise reductions of picket barriers is studied. A barrier diffraction theory incorporating the effect of partial sound transmission through a barrier of

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Dohner, J.L (1989)	JASA, 86 (3) 1053-1059	A method for active noise control using a source point model.	infinite size is developed. Methods for improving the performance of picket barrier resulting in enhanced noise reduction are demonstrated.
Esperance, A.L. (1989)	JASA, 86 (3) 1060-1064	Insertion loss of absorbent barriers on ground.	In this paper, an active noise control method is derived from a source point model and discrete optimal control theory. Theoretical results are given for a single detector microphone in the acoustic domain and for full- state feedback. Both the single measurement and full state feedback responses give satisfactory results in simulation and theory.
			In the present paper, a method for calculating the insertion loss (IL) of a thin barrier covered with absorbent material, either on the source side/on the receiver side/on both sides is presented. Validity was confirmed by comparing theoretical results with

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Franks, J.R (1989)	Hearing Instru- ments, 40 (11) 29-36	Noise reducing muffs for audiometry.	<p>experimental measurements for various geometrical configurations and screen boundary conditions.</p> <p>Results : When the angles of diffraction are significant, IL of hard barrier can be increased by covering one of its surfaces with an absorbent material. Also by covering both sides of the barrier, the increase of the IL due to the absorbent will double compared to a single covering.</p> <p>In this study, the use of a noise excluding muff during audiometric testing is examined. Real ear attenuation at threshold was determined. Earphone electroacoustic responses was also determined. The results from this study are preliminary and conclusions based upon these elements should be considered as tentative.</p>

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Giguere, C (1989)	JASA, 8 5 (3) 1197-1205	An acoustic head simulator for hearing protector evaluation II: measurements in steady state and impulse noise environments.	In this study, the attenuation characteristics of hearing protection devices (HPDs) were measured using a modular acoustic simulator. Results were also compared with real ear attenuation at threshold (REAT) data (ANSI S3.19-1974). In general, there is good agreement between the two methods, especially for earmuffs. Design improvements are proposed for earplugs.
Kuk, F.K. (1989)	Hearing Instru- ments, 40 (7) 20-26	Noise reduction circuitary in ITE instruments.	This paper investigated the effectiveness of 2 versions of a noise reduction circuit,; as implemented in an in-the-ear hearing instrument was evaluated in 10 subjects using a battery of evaluation measures which included a consonant word recognition test, subjective ratings of recorded speech materials, situational rating scales, paired comparison of preferences in daily lives and subjective comments.

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Kunov, H. (1989)	JASA, 85 (3) 1191-1196	An acoustic head simulator for hearing protector evaluation I: design and construction.	Purpose of the present study was to carry out hearing protector testing and research measurements. The design is based on the KEMAR manikin and therefore approximates the physical dimensions and the acoustical eardrum impedance of the median human adult. The bone conducted sounds are not mechanically reproduced in the design.
Snyder, S.D (1989)	JASA, 86 (1) 184-194	Active noise control in ducts : Some physical insights.	In this paper, a complete analytical model is developed for calculation of individual source power flows and total down stream power flow as a function of source strengths and relative phase angles for finite size sources. Results : The monopole system attenuates sound by suppression of primary source acoustic power output. In the dual secondary source system, the power is absorbed by secondary sources.

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Pirinchieva R. (1990)	JASA, 87 (5) 2109-2113	Model study of the sound propagation behind barriers of finite length.	In this paper, a scale model study of sound diffraction behind thin barriers of finite length on hard reflecting ground is presented. The measurements have been carried out in an anechoic chamber. Experimental curves of SPL distribution behind barriers of different lengths and heights have shown very good agreement with theoretically predicted values.
Prydz, R.A (1990)	JASA, 87 (4) 1597-1602	Transmission loss of a multilayer panel with internal tuned Helmholtz resonators.	In the present study, two different methods of analysis are presented for the transmission loss prediction of a multilayer panel with internal helmholtz resonators. Results : The use of tuned acoustic resonator's in a double wall structure can provide large increases in transmission loss at selected frequencies. Both theory and experiment show that for singly tuned resonator arrays the large transmission loss

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Royster, J.D (1990)	HCP-practical guidelines for success, 1, 33-43, Lewis publishers.	Engineering and administrative noise control	increases at the resonance frequency is accomplished by large decrease in the transmission loss over a limited frequency range above resonance frequency. The chapter provides information on engineering and administrative noise control by providing checklist for noise controls, engineering * controls, administrative controls and solving noise control problems using various methods. In the end sources of obtaining informa- tion on this topic are provided.
Suter, A.H (1990)	JASA, 87 (5) 2114-2117	Real-ear attenuation of earmuffs in normal hearing and hearing-impaired individuals.	This study assessed REAT for 10 normal hearing and 10 hearing- impaired subjects using a set of David Clark 10 A earmuffs. Testing procedures followed the specifications of ANSI S.12.6 19.84.

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Elliott, S.J (1991)	JASA, 90 (5) 2501-2512	Power output minimization and power absorption in the active control of sound.	Results : The hearing-impaired subjects received slightly more attenuation than the normal hearing subjects at all frequencies, but these differences were not statistically significant. In the present study, active minimization of total power output and active absorption of sound power are analyzed, using a general impedance based approach, for an array of controllable secondary sources and an array of original primary sources.
Sammeth, C.A (1991)	Ear and Hearing 12 (6) 116 S - 124 S.	A review of current noise reduction Hearing aid : Rationale, assump- tion and efficacy.	This article discusses issues and assumptions underlying noise reduction strategies, reviews categories of hearing aid in the market that are meant to alleviate listening difficulties in noise and outlines future needs in research and development in this area.

Author/Editor Year	Journal, Vol. No. page No. Edn.Publisher,	Name of the article/Title of the chapter	Abstract of the article/ chapter's content
Schomer, P.D (1991)	JASA, 89 (4) 1708-1713	Decibel annoyance reduction of low frequency blast attenuating windows.	<p>In the present study, the acoustical benefits of improved, blast noise reducing retrofit windows are determined using the method of paired comparison testing with panels of subjects.</p> <p>Results : The retrofit windows reduce the received indoor 'C' weighted SEL by 7 dB. The retrofit windows result in about a 14 dB improvement in terms of community response.</p>
Tokhi, M.O. (1991)	JASA, 90 (1) 334-345	The robust design of active noise control systems based on relative stability measures.	<p>In the present study, a design method for active noise control systems operating in a 3-dimensional non-dispersive propagation medium based on an analysis of relative stability of the inherent feed back loop is presented. Practical limitations in the design of the controller owing to the geometric configuration of the system are also discussed.</p>

Author/Editor Year	Journal, Vol. No. page No. Edn.Publishern,"	Name of the article/Title of the chapter	Abstract of the article/ chapter's content
Arlinger, S (1992)	Scandinavian Audiology 21 (2), 123-126	Speech recognition in noise when wearing amplitude sensitive ear-muffs	The present study was carried out on 15 young normal-hearing test subjects. ANOVA showed that speech recognition is significantly influenced by type of hearing protector and by noise spectrum. In general, subjects obtained better SRT in noise when wearing electronic amplitude-sensitive earmuffs than without muffs, opposite was true for passive amplitude sensitive and normal ear muffs.
Hellstrom P.A. (1992)	NIHL, 1, 401- 413, Mosby Year Book St.Louis	Objective methods for evaluating conventional non- liner and active hearing protector attenuation.	In the present study, the reliability of using an MMP technique (minimum microphone measuring technique for hearing protector attenuation) was studied. MMP method was found to be an alternative to the HT method for measuring hearing protector attenuation, especially the attenuation from non-linear hearing protectors and in real-ear situations.

Author/Editor Year	Journal, Vol. No. page No. Edn.Publishern,	Name of the article/Title of the chapter	Abstract of the article/ chapter's content
Jo, C.H. (1992)	JASA, 92 (3) 1461-1472	Active control of low-frequency sound transmission between rooms.	<p>In the study on active control of low frequency sound transmission between rooms, 3 active control strategies employed were :</p> <ol style="list-style-type: none">(1) Minimizing total acoustic potential energy in the source room using a secondary source in the source room.(2) Minimizing total acoustic potentice energy in receiving room by using secondary source in receiving room.(3) Using secondary acoustic source in the source room. <p>The third strategy was found most useful.</p>
Kirkwood,D.H (1992)	Hearing Journal 45 (3), 13-23	Washington starts waking up to hazards of recrea- tional noise.	<p>In the decade since the Federal Government eliminated funding for the office of Noise Abatement and Control, the sounds of firearms, personal stereos, amplified music, chain saws and etc. have only grown louder, which has</p>

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			<p>increased the threat of NIHL. Now, prompted by concerns in the Hearing Health Care Community, Washington has begun to reconsider its part policy of ignoring the sounds of leisure, and take measures in this particular area.</p>
Naghshineh, K (1992)	JASA, 92 (2) 841-855	Material tailoring of structures to achieve a minimum radiation condition	<p>In the present study, the weak radiator structure response is found to exhibit 3 important characteristics : that is - It shows lower amplitude near its boundaries, exhibits lower wave number content in the supersonic region and distribution of surface acoustic intensity on the weak radiator structure is very small at all the points along its surface.</p>
Naghshineh, K (1992)	JASA, 92 (2) 856-870	A design method for achieving weak radiator structures using active vibration control.	<p>A design method, for achieving weak radiator structures using active vibration control is constructed. The controlled structures exhibit lower response</p>

Author/Editor Year	Journal, Vol. No. page No. Edn.Publishern,	Name of the article/Title of the chapter	Abstract of the article/ chapter's content
Newby, H.A. (1992)	Audiology, 6, 369-376, Prentice Hall, New Jersey.	Industrial Audiology	<p>amplitudes at frequencies near structural resonances. Also, the controlled structural response amplitude decreases near the boundaries. Finally, the wave number content of the controlled structural response shifts from supersonic to subsonic regions.</p>
Nixon, C.W. (1992)	Noise Induced Hearing Loss 1, 389-400 Mosby Yearbook St. Louis	Performance of active noise reduction (ANR) headsets.	<p>In this paper, ANR headset technology under laboratory conditions is examined which is found to be moving rapidly toward production. Applications of this technology are wide from military application to entertainment.</p>

Author/Editor Year	Journal, Vol. No. page No. Edn.Publishern,	Name of the article/Title of the chapter	Abstract of; the article/ chapter's content
Orduna, F (1992)	JASA, 91 (5) 2740-2747	An adaptive controller for the active absorption of sound.	In the present study, a simple experimental set-up is used to obtain an absorbing termination which is shown to work with periodic, random and transient input signals. The system can also be generalized in order to achieve other termination impedances.
Van Der Venne M.J. (1992)	Noise Induced Hearing Loss. 1, 531-534 Mosby Yearbook St. Louis	Control of occupa- tional noise in EEC.	The chapter on control of occupational noise in EEC provides information on controlling risk due to noise, followed by information on directives on equipment and the noise at work.
Zander, A.C (1992)	JASA, 92 (1) 244-257	Active control of higher order acoustic modes in ducts.	From the study on active control of higher order acoustic modes inducts it was found that reduction in total acoustic power is dependent upon the relative location of the primary and control sources. The reduction in total acoustic power was found to be maximum at. axial source

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Cunefare K.A. (1993)	JASA, 93 (5) 2732-2739	Active control of point acoustic sources in half space.	<p>separation distances correspond- ing to multiples of half- wave lengths of the propagating modes.</p> <p>This paper examines the impact of the presence of a nearby reflec- tive plane on the active control of sound radiated by a number of point sources.</p> <p>The orientation of the noise sources and the control sources with respect to each other and to plane significantly influence the control.</p>
Johnson, M.E (1993)	JASA, 93 (3) 1453-1459	Measurement of acoustic power output in the active control of sound.	<p>In this article, the physical consequences of minimizing total power output are discussed, Method was verified by experiments, in which acoustic power output of two loudspeakers acting as the primary and secondary sources were monitored, with the sum of squared pressures at 32 microphone locations in the enclosure.</p>

Author/Editor Year	Journal, Vol. No. page No. Edn.Publishern,	Name of the article/Title of the chapter	Abstract of the article/ chapter's content
Lam, Y.W (1993)	JASA, 93 (3) 1445-1452	A simple method for accurate prediction of finite barrier insertion loss.	In this paper, a simple method for accurate prediction of finite barrier insertion loss is studied. Method is based on geometric theory of minimum diffracted paths. Extensive model experiments are used to verify this relatively simple model, which is fairly accurate. It represents a major improvement on Maekawa's energy summation method for octave band finite barrier calculations.
Naghshineh,K (1993)	JASA, 93 (5) 2740-2752	Active control of sound power using acoustic basis functions as surface velocity filters.	In this paper, active control of sound power using acoustic basis functions as surface velocity filters is studied. The minimization of radiated power results in a controlled beam response that contains much lower supersonic wave number content than that of uncontrolled beam response. This also provides a rational procedure for selecting the number placement of actuators and

Author/Editor Year	Journal, Vol. No. page No. Edn.Publishern,	Name of the article/Title of the chapter	Abstract of the article/ chapter's content
Omoto, A. (1993)	JASA, 94 (4) 2173-2180	A study of an actively controlled noise barrier.	sensors on a structure for effective control. The paper describes an application of active control of sound diffracted by barrier, the basis for application cancellation of sound pressure at the diffraction edge. Numerical stimulation was used for investigation. Results : Control is stable than 1/2 of the wave length and attenuation is greatest when secondary are nearest the primary sources.
Ruppel, T.H (1993)	JASA, 93 (4) 1970-1977	Cancellation of air-borne acoustic plane waves obliquely incident upon a plarar phased array of active surface elements.	In this paper the approach of active reduction of sound reflected off an object is used to control the sound in a given region with destructive interference from a set of vocalized sources whose strengths, phases and locations which can be adjusted. The paper reports on the construction and

Author/Editor Year	Journal, Vol. No. page No. Edn.Publishern,	Name of the article/Title of the chapter	Abstract of the article/ chapter's content
Zander, A.C (1993)	JASA, 94 (2) 841-848	A comparison of error sensor strategies in the active control of duct noise.	testing of a planar active surface capable of canceling the reflections of obliquely incident acoustic plane waves. The technique is also applicable in controlling low frequency. In this paper the error sensor strategies were analyzed for both plane wave and multimode sound fields and for a range of duct termination conditions. The criterion used to assess the error sensor strategies is the minimization of the sound field downstream of the control sources.
In Soo.Kim, (1994)	JASA, 95 (6) 3379-3389	Constraint filtered -X and filtered -u mean square algorithms for active control of noise in ducts.	This paper discusses the dependence of the convergence rate on the acoustic error path in these popular algorithms, and introduces new algorithms which increases the convergence region regardless of the time delay in the acoustic error path. Performances of the new LMS algorithms are presented in

Author/Editor Year	Journal, Vol. No. page No. Edn.Publishern,	Name of the article/Title of the chapter	Abstract of the article/ chapter's content
Mishra, S (1994)	An Independent Project submitted as part fulfill- ment of first year M.Sc. (Sp. & Hg.) to the University of Mysore, Mysore.	A course on noise pollution-audio and visual resource material, P.14-15.	<p>comparison with those by the conventional algorithms based on computer simulations.</p> <p>In this project on noise pollution slides are used to provide information on the following slide 30 - crash courses in noise control and slide 31 - the information on various ear protective deices, i.e. carrying out noise control at receiver end.</p>
Okamoti, Y (1994)	JASA, 96 (3) 1533-1538	Active noise control in ducts via side branch resonators.	<p>The analysis used in this paper, focuses on how to minimize the secondary source strength (volume velocity) necessary for active noise control.</p> <p>Conclusion : By using a resonator with an end mounted high impedance secondary source, it is possible to reduce the required source strength compared to the case with the secondary source directly mounted on the duct wall.</p>

Author/Editor Year	Journal, Vol. No. page No. Edn.Publishern,	Name of the article/Title of the chapter	Abstract of the article/ chapter's content
Yang, T.C. (1994)	JASA, 95 (6) 3390-3399	Constrained optimization of active noise control system in enclosures.	In this study, the boundary method is employed to evaluate the sound field in enclosures, The optimal location of the controller is found to change with varied upper bounds of the strength of the secondary source.
Fahline, J.B. (1995)	JASA, 97 (4) 2249-2254	Active control of the sound radiated by a vibrating body using only a layer of simple sources.	In this paper, source layer is assumed to consist of simple sources only. It is shown that complete control can be achieved when the simple source layer is just outside the boundary surface of the vibrating body.
Wuzhen, (1995)	JASA, 97 (2) 1078-1087	Active absorption of acoustic waves using state space model and optional control theory.	The work presented in this paper regards modeling, synthesis and simulation of an active acoustic field control system (which is supposed to absorb an incident sound energy) under state space feedback control approach. Based on the state space model, a feasible feedback control algorithm is synthesized using an optimal control theory (LQ4).

Author/Editor Year	Journal, Vol. No. page No. Edn.Publishern,	Name of the article/Title of the chapter	Abstract of the article/ chapter's content
Vlikoski, M.E. (1995)	Scandinavian Audiology, 24 (1), 3-12	Physical characte- ristics of gunfire impulse noise and its attenuation by hearing protectors.	<p>In the present study, the peak SPL, spreading of pressure wave and other physical characteristics of the impulse noise from weapons were studied in actual shooting conditions for assessment of gunfire noise exposure. All kinds of earmuffs appeared to be ineffective against impulses from large caliber weapons with /energy content at very low frequencies.</p> <p>Therefore the combined use of earmuffs and earplugs is recommended for the most noise operations.</p>

HEARING CONSERVATION PROGRAMS

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
Dempsey, J.J (1985)	Ear and Hearing 6 (3), 159-160	Clinical note: 6000 Hz. as an early indicator of NIHL.	In a hearing survey, 76 physical plant employees of a major teaching hospital were evaluated audiologically, who were exposed to high intensity levels of noise in certain work locations. Following a quiet period of at least 14 hours, pure tone thresholds were obtained from 250-8000 Hz and for 3000-6000 Hz. Results : The need for including the interoctave frequency at 6000 Hz in routine audiological testing is confirmed in order to identify hearing loss earlier.
Fidell, S. (1985)	JASA, 77 (3) 1054-1068	Aircraft noise annoyance at 3 jt. air carrier and general aviation.	The results of social surveys conducted near 3 airports are presented and discussed : (1) Nature of noise exposure and community reaction at smaller airports may differ from that at larger airports.

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
Newby, H.A. (1985)	Audiology, 6, 294-357, Prentice Hall, New Jersey	Industrial Audiology	<p>(2) Survey techniques are capable of identifying changes in annoyance associated with numerically small changes in noise exposure.</p> <p>(3) Changes in prevalence of annoyance are causally produced by changes in noise exposure, and</p> <p>(4) Changes in annoyance associated with changes in exposure vary with time.</p> <p>The chapter provides information on - NIHL - in general - Noise and the medico legal problem History and provisions of the law in New York. Noise measurement of SLM, noise analyzers, conducting a noise survey. DRC -what is it? Interference of noise with communication, other effects</p>

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
Tempest, W (1985)	The Noise Hand- book, 1, 182-194 Academic Press Florida.	Noise in Industry	of noise (physiological and psychological). The control of industrial noise. Industrial HCP Importance of reference audiogram, monitoring audio- metry, personnel requirements Noise susceptibility Noise pollution.
Hemalatha, B (1986)	An Independent Project submitted in part fulfill- ment of First year M.Sc., (Sp. & Hg.), to the University of Mysore, Mysore.	Prvention of Hearing Loss for Public Education.	The chapter deals with noise survey, noise control, hearing protection, industrial audiometry, organization of a HCP and legal aspects related to noise. Suggestions through pictures are provided for housewives for reducing noise from house hold appliances, from continuous recreational noise and sudden loud sound from gun as well as automobile sound.

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
Browning, G (1986)	Clinical Otology and Audiology,1, 85-91, Butter Worth & Co. Ltd.	Progressive sensori- neural hearing- impairment.	The chapter throws light on noise exposure, Government compensation for noise, armed forces and common law, about employment in noisy environment and exposure to gunfire, social exposure history regarding presence and degree of exposure and the use of ear protection. It also deals with calculation of noise emission level for compensation purposes.
Sreedevi, H.S. (1986)	An Independent Project submitted in part fulfill- ment of First Year, M.Sc., (Sp. & Hg.) to the University of Mysore, Mysore.	Community noise survey in Mysore City.	Aim : To find difference in noise items perceived by males and females, and by different age groups, by different occupational groups and by different activities of above categories of people. Questionnaires were developed. Results were analyzed and following facts were concluded : (1) Noise in environment made by man and vehicles interfered with relaxation, communication and daily routine activities.

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
Fields, J.M. (1987)	JASA, 82 (2), 479-492.	Community reactions to helicopter noise: results from an experimental study.	<p>(2) Most annoyance caused by noises of people and vehicular noises followed by noise from public address system. Noise from domestic appliances was perceived as less annoying.</p> <p>(3) Also annoyance and interference with different activities being affected was dependent on the type of activity at hand and also the kind of noise source. It was related to age, sex, occupation.</p> <p>The article provides information of the effects of maximum noise level and number of noise events on helicopter noise annoyance which were found to be consistent with the principles contained in Leq-based noise indices. The effect of duration of noise events was also found to be consistent with Leq - based indices.</p>

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of. the article/title of the Chapter	Abstract of the article/ chapters content
Lass, N.J. (1987)	Hearing Journal 40 (11), 32-40	Hearing Conservation Program for Junior High School.	<p>Aim : was to determine whether providing information in a classroom setting would alter knowledge, attitudes and behavior of junior-high-school students regarding hearing conservation. Detailed analysis and comparison between pre participation and post-participation questionnaires showed significant results.</p> <p>Conclusion : Students with heightened awareness of the effect of noise on hearing would have less chance of acquiring NIHL in school-age population.</p>
Sataloff, R.T. (1987)	Occupational Hearing loss 1, 623-634, Marcel Dekkar New York.	Hearing Conserva- tion in Industry.	<p>The chapter provides information on the following issues :</p> <p>What is HCP? How does "team work" in HCP work? Important features of HCP Use of hearing protctors physician's responsibility in occupational hearing loss, special problems encountered in occupational hearing loss.</p>

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
Sataloff, R.T. (1987)	Occupational Hearing Loss 1, 635-654, Marcel Dekkar, New York.	Establishing a HCP	<p>The chapter provides information on steps for establishing a HCP.</p> <ul style="list-style-type: none"> - Noise measurement and control - Hearing conservation education - Record keeping - Enforcement of mandatory program - Management of complaints from the wearing of hearing protection - Follow up - Audiometric testing - Scheduling hearing tests - The otologic history - Audiogram evaluating procedures and hearing test equipment - Sample forms - Legal requirements. - Hearing consultant and reference material.
Hetu, R (1988)	British Journal of Audiology 22 (4),251-264	Quantitative analysis of the handicap asso- ciated with occupational hearing loss.	<p>An analytic study of handicap associated with hearing loss. Interview is used and results were classified as disabilities, disadvantages and adjustments. It is illustrated, that spontaneous adjustment can in themselves be sources of disadvantages.</p>

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of_the article/Title of the Chapter	Abstract of the article/ chapters content
Job, R.F.S. (1988)	JASA, 83 (3) 991-1001.	Community response to noise : A review of factors influencing the relationship between noise exposure and reaction.	Implication for rehabilitation in terms of the means to facilitate optimal adjustment to disabilities is also discussed. The article deals with factors influencing relationship between noise exposure and reaction. The review indicated remarkably similar results across different nationalities with different measurement techniques, Variables, such as attitude to noise source and sensitivity to noise, account for more variations in reaction than noise exposure.
Lanade, N.M. (1988)	Ear and Hearing 9 (5), 248-255.	Occupational Hear- ing Loss - An aural rehabilitation program for workers and their spouses, characteristics of the program and target group/ participant and non participant.	This particular study showed that the main factors leading to enrollment in the HCP program were the acknowledgment of moderate/severe hearing handicap and the recognition of the need for help. It also highlights awareness as the need of the time that would increase enrollment in the rehabilitation program.

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
Lipscomb D.M. (1988)	Hearing Conserva- tion in industry, schools, and the military 1, 81- 308, Taylor and Francis, London.	Components of an effective HCP	<p>The chapter provides information on components of effective HCP principles of noise control, hearing testing and interpretation and management of hearing conservation data, use of hearing protectors, information on employee education program, summary of a comprehensive HCP.</p> <p>It also highlights related hearing conservation activities in educational setting, in the military and in community. The last section deals with the business of hearing conservation, managing it, equipping a HCP, shaping managerial attitudes for hearing conservation.</p> <p>Appendix A: Information on Department of Labor Occupational Noise exposure standard.</p> <p>Appendix B: Information on Walsh Healey Noise Standard.</p>

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
Radhika, S (1988)	An Independent Project submitted in part fulfill- ment of First Year M.Sc., (Sp. and Hg.) to the University of Mysore, Mysore.	High Frequency Audiometry p.93-95	The chapter provides information on the previous studies related to high frequency audiometry. Conclusion : The high frequency audiogram provides conclusive evidence as to whether/not there is complete destruction of the high frequency range/only a broad dip at about 4-6 KHz. This may/may not be useful in early diagnosis of NIHL.
Berger, E.H (1989)	JASA, 85 (4) 1590-1594	Is it necessary to measure hearing protector attenua- tion at 3.15 and 6.3 KHz?	The results from the present study showed that there is little value in measuring real-ear attenuation in a diffuse sound field at the frequencies of 3.15 and 6.3 KHz. For application in which hearing protector attenuation data are normally utilized.
Bhat, S.K. (1989)	An Independent Project as part fulfillment of First Year M.Sc. (Sp. & Hg.) to	Hearing Conservation Program.	This independent project provides the following information on HCP. Definitions, steps and purpose of HCP, carrying out noise survey and noise measurement.

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
	the University of Mysore, Mysore		Importance of DRC, team members in a HCP and administrative and engineering control of noise. It also provides information on EPDs. Misconceptions in HCP. Finally, summary is provided in the end of the chapter.
Franks, J.R (1989)	Ear and Hering 10 (5), 273-280	Analysis of HCP data base-factors other than work place noise.	This study probed into factors affecting HCP. The factors included hearing levels, employee age and sex, occupational and non-occupational noise exposure histories and medical history, out of which all were found to be associated with standard threshold shift except for occupational noise.
Bebout, J.M (1990)	Hearing Journal 43 (3), 11-17.	Industrial Hearing Conservation : Mixed outlook for the 90s.	In this article mixed outlooks for the 90s is presented as far as industrial hearing conservation is concerned. Various agencies are competing to get Government attention. Areas like mobile education, focusing on impulse noise regulation need to be looked into.

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
Buchta, E. (1990)	JASA, 88 (3) 1459-1467.	A field survey on annoyance caused by sounds from small firearms.	A field survey on annoyance caused by sounds from small firearms was carried out. Dose - response relationships were determined for about 400 randomly selected residents around 2 military and 3 civil shooting sites. Extensive sound measurements with different time- weightings here carried out. Conclusion: At low and relatively moderate levels, the A-weighted Leg of shooting sound is about 13 dB lower than that of equally annoying road-traffic sound.
Asha, R.M. (1990)	An Independent Project submittd as part fulfill- ment of First Year M.Sc., (Sp. & Hg.) to the University of Mysore, Mysore.	Industrial Noise and its consequences - Employers aware- ness	Aim : This project, surveys the knowledge of employers of various industries about noise in their respective industries. Conclusion : The study highlights the fact that though there is an increased awareness about industrial noise and its consequences, further education is essential about hearing conservation and employers need

Author/Editor and Year	Journal, Vol. No. Page No. Edn. Publisher	Name of the article/Title of the Chapter	Abstract of the article/ chapters content
Royster, J.D (1990)	HCP-Practical Guidelines for success, Lewis Publishers		<p>to be given adequate information about EPD and sources of their procurement.</p> <p>In this particular book on practical guidelines for success of HCP, the following sections are dealt with :</p> <ol style="list-style-type: none"> 1) Effective HCPs ; Benefits and strategies P.No.1-5. 2) Organizing your HCP (7-13) - 5 phases of HCP 3) Education and motivation in carrying out HCP (15-22) 4) Sound survey (23-30) 5) Noise Control (31-44) 6) Hearing Protection (45-60) 7) Audiometric evaluation (61-75) 8) Making sure HCP works (77-86) 9) Reducing compensation Liability for NIHL (87-113) 10) Resources for information industrial HCP (115-116)
Arlinger, S (1991)	Manual of practical audio- metry, 3, 206-	Audiometry in occupational Health	The chapter throws light on the various goals of HCP, staff involved, test methods and test

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
	211, Whurr Publishers Ltd. London.		site equipments used interval between repeated audiometric testing and selection criteria for referrals.
Getty, L (1991)	Audiology, 30(6) 317-329	Development of a rehabilitation program for people affected with occupational hear- ing loss. Results from group inter- vention with 48 workers and their spouses.	Results from the present study showed that the workers judged their hearing problem as being significantly less severe after their participation in the session. Although, they were more conscious of their hearing difficulties they agreed on being much more confident in dealing with them. Different steps were taken by them to facilitate communication.
Hetu, R. (1991)	Audiology, 30(6) 305-316	Development of a rehabilitation program for people affected with occupational hear- ing loss: 1, A new paradigm.	This chapter provides definition of paradigm for rehabilitation program, noise as a health problem, followed by determining precursors of the problem in hierarchy. This paradigm/ was used in the development of rehabilitation program for people affected with occupational hearing loss.

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Berger, E.H. (1992)	Noise Induced Hearing Loss 1, 377-388 Mosby Yearbook St.Louis	Current issues in Hearing Protection	The chapter deals with current issues in hearing protection which are - - HPDs of better sound quality - Strategies for training and motivating clients with NIHL - Real-world attenuation of noise - More representative laboratory methods - Quantitative fit test - Audiometric database analysis techniques - Effects of HPDs, communication - Recreational earphones and personal music systems - International standards.
Makarewicz,R (1992)	JASA, 91 (3) 1500-1503	Barrier attenuation in terms of A- weighted sound exposure level.	This paper considers the traffic noise attenuation produced by a very long barrier, which is described in terms of A-weighted sound exposure level. This allows prediction of the A- weighted sound exposure level and the time-average, A-weighted sound level behind the barrier.

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of_the article/Title of the Chapter	Abstract of the article/ Chapter's content
Newby, H.A. (1992)	Audiology, 6, 377-383, , Prentice Hall New Jersey	Industrial Audiology	The chapter first provides an introduction on industrial HCP, use of baseline audiogram in industrial HCP followed by importance of monitoring audiometry and personnel requirements for HCP.
Rajkumar, T (1992)	An Independent Project submitted as part fulfill- ment of First Year M.Sc., (Sp. & Hg.) to the University of Mysore, Mysore.	Audio cassette on Noise.	The audio cassette provides an Introduction about noise in general, followed by information from audiologist regarding NIHL. It also deals with methods of controlling noise. Finally few suggestions regarding HCP are provided.
Hemalatha, B (1993)	An Independent Project submitted as part fulfill- ment of First Year M.Sc., (Sp. & Hg.) to the University of Mysore, Mysore.	Audio Cassette on HCP	The audiocassette first provides an introduction about HCP followed by definitions of conservation and role and purpose of HCP. It also deals with benefits of HCP - primary and secondary. It provides information, indication, features, phases and desired characteristics of HCP, personnel involved; external influences on

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Christiahsson B.A.C (1993)	Scandinavian Audiology, 22 (3), 147-152.	An Audiological Survey of officers at an infantry regiment.	<p>HCP. Finally, it deals with organization of HCP by OSHA 1979. The conclusion was planning and implementing a HCP is very essential.</p> <p>The present article is a study on survey of 204 officers who were exposed to impulse noise from firearms with peak levels upto 185 dB (SPL).</p> <p>Results were summarized in 4 age groups, all of which showed significant hearing loss compared to ISO-1999 (1990) database A of a non-noise exposed male population. Even officers who claimed regular use of hearing protectors during their entire military career showed significant hearing losses.</p>
Hetu, R (1993)	The Volta Review 195 (4), 391-402	Overcoming difficul- ties experienced in the work place by employees with	A study for overcoming difficulties by occupational hearing handicap was carried out. Based on a series of studies

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
		occupational hearing loss.	using questionnaire and interviews, the effects of occupational hearing loss are examined, with a specific focus on the experience of employees with his adult-onset impairment in the work place. It is shown that, coping with these effects is governed by threat to self image created by hearing-impairment. Hearing loss is concealed and demanding situations are avoided.
Razdan, S (1993)	An Independent Project submitted as part fulfillment of First Year M.Sc., (Sp. & Hg.) to the University of Mysore, Mysore.	Video Script for HCP.	The video script first provides an introduction about hearing conservation program and its 5 phases. It also deals with desired characteristics of HCP, personnel involvement and external influence on HCP.
Sataloff, R.T. (1993)	Hearing loss, 3, 371-402, Marcel Dekkar, New York.	Occupational Hearing loss	In the chapter on occupational hearing loss information on EPDs is provided which are necessary for noise control at the receiver's end. Earmuffs,

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Smooenburg G.F. (1993)	Audiology, 32(6) 333-343.	Risk of NIHL following exposure to Chinese firecrackers.	earplugs, canal caps are included. Also the need for professional guidance and individual fitting is stressed. This chapter deals with the risk of NIHL following exposure to Chinese fire crackers. Fire crackers produce sound impulses reaching peak levels measured at the ear sometimes in excess of .160 dB when fired at 2 m distance. Thus, these sound levels are potentially hazardous to the ear.
Suma T. (1993)	An Independent Project submitted as part fulfill- ment of First Year M.Sc., (Sp. & Hg.), to the University of Mysore, Mysore.	Community Noise Survey - A Report	Aim : To see the variability regarding the effects of noise, across age groups and with different education and does noise affect our daily living activities. Questionnaire was developed to collect information. Conclusion : Effects of noise varied with different occupations depending upon their working environment.

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Hetu, R. (1994)	British Journal of Audiology 28 (6), 313-325	Attitudes towards co-workers affected by occupational hearing loss II: Focus group inter- view.	<p>Doctors, teachers and housewives found noise by people most disturbing.</p> <p>Engineers, scientists and factory workers found noise by vehicles to be most disturbing.</p> <p>There was a general opinion regarding noise by natural phenomenon to be the least disturbing to the ears.</p>
Hetu, R (1994)	British Journal of Communication	Attitudes towards Co-workers affected	<p>The study was carried out on attitudes towards co-workers affected with occupational hearing.</p> <p>Results - showed that the strong fear of being stigmatized leads those affected by occupational hearing loss to conceal its manifestation and consequences in their every day life.</p> <p>The present study was carried to study attitudes towards co-</p>

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's -content
	Disorders, 28 (6) 299-312.	by occupational hearing loss. I. Questionnaire development and enquiry.	workers affected by occupational hearing loss. A questionnaire has been designed to characterize attitudes that contribute to psychological social disadvantage. Majority of workers are not inclined to adopt types of conduct that favour communication with people having occupational hearing loss. The findings are useful for development of an awareness program on the consequence of occupational hearing loss.
Melnick, W. (1994)	Handbook of Clinical Audiology, 4 534-552 Williams and Wilkins.	Industrial Hearing Conservation	The chapter provides the following information on industrial hearing conservation (1) the legal basis (2) effects of noise on hearing (TTS, PTS), DRC - its importance and HCP - in general. It also deals with noise survey and noise control, and measurement of hearing. It also deals with issues such as audiometric calibration, test environment, test personnel.' The

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of_the article/Title of the Chapter	Abstract of the article/ Chapter's content
Mishra, S (1994)	An Independent Project submitted as part fullfill- ment of First Year M.Sc., (Sp. & Hg.) to the University of Mysore, Mysore.	A course on noise pollution Audio and visual resource material.	other issues are hearing protection, educational component, record keeping, and the role of audiologist in industrial HCP. In the present project work on noise pollution. Slide 32 projects schematic layout of a HCP. The slide contains information on : Noise measurement, noise control, personal hearing protection, information on motivation of clients, hearing tests, documentation.
Yost, W.A. (1994)	Fundamentals of hearing, 3, 194- 208, Academic Press, San Diego.	Noise	The chapter on noise deals with effects of noise on the 'inner ear, hearing loss due to noise exposure, parameters of exposure stimuli that affect hearing loss, recovery, relation between hearing loss and inner ear damage, effects of environmental hearing loss from environmental noises.

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
Rout, A. (1995)	An Independent Project submitted as part fulfill- ment of First Year M.Sc., (Sp. & Hg.) to the University of Mysore, Mysore.	Efficacy of audio- visuals on hearing loss : A Field study	Aim : To evaluate the efficacy of 2 audiological materials, one a course in noise pollution - a set of slides with pre-recorded audio cassette explaining the cause and effect of noise pollution and ways to control it. The efficacy were judged by comparing the pre and post exposure scores on target groups. Statistically analysis to find out significance of variance was carried out. Conclusion : Subjects had gained a significant amount of knowledge on the audio visual after watching it.
Hall, J.W (1995)	Hearing Journal 48 (3), 37-45	Protecting the professional ear conservation strategies and devices.	The chapter provides information on protecting the professional ear from sound exposure in music and in industry, followed importance of hearing assessment, making case reports and employing strategies for hearing conservation.

Author/Editor and Year	Journal, Vol No. Page No. Edn., Publisher	Name of the article/Title of the Chapter	Abstract of the article/ Chapter's content
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Conclusions was that by employing various strategies and devices, the professional ear could be protected from the hazardous effects of noise.

SUMMARY, CONCLUSION AND IMPLICATIONS

The aim of the present Independent Project was to "tie together" the information obtained from various journal articles as well as books from 1985-1995, thereby, updating the information in selected areas of noise.

Moreover, the present bibliography being an annotated one, provides, in brief, the abstract/content of the published material.

There were four major categories selected in the wide area of noise. They being **Damage Risk Criteria, Noise Measurement, Noise Control and Hearing Conservation Program.** The published material, which included information from more than 200 **journal** articles and books, was listed under one of the **four categories** chronologically and with in each year alphabetically to make easier the task of searching through literature between 1985-1995.

Thus, in the above described way, the present piece of work was compiled in the form of an annotated bibliography.

CONCLUSION

The present work i.e. An Annotated Bibliography on Publications on Noise : 1985-1995, would thus provide consolidated information on selected areas of noise from 1985-1995.

IMPLICATIONS

The implications of the present study:

The present work is carried out to consolidate the information in selected areas of noise from 1985-1995.

- This could be used by one and all involved in the battle against the preventable form of hearing loss, which is, NOISE INDUCED HEARING LOSS.
- It could be used for understanding the kind of experiments performed, procedure followed etc.
- It could also be used for observing the changing trends in studies carried out in the domain of noise.
- It could be used for carrying out detailed review of literature in this area.
- And finally also for carrying out further research on noise.

BIBLIOGRAPHY

- Abel, S.M., Kunor, H., Pichora, F.M.K., Alberti, P.W. (1985). Signal detection in industrial noise, effects of noise exposure history, hearing loss and the use of ear protection. *Scandinavian Audiology*, 14 (3), 161-173.
- Alberti, P.W. (1987). Occupational hearing loss in Canada. Sataloff, R.T., and Sataloff, J. (1), 597-604, **Occupational Hearing Loss**. Marcel Dekkar, New York.
- Arlinger, S. (1991). Audiometry in occupational health. 206-211. *Manual of practical audiometry* (2), Whurr Publishers, London.
- Arlinger, S. (1992). Speech recognition in noise when wearing amplitude sensitive ear-muffs. *Scandinavian Audiology*, 21(2), 123-126.
- Asha, R.M. (1990). Industrial noise and its consequences employers awareness. An Independent Project in part fulfillment of first year M.Sc, (Speech and Hearing) to the University of Mysore, Mysore.
- Atwal, M.S., Heitman, K.E., Crocker, M.J. (1987). Light aircraft sound transmission studies : Noise reduction model. *Journal of Acoustical Society of America*, 82 (4), 1342-1348.
- Bebout, J.M. (1990). Industrial hearing conservation : Mixed outlook for the 90s. *Hearing Journal*, 43 (3), 11-17.
- Berger, E.H. (1992). Current issues in hearing protection. Dancer, A.L., Henderson, D. (1) 377-388, **Noise Induced Hearing Loss**, Mosby Year book, St.Louis.
- Berger, E.H., Rowland, L.D. (1989). Is it necessary to measure hearing protector attenuation at 3.15 and 6.3 KHz. *Journal of Acoustical Society of America*, 85(4), 1590-1594.

- Bernhard, R.J., Takeo, S. (1988). A finite element procedure for design of cavity acoustical treatments. *Journal of Acoustical Society of America*, 83(6), 2224-2332.
- Bhat Suresh Kumar (1989). Hearing Conservation Program. An Independent Project submitted in part fulfilment of first year M.Sc, (Sp. & Hg) to the University of Mysore, Mysore.
- Bloom, S. (1995). Recreational Audiology : Is it blue sky or a golden opportunity? *Hearing Journal*, 48(5), 13-22.
- Bong, K.K., Jeong, G.I. (1993). In situ estimation of an acoustic source in an enclosure prediction of interior noise by using the principle of vibroacoustic reciprocity. *Journal of Acoustical Society of America*, 93(5), 2726-2731.
- Bowlby, W., Cohn, L.F. (1986). A model for insertion loss degradation for parallel highway noise barriers. *Journal of Acoustical Society of America*, 80 (3), 865-868.
- Bradley, J.S. (1993). Disturbance caused by residential air conditioner noise. *Journal of Acoustical Society of America*, 93(4), 1978-1986.
- Browning, G. (1986). Progressive sensorineural hearing-impairment. *Clinical Otology and Audiology* (1), 85-91, Butterworth and Co. Ltd.
- Buchta, E. (1990). A field survey on annoyance caused by sounds from small firearms. *Journal of Acoustical Society of America*, 88 (3), 1459-1467.
- Christiansson, B.A.C., Wintzell, K.A. (1993). An audiological survey of officers at an infantry regiment. *Scandinavian Audiology*, 22(3), 147-152.
- Clymont, L.G., Simpson, D.C. (1989). Noise levels and exposure patterns to Do-it-yourself power tools. *Journal of Laryngology and Otology*, 103, 1140-1141.
- Court Voids OSHA Hearing Conservation Amendment (1985). *Hearing Journal*, 38(1), 7-10.

- Cunefare, K.A., Shepard, S. (1993). Active control of point acoustic sources in half space, *Journal of Acoustical Society of America*, 93(5), 2732-2739.
- Dan, Y.M. (1988). Sound power emission in reverberation chambers. *Journal of Acoustical Society of America*, 83(4), 1414-1419.
- Dancer, A.L. (1992). Status and shortcomings of military noise standards. Dancer, A.L., Henderson, D. (1) 513-520. *Noise Induced Hearing Loss*. Mosby-YearBook, St. Louis.
- Davis, J.M., Hardick, E.J. (1981). Communication problems of adults, 395-396. *Rehabilitation Audiology for children and adults* (1). John Wiley and Sons, New York.
- Dear, T.A. (1987). Noise criteria regarding risk and prevention of hearing injury in industry. Sataloff, R.T., and Sataloff, J. (1), 485-507. *Occupational Hearing Loss*. Marcel Dekkar, New York.
- Dempsey, J.J. (1985). Clinical Note - 6000 Hz as an early indicator of NIHL. *Ear and Hearing*, 6(3), 159-160.
- Dohner, J.L., Shoureshi, R. (1989). A method for active noise control using a source point model. *Journal of Acoustical Society of America*, 86 (3), 1053-1059.
- Edelman, P.S., Genna, A.J. (1985). Noise and the law - in the USA. Tempest, W (1), 337-376. *The Noise Handbook*. Academic Press, Florida.
- Elliott, S.J., Joseph, P., Nelson, P.A., Johnson, M.E. (1991). Power output minimization and power absorption in the active control of sound. *Journal of Acoustical Society of America*, 90(5), 2501-2512.
- Esperance, A.L., Nicolas, J., Daigle, G.A. (1989). Insertion loss of absorbent barriersⁱ on ground. *Journal of Acoustical Society of America*, 86 (3), 1060-1064.

Fahnlane, J.B. (1995). Active control of the sound radiated by a vibrating body using only a layer of simple sources. **Journal of Acoustical Society of America**, 97 (4), 2249-2254.

Fidell, S., Horonjeff, R., Mills, J., Baldwin, E., Teffeteller, S., Pearson, K. (1985). Aircraft Noise Annoyance at 3 jt. air carrier and general aviation. **Journal of Acoustical Society of America**, 77(3), 1054-1068.

Fields, J.M., Powell, C.A. (1987). Community reactions to helicopter noise : Results from an experimental study. **Journal of Acoustical Society of America**, 82(2), 479-492.

Flynn, D.R., Yanir, S.L. (1985). Relations among different frequency rating procedure for traffic noise. **Journal of Acoustical Society of America**, 77(4),1436-1446.

Franks, J.R., Davis, R.R., Kreig, E.F. (1989). Analysis of HCP data base - factors other than work place noise. **Ear and Hearing**, 10(5), 273-280.

Franks, J.R., Merry, C.J., Engell, D.P. (1989). Noise reducing muffs for audiometry. **Hearing Instruments**, 40(11), 29-36.

Gannelli, G.B., Santoboni, S. (1991). Microprocessor based appratus for direct evaluation of environmental impulsive sounds. **Journal of Acoustical Society of America**, 90(3), 1464-1468.

Getty, L., Hetu, R. (1991). Development of a rehabilitation program for people affected with occupational hearing loss. Results from group intervention with 48 workers and their spouses. **Audiology**, 30(6),317-329.

Giguere, C, Kunov. H. (1989). An acoustic head simulator for hearing protector evaluation II Measurements in already state and impulse noise measurements. **Journal of Acoustical Society of America**, 85 (3), 1197-1205.

Greene, C.R. (1987). Characteristics of oil industry dredge and drilling sounds in the Beaufort Sea. **Journal of Acoustical Society of America**, 83(6), 2246-2254.

- Greene, C.R., John, W.R. (1988). Characteristics of marine seismic survey sounds in the Beaufort Sea. **Journal of Acoustical Society of America**, 83 (6), 2246-2254.
- Grime, R. (1985). Noise and the law in the UK. Tempest, W. (1), 303-335. **The Noise Handbook**. Academic Press, Florida.
- Gupta, V.H., Munjal, M.L. (1992). On numerical prediction of the acoustic source characteristics of an engine exhaust system. **Journal of Acoustical Society of America**, 92 (5), 2716-2725.
- Hall, J.W., Santucci, M. (1995). Protecting the professional ear : Conservation strategies and devices. **Hearing Journal**, 48(3), 37-45.
- Hay, B. (1985). EEC directives on noise in the environment. Tempest, W. (1), 377-396. **The Noise Handbook**, Academic Press, Florida.
- Hellstrom, P.A., Dengerink, H.A., Axelsson, A. (1992). Noise levels from toys and recreational articles for children and teenagers. **British Journal of Audiology**, 26(5), 267-270.
- Hellstrom, P.A. (1992). Objective methods for evaluating conventional, non-linear, and active hearing protector attenuation. Dancer, A.L., Henderson, D. (1), 401-413, **Noise Induced Hearing Loss**. Mosby-Year book, St. Louis.
- Hemalatha, B. (1986). Prevention of hearing loss for public education. An Independent Project submitted in part fulfillment of first year M.Sc, (Sp. & Hg.) to the University of Mysore, Mysore.
- Hemalatha, B. (1993). Audio cassette on HCP. An Independent Project submitted in part fulfillment of first year M.Sc, (Sp. & Hg.) to the University of Mysore, Mysore.

Hetu, R., Riverin, L., Lalande, N., Getty, L., Cyr, C.S.T. (1988). Quantitative analysis of the handicap associated with occupational hearing loss. **British Journal of Audiology**, 22 (4), 251-264.

Hetu, R., Getty, L. (1991). Development of a rehabilitation program for people affected with occupational hearing loss. 1. A New paradigm. **Audiology**, 30 (6), 305-316.

Hetu, R., Getty, L. (1993). Overcoming difficulties experienced in the work place by employees with occupational hearing loss. **The Volta Review**, 195 (4), 391-402.

Hetu, R., Getty, L., Waridel, S. (1994). Attitudes towards co-workers affected by occupational hearing loss II : Focus group interview. **British Journal of Audiology**, 28(6), 313-325.

Hetu, R., Getty, L., Beaudry, J., Phillibert, L. (1994). Attitudes towards co-workers affected by occupational hearing loss I: Questionnaire development and enquiry. **British Journal of Communication Disorders**, 28 (6), 299-312.

Hickling, R. (1990). Narrow band indoor measurement of the sound power of a complex mechanical noise source. **Journal of Acoustical Society of America**, 87 (3), 1182-1191.

Hong, W.K.W., Eghtesadi, K.H., Leventhall, H.G. (1987). The tight coupled monopole (TCM) and the tight coupled Tandem (TCT) attenuator: Theoretical aspects and experimental attenuation in an air duct. **Journal of Acoustical Society of America**, 81(2), 376-388.

Hood, L.M. (1987). Occupational hearing loss in United Kingdom. Sataloff, R.T., and Sataloff, J. (1) 605-612. **Occupational Hearing Loss**, Marcel Dekkar, New York.

In, S.K., Hee, S.N., Kwang, J.K., Youngjin, P. (1994). Constraint filtered -x and fittered -u mean square algorithms for active control of noise in ducts. **Journal of Acoustical Society of America**, 95(6), 3379-3389.

Irvin, S. (1987). Formulae differences in state and federal hearing loss compensation. Sataloff, R.T. and Sataloff, J. (1), 563-570, Occupational Hearing Loss. Marcel Dekkar, New York.

Irey, E.S., Nerbonne, G.P., Tolhurst, G.C. (1987). Measuring helmet sound attenuation characteristics using acoustic manikin. Journal of Acoustical Society of America, 81(2), 370-375.

Jiang, J.K., Prasad, M.G. (1988). A parametric study of acoustical fields of vibrating structures for noise control applications. **Journal of Acoustical Society of America**, 83(4), 1420-1430.

Job, R.F.S. (1988). Community response to noise : A review of factors influencing the relationship between noise exposure and reaction. **Journal of Acoustical Society of America**, 83(3), 991-1001.

Jo, C.H., Elliott, S.J. (1992). Active control of low frequency sound transmission between rooms. **Journal of Acoustical Society of America**, 92(3), 1461-1472.

Johnson, M.E., Elliott, S.J. (1993). Measurement of acoustic power output in the active control of sound. **Journal of Acoustical Society of Aaerica**, 93(3), 1453-1459.

Joos, V. (1990). On the level dependent penalty for impulse sound. **Journal of Acoustical Society of America**, 88 (2), 883-893.

Jorasz, U., Makarewicz, R., Jarzecki, J. (1991). The influence of atmospheric absorption of loudness and the A-Weighted sound pressure level. Journal of Acoustical Society of **America**, 90 (5), 2517-2520.

Kirkwood, D.H. (1992). Washington starts waking to hazards of recreational noise. **Hearing Journal**, 45 (3), 13-23.

Kryter, K.D. (1991). Hearing loss from gun and railroad noise - relations with ISO standard 1999. **Journal of Acoustical Society of America**, 90 (6), 3180-3195

- Kryter, K.D. (1994). The assessment of hearing and damage risk from noise. 376-388. **The Handbook of hearing and the effects of noise physiology, psychology and public health.** Academic Press, California.
- Kuk, F.K., Tyler, R.S., Stubbing, P.W., Bertschy, M.R. (1989). Noise reduction circuitry in ITE instruments. **Hearing Instruments**, 40 (7), 20-26.
- Kumar, 8. (1992). Guidelines for the purchase of instruments for the speech and hearing centers. An Independent Project submitted in part fulfillment of First year M.Sc, (Speech and Hearing) to the University of Mysore, Mysore.
- Kunov, H., Giguere, C. (1989). An acoustic head simulator for hearing protector evaluation I : Design and construction. **Journal of Acoustical Society of America**, 85 (3), 1191-1196.
- Kuruvilla, M. (1995). Audiovisuals on auditory effects, non-auditory effects and legislative aspects of noise. An Independent Project submitted in part fulfillment of first year M.Sc, (Speech and Hearing) to the University of Mysore, Mysore.
- Lam, Y.W., Roberts, S.C. (1993). A simple method for accurate prediction of finite barrier insertion loss. **Journal of Acoustical Society of America**, 93 (3), 1445-1452.
- Lanade, N.M., Riverin, L., Lambert, J. (1988). Occupational hearing loss - An aural rehabilitation program for workers and their spouses, characteristics of the program and target group/participant and non-participant. **Bar and Hearing**, 9 (5), 248-255.
- Lass, N.J., Woodford, C.M., Lundeen, C. (1987). Hearing Conservation Program for junior high school. **Hearing Journal**, 40 (11), 32-40.
- Laville, F., Nicolas, J. (1992). A computer simulation of sound power determination using 2 microphone sound intensity measurements. **Journal of Acoustical Society of America**, 91 (4), 2042-2055.

- Lipscomb, D.M. (1988). Determination of noise exposures. 35-44. **Hearing Conservation in industry schools and the Military** (1), Taylor and Francis, London.
- Lipscomb, D.M. (1988). Principles of noise control. 83-92. **Hearing Conservation in Industry schools and Military** (1). Taylor and Francis, London.
- Lipscomb, D.M. (1988). Components of an effective HCP : 81-230. **Hearing Conservation in Industry, Schools and the Military** (1), Taylor and Francis, London.
- Lipscomb, D.M. (1988). Basic principles of sound measurement. 21-34, **Hearing Conservation in Industry schools and the Military** (1). Taylor and Francis, London.
- Lutman, M.E. (1992). Apportionment of noise induced hearing disability and its prognosis in a medico-legal context modeling study. **British Journal of Audiology**, 26(5), 307-319.
- Makarewicz, R. (1992). Barrier attenuation in terms of A-weighted sound exposure level. **Journal of Acoustical Society of America**, 91(3), 1500-1503.
- Melnick, W. (1992). Occupational noise standards : Status and critical issues. Dancer, A.L., Henderson, D. (1), 521-530, **Noise Induced Hearing Loss**, Mosby Year book, St. Louis.
- Melnick, W. (1994). Industrial hearing conservation. Katz, J. (4), 534-552. **Handbook of clinical audiology**, Williams and Wilkins.
- Menon, S. (1995). Handouts on noise instrumentation. An Independent Project submitted as part fulfillment for the first year M.Sc. (Speech and Hearing) to the University of Mysore.
- Morrison, A.W. (1993). Trauma. Ballantyne, J. (5), 206-211. **Deafness**. Whurr Publishers, U.K.
- Mouique, J.B. (1987). OSHA, B.L.S. Official address NHCA Annual meeting. **Hearing Journal**, 40(6), 30-32.

- Mulholland, K.A. (1985). Noise control. Tempest, W. (1), 281-301. **The Noise Handbook**. Academic Press, Florida.
- Naghshineh, K., Koopmann, G.K., Belegundu, A.D. (1992). Material tailoring of structures to achieve a minimum radiation condition. **Journal of Acoustical Society of America**, 92 (2), 841-855.
- Naghshinen, K., Koopmann, G.H. (1992). A design method for achieving weak radiator structures using active vibration control. **Journal of Acoustical Society of America**, 92 (2), 856-870.
- Naghshineh, K., Koopmann, G.H. (1993). Active control of sound power using acoustic basis functions as surface velocity filters. **Journal of Acoustical Society of America**, 93 (5), 2740-2752.
- Newby, H.A., and Popelka, G.R. (1985). Industrial Audiology. **Audiology** (5), 294-383. Prentice Hall, New Jersey.
- Nixon, C.W. (1992). Performance of active noise reduction head sets. Dancer, A.L., Henderson, D. (1), 389-400, **Noise Induced Hearing Loss**. Mosby Year Book, St.Louis.
- Okamoto, Y., Boden, H., Abom, M. (1994). Active noise control in ducts via side branch resonators. **Journal of Acoustical Society of America**, 96 (3), 1533-1538.
- Omoto, A., Fujiwara, K. (1993). A study of an actively controlled noise barrier. **Journal of Acoustical Society of America**, 94(4), 2173-2180.
- Orduna, F., Bustamante, P., Nelson, P.A. (1992). An adaptive controller for the active absorption of sound. **Journal of Acoustical Society of America**, 91(5), 2740-2747
- Pan, J., Snyder, S.D., Hansen, C.H., Fuller, C.R. (1992). Active control of far field sound radiated by a rectangular panel - a general analysis. **Journal of Acoustical Society of America**, 91 (4), 2056-2066.

Paul, J.R., Lary, E.W. (1985). Prediction of the effectiveness of noise control treatments in Urban rail elevated structures. **Journal of Acoustical Society of America**, 78 (6), 2017-2033.

Paul, J.R. (1987). Wheel/rail rolling noise I : Theoretical analysis. **Journal of Acoustical Society of America**, 81 (6), 1805-1823.

Paul, J.R. (1987). Wheel/rail rolling noise II : Validation of the theory. **Journal of Acoustical Society of America**, 81 (6), 1824-1832

Pekkarinen, J.O., Starck, J.P., Ylikoski, J.S. (1992). Hearing Protection against high level shooting impulses in relation to hearing damage risk criteria. **Journal of Acoustical Society of America**, 91 (1), 196-202.

Pekkarinen, J., Iki, M., Starch, J., Pyykko, I. (1993). Hearing loss risk from exposure to shooting impulses in workers exposed to occupational noise. **British Journal of Audiology**, 27 (3), 175-182.

Pirinchieva, R. (1990). Model study of the round propagation behind barriers of finite length. **Journal of Acoustical Society of America**, 87 (5), 2109-2113.

Postal, L.P. (1987). The United States : The Longshore and Harbor Workers' compensation Act. Sataloff, R.T., and Sataloff, J. (1), 585-596. **Occupational Hearing Loss**. Marcel Dekkar, New York.

Prydz, R.A., Wirt, L.S., Kuntz, H.L., Popel, D. (1990). Transmission loss of a multilayer panel with internal tuned Helmholtz resonators. **Journal of Acoustical Society of America**, 87 (4), 1597-1602.

Radhika, S. (1988). High frequency audiometry. An Independent Project in part fulfillment of First year **M.Sc, (Speech and Hearing)** to the University of Mysore, Mysore.

Rajkumar, T. (1992). Audio Cassette on noise. An Independent Project submitted as part fulfillment for first year M.Sc. (Speech and Hearing) to the University of Mysore.

Razdan Suchitra (1993). Video script for HCP. An Independent Project submitted in part fulfilment of first Year M.Sc, (Speech and Hearing) to the University of the Mysore, Mysore.

Rice, C.G., Rossi, G., Olin, M. (1987). Damage risk from personal cassette player. **British Journal of Audiology**, 21, 279-288.

Rout Ayaskanta (1995). Efficacy of audiovisuals on hearing loss : A field study. An Independent Project submitted in part fulfillment of first year M.Sc., (Speech and Hearing), to the University of Mysore, Mysore.

Royster, J.D., Royster, L.H. (1990). Engineering and Administrative noise control. 33-43, **HCP - Practical Guidelines for success** (1). Lewis Publishers.

Ruppel, T.H., Shields, F.D. (1993). Cancellation of air borne acoustic plane waves obliquely incident upon a planar phased array of active surface elements. **Journal of Acoustical Society of America**, 93 (4), 1970-1977.

Sammeth, C.A., Ochs, M.T. (1991). A review of current noise reduction hearing aids. Rationale, assumption and efficacy. **Ear and Hearing**, 12 (6), 116S-124S.

Sarika, M. (1994). A course on Noise Pollution - Audio and visual resource material. An Independent Project submitted as part fulfillment for the first year M.Sc, (Sp. &Hg.}, to the University of Mysore.

Sataloff, R.T., and Sataloff, J. (1987). Occupational hearing loss : Legislation and compensation. 531-540. **Occupational Hearing Loss** (1), Marcel Dekkar, New York.

Sataloff, R.T., and Sataloff, J. (1987). OSHA noise regulation. 541-562. **Occupational Hearing Loss** (1) Marcel Dekkar, New York.

Sataloff, R.T., and Sataloff, J. (1987). Noise control. 463-484. **Occupational Hearing Loss** (1), Marcel Dekkar, New York.

- Sataloff, R.T., and Sataloff, J. (1987). Establishing a HCP. 635-654. **Occupational Hearing Loss** (1), Marcel Dekkar, New York.
- Sataloff, R.T., and Sataloff, J. (1987). Hearing Conservation in Industry. 623-634. **Occupational Hearing Loss** (1), Marcel Dekkar, New York.
- Sataloff, R.T., and Sataloff, J. (1993). **Occupational Hearing Loss**. 371-402. Hering loss (3), Marcel Dekkar, New York.
- Sataloff, R.T., and Sataloff, J. (1987). Noise Measurement. 437-462. **Occupational Hearing Loss** (1), Marcel Dekkar, New York.
- Schomer, P.D., Buchta, E., Hirsh, W. (1991). Decibel Annoyance reduction of low frequency blast attenuating windows. **Journal of Acoustical Society of America**, 89 (4), 1708-1713
- Seybert, A.F. (1988). Two sensor methods for the measurement of sound intensity and acoustic properties in ducts. **Journal of Acoustical Society of Aaerica**, 83 (6), 2233-2239.
- Shirahatti, U.S., Crocker, M.J., Raju, P.K. (1988). Finite difference approximation errors in sound intensity estimation of interfering sources. **Journal of Acoustical Society of Aaerica**, 84(2), 629-638.
- Smooenburg, G.F. (1992). Damage risk for low frequency impulse noise. The spectral factor in NIHL Dancer, A.L., Henderson, D. (1) 313-324. **Noise Induced Hearing Loss**, Mosby Year book, St.Louis.
- Smooenburg, G.F. (1993). Risk of noise induced hearing loss following exposure to Chinese firecrackers. **Audiology**, 32 (6), 333-343.
- Snyder, S.D., Hansen, C.H. (1989). Active noise control in ducts : Some physical insights. **Journal of Acoustical Society of Aaerica**, 86(1), 184-194.

Sreedevi, H.S. (1986). Community Noise Survey in Mysore City. An Independent Project submitted in part fulfillment of first year M.Sc, (Sp. & Hg.) to the University of Mysore, Mysore.

Stander, I. (1987). Workers compensation : Presenting medical evidence in hearing loss cases Sataloff, R.T., and Sataloff, J. (1), 613-622. **Occupational Hearing Loss.** Marcel Dekkar, New York.

Suma, T. (1993). Community noise survey - A report. An Independent Project submitted as part fulfillment for first year M.Sc., (Speech and Hering) to the University of Mysore.

Suter, A.H., Von, G.H.E. (1987). Tutorial noise and public policy. **Ear and Hearing,** 8 (4), 188-191.

Suter, A.H. (1988). The development of federal noise standards and DRC. Lipscomb, 'D.M. (1), 45-66. Hearing conservation in industry, schools and military. Taylor and Francis Ltd., London.

Suter, A.H., Lempert, B.L., Franks, J.R. (1990). Real ear attenuation of earmuffs in normal hearing and hearing-impaired individuals. **Journal of Acoustical Society of America,** 87 (5), 2114-2117.

Tarnow, V., Pommer, C. (1988). Attenuation of sound mufflers with absorption and lateral resonants. **Journal of Acoustical Society of Aaerica,** 83 (6), 2240-2245.

Tempest, W. (1985). Noise measurement. 3-26. **The Noise Handbook** (1), Academic Press, Florida.

Tempest, W. (1985). Noise in industry. 182-194. **The Noise Handbook** (1), Academic Press, Florida.

Tokhi, M.O., Leitch, R.R. (1991). The robust design of active noise control systems based on relative stability measures. **Journal of Acoustical Society of Aaerica,** 90 (1), 334-345.

1

Van Der Venne, M.J. (1992). Control of occupational noise in EEC. Dancer, A.L., Henderson, D. (1), 531-534. **Noise Induced Hearing Loss**. Mosby Year book, St. Louis.

Wassilieff, C. (1988). Improving the noise reduction of picket barriers. **Journal of Acoustical Society of America**, 84 (2), 645-650.

Wuzhen, Varadan, V.K., Varadan, V.V., Leek, Y. (1995). Active absorption of acoustic waves using state space model and optional control theory. **Journal of Acoustical Society of America**, 97 (2), 1078-1087.

Yang, T.C., Seng, C.H., Ling, S.F. (1994). Constrained optimization of active noise control system in enclosures. **Journal of Acoustical Society of America**, 95 (6), 3390-3399.

Ylikoski, J., Pekkarinen, J., Starck, J. (1987). The efficiency of ear muffs against impulse noise from firearms. **Scandinavian Audiology**, 16(2), 85-88.

Ylikoski, M.E., Pekkarinen, J.O., Starck, J.P. (1995). Physical characteristics of gunfire impulse noise and its attenuation by hearing protectors. **Scandinavian Audiology**. 24 (1), 3-12.

Yost, W.A. (1994). Noise. 194-208. **Fundamentals of Hearing - An Introduction** (3) Academic Press, San Diego.

Zander, A.C., Hansen, C.H. (1992). Active control of higher order acoustic modes in ducts. **Journal of Acoustical Society of America**, 92 (1), 244-257.

Zander, A.C., Hansen, C.H. (1993). A comparison of error sensor strategies for the active control of duct noise. **Journal of Acoustical Society of America**, 94 (2), 841-848.

Zeng, L.J., Maa, D.Y., Crocker, M.J. (1989). The calculation of sound power emission of sources in reverberation chambers. **Journal of Acoustical Society of America**, 85 (1), 178-184.