James D. McGlothlin, M.P.H., Ph.D., C.P.E., FAIHA Faculty Scholar & Professor Emeritus College of Health and Human Sciences Purdue University

McGlothlin Ergonomics, VEM Systems & STS, LLC's

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Business/ Consulting:

McGlothlin Ergonomics LLC; VEM Systems Inc.; VEM Smart Systems (non-profit) LLC; Safe Temperature Systems, Inc; Founder and President of these four companies. Ergonomics: Provide ergonomics and exposure assessment (Ergonomics, Safety, Industrial Hygiene Training Courses, Expert Witness, Engineering, Safety, and Industrial Hygiene Exposure Assessments) consulting for companies worldwide. Video Exposure Monitoring: Provide real-time exposure assessments to detect, mitigate, and prevent exposures to environmental and occupational safety and health hazards. Safe Temperature Systems: Hands free, cloud-based body temperature detection system to prevent the spread of COVID-19.

Teaching/Academic Responsibilities:

- Faculty Scholar and Professor Emeritus Purdue University, West Lafayette, IN.
- Former Director of Service Initiative for International Study Abroad Program for Purdue University College of Health and Human Sciences.
- Former Director, Graduate Occupational and Environmental Health Program
- Former Director: Purdue's Exposure Assessment Research Laboratory (PEARL)
- Former Co-Director: Consortium for Virtual Reality Design of Healthcare Facilities
- Associate Professor of Health Sciences
- Former Chair: ABET reaccreditation for Purdue's School of Health Sciences

Disciplines:

Ergonomics, Exposure Assessment and Risk Assessment, Engineering Controls, Occupational and Environmental Health, Industrial Hygiene, Public Health, Epidemiology, Study Abroad: Service-Based Projects

Current

Location: Grand Rapids, Michigan, 49546-3661

Education: Ph.D. April 1988, University of Michigan, Horace H. Rackham School of Graduate

Studies, School of Public Health, Department of Environmental and Occupational

Health. Major: Industrial Health with Emphasis in Ergonomics.

M.S. May 1977, University of Hawaii, School of Public Health, Department of Environmental and Industrial Health. Major: Environmental and Industrial Health.

M.P.H. May 1977, University of Hawaii School of Public Health, Department of Epidemiology. Major: Epidemiology.

B.A. August 1975, University of Hawaii, Department of Psychology. Major: Psychology, Minor: Chemistry.

Certification:

Certified Professional Ergonomist (CPE), Granted September 30, 1993, Certification # 147.

Interests:

- Certified Training in Ergonomics/On-Site Certificate Series Training in Ergonomics, Safety, Industrial Hygiene.
- Prevention through Design Design Systems to Solve Problems in the Healthcare Industry.
- Integrate ergonomic, epidemiologic and occupational hygiene principles and tools to
 evaluate and control physical, chemical, radiological and biological hazards in the
 environment.
- Develop and administer ergonomic programs to prevent musculoskeletal injuries, promote health, and improve productivity and quality in the workplace.
- Improve healthcare delivery through the integration of engineering, management and scientific principles.
- Understand tipping points in the development and implementation of national and international public health laws and policies.
- Teach college students the principles of public health, epidemiology, industrial hygiene, and engineering controls.

Activities:

- Plan, design, conduct and report on engineering control technology projects to decrease injuries and promote health in the occupational environment.
- Advance Molecular Diagnostic research for emerging infectious diseases particularly in healthcare settings.
- Invent and develop state of the art exposure assessment measurement methods and data capture systems such as video exposure monitoring to evaluate and control hazards in the environment.
- Recent specific research activities include:
 - Methods development and field studies for systematic evaluation of worker exposure to musculoskeletal hazards and airborne chemical exposures as a function work practices and engineering controls;
 - Development of patient-centered design for current and future state hospital systems using virtual reality technology;

O Developing of rapid detection systems to detect and identify airborne infectious agents, including avian flu; quantifying finger tip radiation exposure among nuclear pharmacists; reducing worker exposure to high potency drugs during manufacturing; improving patient care by controlling noise in hospital settings; improving quality of home-health care workers and their patients.

Academic Management Activities (as a Professor at Purdue):

- Direct Molecular HUB.org a global portal to advance molecular diagnostics for early surveillance, control and prevention of infectious diseases
- Direct Graduate Occupational and Environmental Health Program
- Direct PEARL (Purdue's Exposure Assessment Research Laboratory): Includes advancing Video Exposure Monitoring technology and tools to protect occupational and environmental health
- Co-Director for the Consortium for Virtual Reality Design of Healthcare Facilities;
 manage projects and students at Purdue's Envision Center to advance healthcare facility design and functionality
- Executive Committee: Regenstrief Center for Healthcare Engineering, as their Technical Director, by helping to recruit, plan, conduct, and complete research projects.
- Chair, Senate Educational Policy Committee: develop, advise, and execute educational policies for Purdue University.
- Chair, Parking and Traffic Committee Purdue University.

Selected Contributions to advance Purdue's College of Health and Human Sciences:

Dr. McGlothlin

- Managed a portal titled: Molecular HUB. org through Purdue University HubZero. org to advance molecular diagnostics.
- Co-principle investigator of a multimillion-dollar grant from The Regenstrief Foundation to develop the Regenstrief Center for Healthcare Engineering (RCHE). Funding with multimillion dollar increases in funding from the Regenstrief Foundation.
- Project officer for several projects, on the Executive and Operations management teams, and is the Technical Director for RCHE. RCHE's focus is to apply engineering, management and scientific principles for the improvement of healthcare at the local, state and national levels
- Created and directed research in Purdue's Exposure Assessment Research Laboratory (PEARL). Research in this laboratory ranges from detailed work methods analyses to reduce injuries and illnesses among workers in Indiana, to the etiologic causes of back injury among Purdue's faculty and staff, to the development of a rapid detection system for pandemic flu. PEARL is located in the School of Health Sciences, Civil Engineering Building, Room 1285
- Invented, developed and advanced Video Exposure Monitoring (VEM) methods. VEM is an exposure assessment and risk management system to evaluate and control adverse exposures in the environment. The primary source of funding to advance this research has been conducted in the pharmaceutical industry. This pharmaceutical industry's motivation for this research is in developing a user-friendly system that assures product containment during potent drug manufacturing and prevention of exposures to workers.

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- Directed re-accreditation from the Board for Engineering and Technology (ABET) for 6
 more years. The ABET accreditation at the undergraduate and graduate level in
 Industrial Hygiene is unique among U.S. universities.
- Partnered with faculty in the School of Aviation Technology, the Federal Aviation Administration (FAA), to conduct research on adverse health effects from aviation jet exhaust emissions.
- Partnered with the School of Health and Kinesiology, and the School of Technology to
 obtain a grant to establish an innovative program to promote interdisciplinary research
 in ergonomics.
- Developed applied research program with School's freshman scholars, Arnett/Clarion
 Occupational physicians, and local companies. This program focused on ergonomic and
 medical evaluations to reduce musculoskeletal injuries and illnesses at these companies.
- Recruited several PH.D. and Master's candidates for the IH and Interdisciplinary Ergonomics program, including those from the uniformed services to the School of Health Sciences.
- Directed, recruited, taught and mentored graduate students in the Occupational and Environmental Health Sciences Program.
- Assisting State Health Department in the development of a rapid detection system for the Avian Flu using VEM technology.
- Member of the University and Academic Pandemic Flu response committees to develop strategies to address Avian Flu if and when it occurs in the U.S. and at Purdue.
- Purdue University Senate Chair of the Educational Policy Committee.
- Served as Senator and to the President's Senate Advisory Committee.
- Member of Purdue's Health Advisory Committee.
- Chair, Purdue's Parking and Traffic Committee.
- On workgroup for Purdue's Homeland Security to advance patent pending real-time wireless GM sensor and videography system for the Department of Homeland Security.
- Faculty advisor for Physical Therapy/Occupational Therapy Club.
- Co-advisor for Purdue Industrial Hygiene Student Association (PIHSA).

Curriculum Innovations

- HSCI 580: Occupational Ergonomics (Dr. McGlothlin developed this new course in the spring of 1999). Enrollment in this course has grown from 25 in the first year offering and for the past 2 years has between 85-100 students; it is offered in the fall
- HSCI 581: Applied Occupational Ergonomics (Dr. McGlothlin developed this new course in the fall of 2000). It has approximately 25 students and is offered in the spring
- HSCI 582: Video Exposure Monitoring Methods (Dr. McGlothlin developed this new course in the fall of 2001; it has between 12-15 students and is offered in the fall
- HSCI 201 Principles of Public Health (Dr. McGlothlin co-developed this new course in the spring of 2001. It started with approximately 60 students and is now the largest course taught in the School of Health Sciences with over 200 students taking this course in the spring
- HSCI 590b Public Health Law and Policy. (Dr. McGlothlin co-developed this course with Judge (retired) Linda Chezem and Professor Kathy Weaver. It was first offered in the fall of 2007, and has been offered in each semester since its inception. It is taught to students at Purdue, and to Indiana University Bloomington, and Indiana

University/Purdue University (IUPUI). The course enrollment has ranged from 13-20 students per semester.

- HSCI/SA 10601 Contemporary Issues in International Public Health. (Dr. McGlothlin developed this course in 2006 and offers it to students who want to study abroad during the summer. Australia was the country visited in the summer of 2007, and India, Cambodia and Thailand were visited in the spring and summer through 2015.S Most recently, a study abroad course for London, Scotland, and Ireland over spring break 2016. A Service-related study abroad course was conducted in Peru, South America with 26 Purdue students over Maymester 2016
- An Ergonomics Track was developed for the Graduate Occupational and Environmental Health (OEH) Sciences Program in the School of Health Sciences. The ergonomics track innovation allows students in the OEH to focus on Ergonomics issues. This track was integrated into the overall OEH degree
- In 2005 Dr. McGlothlin developed an Interdisciplinary Ergonomics Program for students at Purdue to pursue. It is offered in the School of Health Sciences at the Master's and Ph.D. level. The innovation of this Interdisciplinary Ergonomics program is that it capitalizes on recruitment of academically strong engineering Master's students (most from the School of Industrial Engineering) into the School of Health Sciences to learn how to apply engineering principles to solve occupational and healthcare delivery issues.

Work Experience including Academic / Administrative:

September 2020 - present:

President and CEO of Safe Temperature Systems (STS), LLC., Designed, developed, and deployed a portable, low-cost, no-contact human body temperature sensor that automatically records the persons temperature and takes a picture of the individuals face. This data is then automatically uploaded cloud that produces real-time results upon request, and a summary report at the end of each day for the client. The purpose is to screen for elevation in body temperature as a an initial screening mechanism for COVID-19.

June 2006 to present

President and CEO of VEM SystemsTM., LLC and VEM Smart Systems (non-profit), LLC. The goal of these companies is to advance the science and application of exposure and risk assessment by developing customized software that collects, archives, and retrieves videography data digitally linked with environmental sensor data. VEM helps the safety specialist, industrial hygienist, engineer, and public health professional visualize events while quantitatively measuring hazardous chemical, physical, radiological, and physical agents. The objective to more accurately pinpoint exposure sources and develop cost-effective controls to reduce exposures and risk from developing harmful human disease and premature death. (Note: Several Purdue related projects had an ergonomics focus ranging from the airline industry to healthcare to manufacturing. For the airline industry Dr. McGlothlin partnered with faculty and students in the College of Technology (now

labeled the (Purdue Polytechnic Institute), to study baggage handling, baggage storage, and overhead baggage storage for various airlines including Jet Blue).

January 2019 - Present:

Adjunct Faculty: Calvin University: Taught an on campus Public Health Epidemiology course to pre-medical and public health students, Grand Rapids, MI.

October 2016 - Present:

Adjunct Faculty: Western Michigan University: Doctoral committee member for Dave Huizen, Director of Occupational Safety and Health Program at Grand Valley State University (GVSU).

August 2016 - Present:

Lecturer: in Ergonomics and Industrial Hygiene at Grand Valley State University, Grand Rapids, Michigan.

July 2015 - September 2016:

Director, Service Initiative for Study Abroad Program,: Under Contract with Purdue: Developed and directed a study abroad course in England, Scotland, and Ireland in March, 2016 (31 students); and a service-based study abroad course in Peru from May-June 2016 (26 students).

May 2006 to June 30th, 2015:

Director of Occupational and Environmental Health Sciences Graduate Program at Purdue University. Develop strategic plan to recruit high quality Master's and Ph.D., candidates from around the world. Work with IH and Toxicology colleagues in the School of Health Sciences to teach and conduct research at graduate level.

August 2012 to June 30th 2015:

Chair: Undergraduate and Graduate ABET Committees. Successfully renewed ABET accreditation for the Industrial Hygiene programs at Purdue University.

August 2012 to June 30th 2015:

Chair: 3+2 Accelerated BS/MGA program. Program created and directed by Dr. McGlothlin for academically gifted pre-professional health science students to receive their BS and MBA in 5 years, then go to professional programs such as medical school.

August 2011 to June 30th 2015:

Chair: College of Health and Human Sciences Study Abroad Program. Directed selected faculty members in the college's 9 units to develop and deploy study abroad programs around the world for Purdue students.

September 2004 to 2013

Technical Director: Regenstrief Center for Healthcare Engineering. Provides technical and strategic direction to the Director of RCHE and the Executive Management

Team to improve the quality and execution of projects that improve healthcare delivery. The Center currently has funding of approximately 24 million dollars. Additional information about RCHE can be found on the following website: http://www.purdue.edu/dp/rche/

August 1999 to June 30th 2015

Director: Purdue's Exposure Assessment Research Laboratory (PEARL). Develops and directs applied and basic research focusing on ergonomics, exposure assessment, and risk management projects.

January 3rd, 1999 to June 30th 2015

Associate Professor of Health Sciences at Purdue University. Develop and direct an ergonomics and industrial hygiene research program. Develop and teach courses in occupational ergonomics and industrial hygiene to undergraduate and graduate students at Purdue University. Serve on student thesis and doctoral committees. Publish research findings.

January 1997 to January 1st, 1999

Director Grade (CAPT: O6) Senior Researcher in Ergonomics for the Engineering Control Technology Branch of the National Institute for Occupational Safety and Health. Plan and conducts worksite and laboratory research to assess, demonstrate, or develop engineering control techniques for hazardous materials, industries, or processes; promotes the transfer and widespread application of effective preventive engineering control measures for safeguarding worker health and safety; provides engineering expertise in formulating effective and feasible workplace standards; (provides technical consultation to other elements of NIOSH and other government agencies in the application of new and improved techniques for hazard prevention.

August 26, 1994 to December 1996

Occupational/Environmental Safety & Health Specialist VI. Direct and assist in research projects in ergonomics for the Engineering Control Technology Branch (ECTB), Division of Physical Sciences and Engineering (DPSE). Projects in the automotive, beverage delivery, and home appliance industries have benefitted from recommendations provided through research reports from ECTB researchers. The benefits include an increase in productivity and product quality, and a decrease in injuries and illnesses. Cost savings for these industries are estimated in the millions of dollars.

March 24, 1991 to August 25, 1994

Occupational/Environmental Safety & Health Specialist V. Control Section I. Conducted research projects to control nitrous oxide in dental operatories, and to control chemical exposures during manual materials handling. The recommendations from these technical reports will reduce airborne contaminant exposures to health practitioners and industrial workers. The reduction in exposures should prevent adverse reproductive health effects and cancer in several million workers.

February 26, 1991 to March 23, 1994

Occupational/Environmental Safety & Health Specialist V. Control Section III. Expanded scope of research projects in real-time sampling for workers in the manufacturing and service industries. New sampling methods and visualization of the effectiveness of controls resulted in significant cost savings to industry. The savings were realized from the use of custom designed ventilation controls to reduce airborne contaminants, and improved work station design to reduced muscle fatigue and accidents.

March 21, 1988 to February 25, 1991

Research Industrial Hygienist. Conducted research projects in real-time sampling for the workers in the manufacturing industries. The projects focused on developing innovative monitoring and sampling techniques for controlling airborne contaminant exposures as a function of work patterns. Sampling methods and visualization of the effectiveness of controls resulted in significant cost savings, estimated in the millions of dollars, for custom designed engineering controls to reduce toxic contaminant exposures among workers.

November 1, 1985 to March 20, 1988

Industrial Hygienist. Conducted Industrial Hygiene studies in industry to reduce and prevent respiratory, dermal, and ingestion of toxic contaminants used in manufacturing processes. Complemented recent ergonomics training from doctoral work at the University of Michigan to develop methods to combine industrial hygiene exposure monitoring with work practices. The new sampling and analysis methods resulted in linking peak exposures with specific work activities. This research led to a innovations in evaluating work place exposures, and implementing more cost effective controls.

May 27, 1984 to October 31, 1985

Chief, Action Analysis Section. Division of Safety Research. (NIOSH). Supervised 9 safety and health professionals and conducted occupational safety research. Developed a program for occupational safety and health research in ergonomics for the division. The key strategies in this program were to a 5 year program to reduce work place fatalities and morbidity. Successful impact was to save thousands of lives through the design of safe work environments.

January 27, 1984 to May 26, 1984

Ergonomics Projects Coordinator. Developed the Institute's first ergonomic program for the Division of Safety Research, NIOSH. This program focused research on reducing acute and chronic injuries in the occupational environment. It also served as a model for an institute wide ergonomics research program to reduce and prevent injuries in the work place.

September 7, 1981 to January 26, 1984

Graduate Trainee. Long-term training leading to a Ph.D. in Industrial Health, with a specialty in Ergonomics, at the University of Michigan. The goal of the long term training was to develop ergonomics expertise among its researchers to plan, design, conduct, and oversee government research to reduce musculoskeletal injuries and illnesses in the work place.

January 17, 1979 to September 6, 1981

Industrial Hygienist. Designed and conducted Industrial Hygiene studies to assess environmental exposure to work populations. Wrote and distributed Health Hazard Evaluation Reports to Industries with recommendations to reduce and prevent exposures to toxic chemical agents. Health Hazard Evaluation work on identifying companies for chemical dumping in Cincinnati sewers received national attention.

May 1, 1978 to January 16, 1979

Criteria Manager. Proposed and evaluated criteria for health standards in occupational environments in the United States. Helped develop outline for reducing exposure to toxic chemical agents in the tire manufacturing industry. This work was later developed into a Technical Report which was translated into several languages to reduce exposures to workers in this industry around the world.

May 1, 1977 to June 30, 1978

Environmental Consultant. Performed comprehensive Industrial Hygiene and environmental surveys for industries (airline, car rental, rock quarries, Navy), in Hawaii.

May 1, 1976 to April 30, 1977

Legislative Assistant. Hawaii State House of Representatives. Served as legislative aid to Senator Anson Chong for Hawaii's House of Representatives.

Academic, Committee, and Technical Experience:

Teaching

Courses Directed and Taught by Dr. McGlothlin at Purdue University:

- Principles of Occupational Ergonomics
- Advanced Occupational Ergonomics (quantitative)
- Primer on Real-Time Exposure Assessment Video Exposure Monitoring Methods
- Principles of Safety Engineering
- The Science and Practice of Public Health
- Contemporary Issues in International Public Health
- Public Health Law and Policy
- Overview of Health Sciences
- Introduction to Environmental, Occupational, and Radiological Health

Course Directed and Taught by Dr. McGlothlin at Calvin University:

Principles of Epidemiology

Involvement in Graduate Research

Major Professor and Co-Primary Advisor for Completed Ph.D. and M.S. Research in Industrial Hygiene and Ergonomics, Interdisciplinary Ergonomics, and Industrial Technology disciplines.

Thirty-three Masters and Ph.D. students

Student Degree	Title
M.S.(Thesis)	The Development, Assembly, and Pilot-Testing of a Task-Based
	video Exposure Assessment system.
M.S.(Thesis)	Videography with comparative Analyses of real-time Monitoring
	Versus diffusive Monitoring to control Methylene Chloride in an
	Industrial Setting.
M.S. (Thesis)	Development of an Ergonomics Training Program to Identify,
	Evaluate and Control Musculoskeletal Disorders among Nursing
	assistants in a State-Run Veterans' Home.
M.S. (Thesis)	Exposure Assessment and Control Strategies Using Real-Time
	Sampling
	Monitors and Multimedia Video Task Analysis of Pharmaceutical
	Operations
M.S. (Thesis)	Prevention of Falls from Elevations in the Construction Industry
Ph.D.	Efficacy of Natural Products as Antifungal Agents in Carpets and
	Investigation of Ethyl Cellulose Polymer as an Extender (co-
	primary adviser)

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M.S. (Thesis)	Evaluation of noise attenuation and verbal communication capabilities using three ear insert hearing protection systems among airport personnel.
M.S. (non-thesis)	Effective Safety management Programs in the Construction Industry in Puerto Rico (co-adviser)
Ph.D. (School of Technology – Industrial Technology)	Modeling and Simulation of Pregnant Employees (co-primary adviser)
M.S. (with Honors)	The Effect of Personalized Adjustments to Computer Workstations on the Efficiency and Physical Comfort of Computer Operators (external examiner)
Ph.D.	Use of Video Exposure Monitoring and Real-Time Sampling to Prevent Harmful Exposures to Workers in the Pharmaceutical Production Industry.
M.S. (Thesis)	A Pilot of Ergonomic Controls for the Preparation of Footers in Post-Frame Building Construction.
M.S. (Thesis)	Evaluation of Cardiovascular Effects from Exposure to Environmental Tobacco Smoke
M.S. (Thesis)	Validation of Video Exposure Monitoring and Infrared Imaging as an Exposure Assessment and prevention tool in Dental Operatories (working title)
Ph.D. (School of Technology – Computational Science and Engineering	Development and application of ergonomics to biometric indicators for the hand (working title).
M.S. (Non- Thesis)	Use of Video Exposure Monitoring to detect and prevent radiation exposure among workers in the pharmaceutical industry. (working title)
M.S. (Thesis)	Use of Video Exposure Monitoring to prevent exposure to biologic agents in the pharmaceutical industry (working title). Student colisted with Dr. Frank Rosenthal at this time.
Ph.D. (Interdisciplinary Ergonomics – School of Health Sciences)	Use of Metrics to validate Ergonomic Interventions in Services and Facilities Personnel at a University (working title)
Ph.D. (Interdisciplinary Ergonomics – School of Health Sciences)	Health Lifestyles and Health Workplaces: Development and evaluation of an Ergonomics Program to reduce and prevent occupational back injuries at a major university
Ph.D. (School of Technology – Industrial Technology)	An Ergonomic and Electromyography Analysis of fatigue among workers in a heavy manufacturing facility
M.S. (College of Engineering, School of Mechanical Engineering)	Evaluation and Control of Noise in a Healthcare facility.
M.S. Industrial Hygiene, School of Health Sciences, Purdue University.	Assessment of Cut-Off Saw Control Methods or Respirable Particulate and Crystalline Silica during Highway Construction Applications.

Ph.D. Industrial Engineering/Interdisciplinary Ergonomics – School of Health Sciences	Development of an Ergonomics Intervention and Healthy Lifestyle Program to Decrease Occupational Back Injuries.
Ph.D. Occupational and Environmental Health, School of Health Sciences	Ergonomic and exposure assessment evaluation of finger radiation exposure among nuclear pharmacists.
M.S. Interdisciplinary Ergonomics	Ergonomic aspects of material handling – Amazon receiving/shipping facility.
Construction Engineering Management, Civil Engineering. Purdue University.	Design and use of Virtual Reality Environments as an investment tool in Construction Industry (tentative title).
Ph.D., Interdisciplinary Ergonomics	Ergonomics design of laboratory facilities for people (including veterans) with disabilities
M.S. Interdisciplinary Ergonomics	Ergonomic evaluation and design of surgical tools used during human surgery.
Ph.D. Industrial Hygiene, School of Health Sciences, Purdue University.	Use of Video Exposure Monitoring to Evaluate and Control Hazardous Crystalline Silica during Construction Applications (tentative title).
M.S. Interdisciplinary Ergonomics	Development of a simulation model to enable Veteran's with lower limb injuries to work in clinical laboratories
M.S. Industrial Hygiene	Laboratory Study of a Scavenging System to Evaluate and Control Airborne Pathogens for healthcare workers in the Post Anesthesia Care Unit (PACU) and Intensive Care Unit (ICU).
M.S. Industrial Hygiene	Exposure of Nanoparticles in the workplace.
Ph.D. completed (Sept 2020) — Interdisciplinary degree from Western Michigan University	Evaluation and control of Carbon Dioxide exposure in craft beer breweries.

Research Grants and Awards Received

Research is focused in four major areas:

- 1) Ergonomics (theory and applications)
- 2) Video exposure monitoring methods (exposure assessment, instrument development, and applications). The projects listed below are organized into these areas.
- 3) Regenstrief Center for Healthcare Engineering (RCHE)
- 4) Indiana State Health Department (ISHD)

1). Ergonomics

Sponsor	Topic
Abbott Labs	An Ergonomic Evaluation of Wrenching Operations in the North Chicago Maintenance Department of Abbott Laboratories (funded)
Eli Lilly	An Ergonomics Program to Reduce Musculoskeletal Injuries and Illnesses among Operators at the Lilly Technology Center, North. (funded)
Ergo Track	Validation and testing of ErgoTrack Internet software for Office Ergonomics (funded)
Starlight Foundation	Ergonomic Evaluations of Koetter Woodworking, Webb Veneer, and Batesville Casket Company. Wood Manufacturing Plants (funded)
Multi-Sponsored (ABC Keyboards)	Evaluation of an Ergonomically designed Keyboard (funded)
Fairfield/State Farm/Alcoa	Ergonomic assessments honors scholar student of 3 manufacturing plants in Lafayette, IN. (funded)
Science Applications International/Glenn Research Center/ NASA	A Pilot Study of a Cost-Effective Office Ergonomics Program Using Ergotrack Internet Software for the NASA Glenn Research Center (funded)
NIOSH	Occupational Safety and Health Training Grant (Co-PI with Rosenthal, Zimmerman) (funned)
USDA	Ergonomic Solutions for the Wood Industry (funded)
NIOSH	Gait and Balance study: Prevention of Falls from Elevations in Construction (funded)
NIOSH	Can visual references enhance balance control in the occupational environment in both younger and older construction workers? (P.I. Dr. Shirley Rietdyk) (funded)
NIOSH	How Is Postural Stability Affected by Age and Manual Materials Handling in the Occupational Environment? P.I. Drs James McGlothlin an Shirley Rietdyk) (funded)
Pfizer/	Ergonomic Program for Pfizer in Terre Haute, IN. (funded)
NIOSH/CDC	Prevention of Fatal Falls in Construction Industry (funded)
Centers for Disease Control and Prevention, NIOSH	Construction Safety Training Programs PIs. J. McGlothlin and Bryan Hubbard (Construction Engineering Management, Civil Engineering). (funded)
University of Michigan, Center for Occupational Health and Safety/NIOSH	Risk Assessment of Tripping for Construction Workers: Application of Action-Perception Theory Co-PI. J. McGlothlin, (funded)
NIOSH, University of Cincinnati Pilot Project Research Training Program	Do Optical Properties of Obstacles Affect the Risk of Tripping in Construction Workers? Co-PI. J. McGlothlin, Rietdyk, Rhea, (funded)

Human Resources, Purdue University	Development of an Ergonomics Program to Prevent Musculoskeletal Injuries and Illnesses among University Employees. PI. J McGlothlin (funded)
Centers for Disease Control and Prevention/NIOSH	Prevention through Design: Focus on the ergonomics of nanotechnology facility design and function. (funded).
"Institute for Accessible Science (IAS): Advancing Inclusion of Persons with Disabilities in Biomedical Laboratory Research" from NIH/National Institute of General Medical Sciences.	Dr. McGlothlin is a Co-PI in this 3-year award (funded), led by Dr. Bradley Duerstock of Purdue's Center for Paralysis Research. The group will use an innovative approach to create virtual environments at the Envision Center for the physically disabled to determine optimal form and functional design.

2). Video Exposure Monitoring Methods

Sponsor	Topic
Eli Lilly	The Development, Assembly, and Pilot Testing of a video Exposure
	Assessment system. PI J. McGlothlin (funded)
Eli Lilly	Videography with comparative analyses of Real-Time Monitoring versus
	Passive Monitoring to Control Methylene Chloride in an Industrial Setting. PI
	J McGlothlin (funded)
NIOSH/U-Cincinnati	The Development, Assembly, and Pilot Testing of a Video Exposure
	Assessment System J McGlothlin (funded)
NIH/CPPR/ IUCRC	Exposure Assessment and Control Strategies Using Real-Time Sampling
Consortium	Monitors and Multimedia Video Task Analysis of Pharmaceutical Operations
	PI J. McGlothlin (funded)
EVPAA	Undergraduate Instructional Equipment for Video Exposure Monitoring
	Course PI J. McGlothlin (funded)
Dean's Computer	Instruct and train Undergraduate School of Health Science Students for new
Equipment Fund	Ergonomics and Video Exposure Monitoring Courses. PI J. McGlothlin
	(funded)
Argonne National	Technical Support Services for Risk Related Materials PI J. McGlothlin
Laboratory	(funded)
NIOSH/U.Cincinnati	Development of a Video Exposure Monitoring System for Detection of
	Radiological Agents in University Laboratories. PI J. McGlothlin (funded)

National Science Foundation	Development of Video Exposure Monitoring system for the Prevention of Particulate and Solvent Exposure in the Pharmaceutical Industry. PI J.McGlothlin (funded)
Federal Aviation Administration	Center of Excellence for Aircraft Noise and Aviation Emissions Mitigation. Major award for Purdue. Focus of Dr. McGlothlin's research is on use of video exposure monitoring and wireless real-time exposure assessment and control monitoring of noise and aircraft emissions. PIs J McGlothlin (funded)
Federal Aviation Administration	Center of Excellence for Aircraft Noise and Aviation Emissions Mitigation. Major award for Purdue. Focus of Dr. McGlothlin's research is on use of video exposure monitoring and wireless real-time exposure assessment and control monitoring of noise and aircraft emissions. PIs J McGlothlin Wayson, Rosenthal, Carlson (funded)
Center for Pharmaceutical and Production Research/National Science Foundation	Use of Real-time Video Exposure Monitoring as a complementary tool for Control Banding in the Pharmaceutical Industry. PI J. McGlothlin (funded)
Purdue Research Foundation	TRASK award for innovation in the development and commercialization of a new sensor system. PI J McGlothlin (funded)
Ascension – St. Vincent Hospital System	Development of Patient-Centered Design Healthcare Environments: Current and Future State. PI. J. McGlothlin. (funded)
Ascension- St. Vincent Hospital System	Evaluation of Noise exposure and patient feedback in a hospital setting PI. J. McGlothlin (funded).
Center for Pharmaceutical Processing Research	Exposure, Risk Assessment, and Control of Antineoplastic Drugs using Video Exposure Monitoring (VEM) Methods. PI J. McGlothlin, (funded).

3. Regenstrief Center for Healthcare Engineering (RCHE)

Regenstrief Center for Healthcare	Development and development of engineering, management, and scientific methods to improve healthcare deliver on a national scale. (PI: President Martin
Engineering	Jischke, several CO-PI's including J. McGlothlin: (funded in perpetuity).
Regenstrief Center for Healthcare Engineering	Lifestyle and Behavioral Risk Factors in the Workplace: The Relationship between Healthy Lifestyle and Health in the Workplace (funded)

4. Indiana State Health Department (ISHD)

Indiana State Health Department (ISHD)	Development of a rapid detection system for the Avian Flu. PI J. McGlothlin (funded)
Indiana State Health Department (ISHD)	Year 1 Pandemic Exercise Preparedness Program Drills and Tabletop Exercises for Local Public Health Departments. Development and Planning for District Functional Exercises. PI's: Timothy Collins, James McGlothlin, Pam Aaltonen and Dean Larson (funded)
Indiana State Health Department (ISHD)	Year 2 Pandemic Exercise Preparedness Program Drills and Tabletop Exercises for Local Public Health Departments. Development and Planning for District Functional Exercises. PI's: Timothy Collins, James McGlothlin, Pam Aaltonen and Dean Larson (funded)

5. Centers for Disease Control and Prevention (CDC)

CDC	Linked Human-Animal Systemic Health Surveillance, Management, and
	Response. PI Dave Ebert, Co-PI's Sandy Amass, Marianne Ash, Alok
	Chaturvedi, William Cleveland, Edward Delp, Ahmed Elmagarmid, Larry
	Glickman, James McGlothlin, Mourad Ouzzani.
CDC/NIOSH	Real-Time Video Monitoring of Ergonomics and Radiation Exposure in a
Through University	Nuclear Pharmacy. PI J. McGlothlin, (funded).
of Michigan	
CDC	Develop of Prevention through Design demonstrations applied to
	Nanotechnology Research and Development at Academic Institutions (funded)

6. National Institutes for Health

NIEHS	R15: Mixed Metals Research and Neurologic function testing. (R-15 –
	Research Grant)

7. Becton Dickenson (BD)

BD	Contract to advance Molecular Diagnostics using the Molecular HUB.org
	portal and Purdue's HubZero server system for research scientists all over the
	world (funded).

8. Teleflex

Aug. 2013	July 2015	Teleflex	Contract to advance exposure assessment for control
			of waste anesthetic gases and pathogens in the Post-
			Anesthetic Care Unit (PACU) (funded).

9. Consultant McGlothlin Ergonomics, LLC

Grand Valley State	Consulting contracts to advance ergonomics research, service, and the law.
University; OSHA,	
NASA,	

10. Michigan Occupational Safety and Health Administration (MIOSHA).

MIOSHA, GVSU	Contract to develop a portable video exposure monitoring (VEM) system to					
	detect hazardous agents in the work environment.					

11. Ergonomics: Expert Witness Consulting (national).

Various clients	Provide ergonomics expertise to various clients involved in legal disputes -
	national.

12. Ergonomics Evaluations and Training:

Amway, Michigan	Ada,	Provide manager	- C	assessment	expertise	and	training	to	workers	and
		Ü								
Hayworth, Z Michigan	Zeeland,	Provide manager	_	assessment	expertise	and	training	to	workers	and
Abbvie, Cin	cinnati,			assessment	expertise	and	training	to	workers	and
ОН		management.								

Total grants and awards to the School of Health Sciences and to Purdue University with Dr. McGlothlin's grantsmanship and assistance from others since arriving at Purdue University (January 1999 to the present) is significant.

Over 85% of the students have been supported with external or intramural funding where Dr. McGlothlin has been the major advisor. Since arriving at Purdue in 1999, Dr. McGlothlin has been supported at 100% by external and/or intramural funds.

Major awards include:

- The establishment of the Regenstrief Center for Healthcare Engineering (RCHE), where Dr. McGlothlin was a co-author of the grant that has received more than 17 million dollars to date. Former President Martin Jischke was the PI for this grant.
- Federal Aviation Administration grant for developing a sensing system for detecting airborne toxins from jet airplane exhaust, and a toxicology risk assessment from Hazardous Airborne Particulates.
- Ergonomics Program Development supported by the Human Resources Department at Purdue These funds support a Ph.D. student and partial annual and summary salary for Dr. McGlothlin.
- National Science Foundation, the Center for Pharmaceutical Processing Research, and Indiana State Health Department funding (includes TRASK funding to develop VEM technology), to develop real-time video exposure monitoring systems to improve exposure assessment methods in the occupational and public health environment.

Academic and Technical Committee Activities

Director, Service Initiative for Study Abroad Program, Purdue University, College of Health and Human Sciences.

Senate Advisory Council Member. Advises Purdue's President on University Policies and Procedures.

Special Emphasis Panel Member, Centers for Disease Control and Prevention/National Institute for Occupational Safety and Health, Evaluation of United States State Surveillance Programs.

Chair: Accreditation Board for Engineering and Technology (ABET), Applied Science Accreditation Commission for the School of Health Sciences Undergraduate and Graduate Programs.

Technical Director Regenstrief Center for Healthcare Engineering.

Provost's Academic Emergency Preparedness Committee.

University Pandemic Preparedness Committee for the Avian Flu.

Academic and Research Continuity Committee for the Avian Flu.

Purdue University Wellness Committee.

Graduate Curriculum Committee: School of Health Sciences.

Chair: Education Policy Committee, Purdue University.

Senator: Purdue University. August.

Multiple Site Reviewer: Educational Resource Centers (ERCs) for the Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (CDC/NIOSH).

Grant Reviewer: Several, most recent: Centers for Excellence to Promote a healthier Workforce for the Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (CDC/NIOSH).

Editorial Board of the American Industrial Hygiene Association.

Editorial Board of the Occupational Hazards Magazine.

American Industrial Hygiene Conference and Exposition (AIHCE) Student Abstracts Reviewer: Annual review with Kent Oestenstad as chair from the University of Alabama, of more than 50 student abstracts for poster presentation at the AIHCE.

Chair: Student Poster Abstracts AIHA.

Reviewer: Student Poster Abstracts AIHA

Ergonomics Committee, American Industrial Hygiene Association.

Chairman, Ergonomics Committee. American Industrial Hygiene Association.

Course Director/Instructor, Ergonomic Control Programs to Reduce Injuries in the Workplace, Northwestern University. Chicago, Illinois.

Course Director/Instructor, Ergonomic Control Programs to Reduce Back Injuries in Industry. University of Cincinnati, Ohio.

Course Instructor, Upper Extremity Cumulative Trauma Disorders, Division of Training and Manpower Development, National Institute for Occupational Safety and Health. Cincinnati.

Program Committee, International Ergonomics Association World Conference, 3rd Latin American Congress, 7th Brazilian Ergonomics Congress, Rio de Janeiro, Brazil.

Course Director/Instructor, The Use of Real Time Instruments to Evaluate Ergonomic and

Industrial Hygiene Problems. University of Cincinnati, Institute of Environmental Health, Cincinnati, Ohio.

Chairperson, Ergonomics Committee, All-Ohio Safety and Health Congress Exhibit.

Technical Program Chairperson, International Industrial Ergonomics and Safety Conference, Cincinnati, Ohio.

Chairperson, Ergonomics Committee, American Industrial Hygiene Association.

Vice-Chairperson, Ergonomics Committee, All-Ohio Safety and Health Congress and Exhibit.

Member, International Program Advisory Committee, International Industrial Ergonomics and Safety Conference.

Laboratory Director/Instructor: Use and Application of Industrial Hygiene Sampling Instruments, University of Hawaii.

Graduate Student Researcher. Research on Environmental factors influencing the incidence of prostate cancer among Americans of Japanese ancestry, at Kuakini Hospital, Honolulu, Hawaii.

Public Health Representative for Graduate Student Organization, University of Hawaii.

Chairperson, Student Health Committee, University of Hawaii. Worked as team member to establish University-wide health care system in conjunction with student health insurance (Blue Cross/Blue shield).

Academic Appointments:

Western Michigan University: Interdisciplinary Studies,

Calvin University, Department of Epidemiology, Grand Rapids, Michigan

Grand Valley State University, Grand Rapids, Michigan.

Courtesy Appointment: School of Technology, Department of Industrial Technology, Purdue University

Adjunct Professor of Ergonomics and Industrial Hygiene, University of Iowa.

Adjunct Professor of Industrial Engineering, Ohio State University, Columbus, Ohio.

Adjunct Associate Professor of Industrial Engineering, University of Cincinnati, School of Engineering, Cincinnati.

Adjunct Assistant Professor of Environmental and Industrial Health, Institute of Environmental Health, University of Cincinnati, Cincinnati, OH.

Adjunct Assistant Professor of Industrial Engineering, West Virginia University, School of Engineering, Morgantown, West Virginia.

Current Memberships:

American Society of Safety Professionals (ASSP).

Commissioned Officers Association, United States Public Health Service.

American Industrial Hygiene Association. (AIHA)

International Occupational Hygiene Association (IOHA)

Human Factors and Ergonomics Society. (HFES)

International Ergonomics Association (IEA)

Indiana Chapter of the Public Health Association

Western Michigan Industrial Hygiene Association

Michigan Industrial Hygiene Society, Lansing, Michigan

Publications:

Books:

McGlothlin, J.D., (eBook to be published May - 2021) Video Exposure Monitoring: Exposure Assessment Tools and Techniques. To be published under Amazon Academic Press.

Bhattacharya, A., & McGlothlin J. D. (Eds.). (Feb. 2012). *Occupational ergonomics:* From theory to application. 2nd Edition. New York: John Wiley Publishers.

Bhattacharya, A., & McGlothlin J. D. (Eds.). (1996). Occupational ergonomics: From theory to application. New York: Marcel Dekker.

Kroemer, K. H. E., McGlothlin, J. D., & Bobick, T. G. (Eds.). (1989). *Manual material handling: Understanding and preventing back trauma*. Cincinnati, OH: American Industrial Hygiene Association.

Children's Books:

McGlothlin, J.D.; Turtle on the Fencepost. CreateSpace Independent Publishing Platform; First Edition edition (September 5, 2012)

McGlothlin, J.D., <u>Epperly</u>, B., and <u>Bassford</u> L.; (Illustrator); Lorelei and the Flutterby. CreateSpace Independent Publishing Platform; First Edition edition (June 3, 2018)

Book Chapters:

McGlothlin, J. (2021). Video exposure monitoring. *Patty's Industrial hygiene and toxicology* (released in Spring of 2021). *Vol 2*, **7**th **ed**. New York: Wiley.

Moenning, J. E., Krenzischek, D. A., & McGlothlin, J. D. (2020). Waste Anesthetic Gases (WAGs): Minimizing Health Risks and Increasing Awareness. In *Advanced Practice and Leadership in Radiology Nursing* (pp. 149-159). Springer, Cham.

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Mangharam, J., & McGlothlin, J. D. (1998). Chapter 2 - Ergonomics and dentistry: A literature review. In D. Murphy (Ed.), *Ergonomics and the dental care worker (*pp. 25-81). Washington, DC: American Public Health Association.

McGlothlin, J. D., Gressel, M. G., Heitbrink, W. A., & Jensen, P. A. (1996). Real-time exposure assessment and job analysis techniques to solve hazardous workplace exposures. **In** A. Bhattacharya & J. D. McGlothlin (Eds.), *Occupational ergonomics:* From theory to application (pp. 699-718). New York, NY: Marcel Dekker.

Marras, W. E., McGlothlin, J. D., McIntyre, D. R., Nordin, M., & Kroemer, K. H. E. (1994). Dynamic measures of low back performance. In *American Industrial Hygiene Association guidebook* Fairfax, VA: AIHA.

Jensen, P. A., Fischbach, T. J., O'Brien, D. M., Todd, W.F., & McGlothlin, J. D. (1991). Application of a ventilation model to real-time nitrous oxide exposure data at dental operatories. In R. T, Hughes, H. D. Goodfellow, & G. S. Rajhans. (Eds.), *Ventilation '91: 3rd International symposium on ventilation for contaminant control* Cincinnati, OH: American Conference of Governmental Industrial Hygienists.

Pizatella, T. J., McGlothlin, J. D., & Putz-Anderson, V. (1989). An overview of NIOSH research activities to reduce low back injuries. In K. H. E. Kroemer, J. D. McGlothlin, & T. G. Bobick, (Eds.). *Manual material handling: Understanding and preventing back trauma* (pp. 103-108). Fairfax, VA: American Industrial Hygiene Association.

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McGlothlin, J. D., Jensen, P. A., Gressel, M. G., & Heitbrink, W. A. (1988). Ergonomic applications and control of chemical aerosols. In F. Aghazadeh (Ed.) *Trends in ergonomics/human factors V: proceedings of the Annual International Industrial Ergonomics and Safety Conference* (pp.333-343). Amsterdam: North-Holland.

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McGlothlin, J. D., Wilcox, T. C., & Fajen, J. M. (1981). A health hazard evaluation of nitrosamines in a tire manufacturing plant. **In** G. Choudhary (Ed.), *Chemical hazards in the workplace: Measurement and control* (pp. 283-299). (ACS symposium series, 149) Washington, DC: American Chemical Society.

Peer-Reviewed Technical Articles for Journals & Proceedings:

Horton, J., Applegate, B., McGlothlin, J.D., (Spring 2021) Evaluation of a Waste Anesthesia Gas Mask Scavenging System to Reduce Airborne Pathogen Exposure in Post Anesthesia Care Health Workers. Science Open Access.

McGlothlin, J.D., (June, 2021). The 21st Triennial Congress of the International Ergonomics Association – Vancouver, Canada: A Pilot Study for the Ergonomic Design of a Clinical Laboratory for People with Lower Limb Disabilities Working from

Wheelchairs. IEA press.

Keer, S., Taptiklis, P., Glass, B., McLean, D., McGlothlin, J. D., & Douwes, J. (2018). Determinants of Airborne Solvent Exposure in the Collision Repair Industry. *Annals of work exposures and health*, *62*(7), 871-883.

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Keer, S., Glass, B., McLean, D., Harding, E., Babbage, D., Leathem, J., McGlothlin, J.D., & Douwes, J. (2017). Neuropsychological performance in solvent-exposed vehicle collision repair workers in New Zealand. *PloS one*, *12*(12), e0189108.

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Samuel Keer1, Bill Glass1, Bradley Prezant1, David McLean1, Neil Pearce, Elizabeth Harding, Diana Echeverria, **James D. McGlothlin**, Duncan R. Babbage, Solvent neurotoxicity in vehicle collision repair workers in New Zealand. Neurotoxicology. 2016 Dec;57:223-229.

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 Purdue University, February 2021
 President and Founder McGlothlin Ergonomics, VEM Systems, LLC & STS LLC
 - exposure monitoring and analyses. In *Proceedings of the 15th Triennial Congress of the International Ergonomics Association, Seoul, Korea.* International Ergonomics Association.
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 - **McGlothlin, J. D.,** & Lee, R.C. (2002) An ergonomic evaluation and redesign of office workstations to decrease reported musculoskeletal discomfort using an internet-based office ergonomics program. **In** *Proceedings of the Human Factors and Ergonomics Society* 46th Annual Meeting: bringing fundamentals & new opportunities: Baltomore, MD (pp 1227-1231). Santa Monica, CA: Human Factors and Ergonomics Society.
 - **McGlothlin, J. D.,** Vosicky, J., & Protopapas, E., (2000). Multimedia video-based data acquisition and analysis applications for ergonomics research. Proceedings of the XIVth Triennial Congress of the International Ergonomics Association and the 44th annual meeting of the Human Factors and Ergonomics Society: ergonomics for the new millennium, San Diego, CA (v. 5, pp. 120-123), Santa Monica, CA: Human Factors and Ergonomics Society.
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 President and Founder McGlothlin Ergonomics, VEM Systems, LLC & STS LLC
 - Exposition, Nashville, Tennessee., September 16-17, 1997.
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- James D. McGlothlin, MPH, Ph.D., CPE, FAIHA. Faculty Scholar & Professor Emeritus
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 - Pizatella, T. J., Putz-Anderson, V., Bobick, T. G., **McGlothlin, J. D.**, & Waters, T. R. (1992). Understanding and evaluating manual handling injuries: NIOSH research studies. *Ergonomics* 35(9):945-953.
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McGlothlin, J. D., Wilcox T (1979). Hazard Evaluation and Technical Assistance Report: Kelly Springfield Tire Company, Cumberland, Maryland. Cincinnati, OH: U.S. Department of Health, Education, and Welfare, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health, NIOSH Report No. HETA-79-109-1538.

YouTube Vignettes on safe practices for wearing masks to prevent the spread of COVID-19(2020=2021.

- https://studio.youtube.com/video/Kkw x8Nk17Y/analytics/tab-overview/period-default
- https://studio.youtube.com/video/jlxXRLv hlo/comments/inbox?filter=%5B%7B%22name%22%3A%22ENGAGED STATUS%22%2C%22value%22%3A%22COMMENT CATEGORY NOT ENGAGED%22%7D%5D

https://studio.youtube.com/video/QluMsXdkkrc/comments/inbox?filter=%5B%7B%22name%22%3A%22ENGAGED STATUS%22%2C%22value%22%3A%22COMMENT CATEGORY NOT ENGAGED%22%7D%5D

Invited Talks and Presentations:

Dr. McGothlin has given more than 650 international, national, regional, and local presentations/talks in his professional career. These talks range from invited key note presentations at international conferences to local talks ranging from industry to student associations.

Most recent selected Talks and Professional Presentations:

2021: American Industrial Hygiene Association, Hawaii Local Section. The facts and factors on wearing a mask during the COVID-19 pandemic. February Virtual Presentation.

2020: Keynote Presentation. SemeAD, Brazil. The Surgical N95 and Surgical (Face) Masks during Pandemics: A Human Factors/Ergonomics Perspective. November 24th, 2021

2020, Distinguished Lecturer, Canada - AIHA APS Section A Human Factors/Ergonomics Perspective of the Surgical N95 Respirator and Face Mask during the COVID-19 Pandemic, November 12.

2019: Distinguished Lecturer on "Video Exposure Monitoring" as the Key Note Speaker at RGAIHA (New Mexico AIHA section) Technical Meeting Thursday Oct. 24^{th} .

2018 Talks and Professional Presentations:

Ethics: Will you do the right thing when no one is looking? ASSE, March

Ergonomics in Healthcare. Michigan Safety Conference, April

2017 Talks and Professional Presentations:

Wellness Programs, Safety and Ergonomics, Michigan Safety Conference, April

Ergonomics in the Laboratory, NASA, KSC, June

Wellness Programs and Ergonomics, NASA, KSC, June

2016 Talks and Professional Development Courses include:

Professional Development Courses on Ergonomics and Video Exposure Monitoring for the American Society of Safety Engineers at South Missouri State University, April 16-18th, 2016.

American Industrial Hygiene Conference and Exposition, Baltimore, Maryland, Platform presentation on the Laboratory Ergonomics (presented by co-authors as proxy for Dr.McGlothlin who was on a study abroad mission to Peru). May, 21-26th, 2016.

Attendance and Presentation of Invited Talks on: Occupational Ergonomics and Wellness Programs for NASA Engineers, and Video Exposure Monitoring. Presented at Kennedy Space Center, Cape Canaveral, Florida. June 13-17th, 2016.

Indiana Innovations Showcase: Talk on Video Exposure Monitoring and demonstration of technology. Indianapolis. July 13-14, 2016.

Michigan Industrial Hygiene Society Troy, Michigan. Featured Speaker: Innovations in Exposure Assessment: A new exposure Assessment Tool – Video Exposure Monitoring. October 5th, 2016.

GVSU: Global Health Showcase. Study Abroad Service Projects – How to develop and sustain a successful study abroad service project (Purdue University Model). October 14th, 2016.

ASSE: Presentation on the Intersection of Ergonomics and Safety. GVSU. October, 26th, 2016. Grand Rapids, Michigan.

ENGAGEMENT

Community Services:

Eaton	South Bend	Custom forgings: gears & shafts for truck, industrial & other vehicle components.	90	Ergonomic analyses and recommendations for hourly employees.
FBi Buildings, Inc.	Remington Commercial construction company.		300	Evaluation of ergonomic issues in both office and factory operations.

James D. McGlothlin, MPH, Ph.D., CPE, FAIHA. Faculty Scholar & Professor Emeritus
Purdue University, February 2021
President and Founder McGlothlin Ergonomics, VEM Systems, LLC & STS LLC

Delco Remy International	Anderson	Starting motors, generators, high energy ignition systems, horns, switches, controls & batteries, permanent magnets.	200	Address arm and shoulder ergonomic issues, and methods of monitoring ergonomic problems.
Wabash MPI	Wabash	Manufactures hydraulic, laboratory, laminating & molding presses	90	Review of potential ergonomic issues.
Dexter Axle	North Manchester	RV axle components, electric brakes, hubs and drums.	400 Improvement of worker ergonomics.	
Bottcher America Corp.	Tipton	Re-cover printing press rollers.	50	Evaluation of worker safety issues.
ITW Ramset/Red Head	Michigan City	Manufactures concrete anchoring systems.	75	Reduction of repetitive stress injuries.
FBi Buildings, Inc.	Remington	Commercial construction company.	300	Improvement of worksite ergonomics.
Cook Biotech	West Lafayette	Commercial Economic, Sociological & Educational Research.	60	Development of a comprehensive production safety plan.
Ryder Integrated Logistics	Plainfield	Logistics and transportation.	470	Ergonomics review.
Dynamic Corporation	Montmorenci	Electrical resistors	30	Noise level reduction.
MCC Inc.	Indianapolis	Consultant	Interpretation of OSHA regulations regarding power cranes.	
Kirby Risk Precision Machining	Lafayette	Machine shop: CNC, general & specialty machinging, blanchard & surface grinding, flame cutting, drilling, lathe & mill work.	65	Analysis of a potentially dangerous substance in a manufacturing plant.
Laibe Corporation	Indianapolis	Manufactures water well drilling rigs & supplies.	110	Provide method for measuring the force required to depress a clutch on a truck chassis.

Federal Government Service:

Special Emphasis Panel Reviewer (SEP) for State Surveillance Programs in the U.S. National Institute for Occupational Safety and Health (CDC/NIOSH) – September 2009 – present.

Site Reviewer: Educational Resource Centers (ERCs) for the Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (CDC/NIOSH) – September 2005 – present

Grant Reviewer: Several, most recent: Centers for Excellence to Promote a healthier Workforce for the Centers for Disease Control and Prevention, National Institute for Occupational Safety and Health (CDC/NIOSH) – November 2005 – present.

Ex-officio. Surgeon General's Professional Advisory Committee, Health Services Officer subcommittee for the development of a commemorative stamp series for the 1998 PHS Bicentennial.

Chairperson, Surgeon General's Professional Advisory Committee, Health Services Officer Category, 1992 - 1993.

Vice Chairperson, Surgeon General's Professional Advisory Committee, Health Services Officer Category, 1991 - 1992.

Environmental Committee Chairperson, Surgeon General's Professional Advisory Committee (PAC) of the United States Public Health Service, Member, Health Services Officer October, 1988-1991.

President, National Commissioned Officers Association, 1989-1990.

Vice-President, National Commissioned Officers Association, 1988-1989.

Chairperson, Field Concerns Committee, Commissioned Officers Association, 1989-1992.

Chairperson, Ergonomics Committee, All-Ohio Safety and Health Congress and Exhibit, 1990.

Vice-Chairperson, Ergonomics Committee, All-Ohio Safety and Health Congress and Exhibit, 1989.

Program Chairperson, International Program Advisory Committee, International Industrial Ergonomics and Safety Conference, 1989.

Member, International Program Advisory Committee, International Industrial

Ergonomics and Safety Conference, 1987-present.

Recorder, Commissioned Officers Association, 1987-1988.

President, Cincinnati Chapter Commissioned Officers Association, 1986-1987.

Chairperson, Vice Chairperson, and Program Chairperson for Ergonomics Committee, American Industrial Hygiene Association. Offices in succession 1986-1988.

Committee member, Resolution and Constitution Committee. Commissioned Officers Association, U.S. Public Health Service. September 1989.

Inventions:

Three Patents, one patent pending:

- Patent: 6,094,780 Ergonomic Handle for Terminal Insertion Tool. James D. McGlothlin, Ova Johnson, Cherie Estill.
- Patent: 7,126,121. Real-Time Video Radiation Exposure Monitoring System. James D. McGlothlin, Wei-Hsung Wang, Ryan M. Traylor.
- Patent: 7,205,891 Real-Time Wireless Video Exposure Monitoring System. James
 D. McGlothlin, Ryan M. Traylor, John Leimgruber.:

Honors/Awards:

Safety Professional of the Year for 2021: Nominated in 2020 by Local Section President Rich DeLeau, Grand Rapids, Michigan. American Society of Safety Professionals (ASSP) for 2021 award.

Teacher of the year 2015: Landolt Teaching Award, Purdue University

AIHA Servicer Award June 2015: In recognition of service to the Student Abstract Review Process and enabling the next generation of Industrial Hygienists to showcase student research at the annual AIHce in Salt Lake City, Utah.

AIHA Volunteer Group Service Award June 2015. In recognition for dedication to the Ergonomics Committee and the NIOSH Recommended Exposure Limit Apple App. Presented at the AIHce June 2015, Salt Lake City, Utah.

AIHA Volunteer Group Service Award. Ergonomics Committee - top 10. 2010-2015.

American Industrial Hygiene Association Fellow. Awarded March 2006.

Regenstrief Scholar (to-date: 1 of only 5 awarded) at Purdue University. Awarded to faculty who have distinguished themselves in healthcare delivery research. Awarded January 2006.

Faculty Scholar, Purdue University. In recognition of outstanding academic distinction, Awarded Spring 2004. This award will continue for five years.

Faculty Focus Award. In recognition of outstanding contributions to the further of Purdue, 2004 University's commitment to disability accessibility and diversity

Quality and Safety Achievement Recognition (QASAR) Award, NASA, Cleveland, Ohio, 1999

Stanley J. Kessel Award. CAPT James McGlothlin was awarded the 1998 Stanley J. Kissel Award for Outstanding Health Services Professional of the Year at the Commissioned Officers Association (COA) meeting in Alexandria, VA. The recipient must have had made a significant impact on the nation's health, exhibited leadership in the achievements being cited, and must serve as a role model for others. CAPT McGlothlin was selected for this award based on his outstanding leadership in applying occupational safety and health research methods in designing, developing, and disseminating information for the American worker for over 20 years.

Outstanding Service Medal. For 20 years of contributions to the U.S. Public Health Service to preserve and protect employee safety and health for the Nation. Awarded on December 9, 1997.

Alice Hamilton Award for Excellence in Science (Honorable Mention). Engineering and Physical Sciences Category, for published report: Ergonomic Interventions for the Soft Drink Industry, DHHS (NIOSH) Publication No 96-109. Citation as follows: This report describes an ergonomic evaluation of the drivers who deliver soft drinks, and has led to the implementation of many control measures that reduce injuries. These new controls can benefit more than 100,000 workers who are employed everywhere. The research is exemplary in following the problem from the evaluation of the injuries through the design of controls and on the effectiveness of the interventions Presented October 8, 1997.

Exemplary Service Award. As a commendation for significant contributions to the mission of the Chief Dental Officer, presented by ADM Robert J. Collins, Chief Dental Officer, May 31, 1995.

Certificate of Excellence. For significant contributions made to the American's with Disabilities Act and Ergonomics Train-the-Trainers Workshop. Presented by Gilbert F. Casellas, Chairman, May 18, 1995.

Surgeon General's Exemplary Service Medal. For Exemplary Service to the Office of the Surgeon General, presented by the Office of the Surgeon General, October 15, 1993, Cincinnati, Ohio.

Surgeon General's Exemplary Service Medal. For Exemplary Service to the Office of the Surgeon General, presented by the Surgeon General, awarded November 5, 1992, Rockville, Maryland.

Commendation Medal. From the Surgeon General for Exemplary Performance of Duty as Editor and Publisher of the *Health Services Reporter*, presented at the Office of the Surgeon General, April 24, 1990.

Unit Commendation. For Exemplary Performance of duty for service in NIOSH field studies, presented February 14, 1995.

Unit Commendation. For Exemplary Performance in Organizing and Directing Transportation through the Military Airlift Command for 75 officers of the U.S. Public Health Service to Scottsdale, Arizona, in June, 1993.

Unit Commendation. For Exemplary Performance as Director of Protocol, and Director of Transportation, during the 27th Annual US Public Health Service Professional Association Meeting, April 25 - 28, 1992

Unit Commendation. For Exemplary Performance of Duty in the development and teaching of a Professional Development Course in Ergonomics, for the Division of Training and Manpower Development, National Institute for Occupational Safety and Health, January 30, 1992.

Unit Commendation. For Exemplary Performance of Duty in assisting the Occupational Safety and Health Administration to develop guidelines for reducing injuries and illnesses in the meatpacking industry, January, 31, 1992.

Recognition Award for "Significant Contributions made in Organizing and Promoting the 1989 International Industrial Ergonomics and Safety Conference." Cincinnati, Ohio, June 5-9, 1989.

Nominated for American Industrial Hygiene Best Poster Session Award. Jensen, P.A., Heitbrink, W.A., McGlothlin, J.D., Problems in Using a Miran 1A for Real Time and Personal Sampling. <u>American Industrial Hygiene Association</u>, St. Louis, Missouri, 1989.

Long-term training assignment for doctoral work in ergonomics at the University of Michigan (September 1981 - March, 1984).

Honorable mention for the National Institute for Occupational Safety and Health <u>Alice Hamilton Award</u> for best peer-reviewed paper of the year, [Gressel, M.G., Heitbrink, W.A., McGlothlin, J.D., Fischbach, T.J.; "<u>Real-Time</u>, <u>Integrated</u>, and <u>Ergonomic Analysis of Dust</u>

Exposures During Manual Materials Handling," Applied Industrial Hygiene Journal. Volume 2, No. 3 pp. 108-113, May 1987]. February 29, 1988.

Nominated for the Centers for Disease Control 1988 <u>Charles C. Shepard Science Award</u> for the best scientific paper of the year, 1988.

Certificate of Appreciation from the Centers for Disease Control for the <u>Development of an Innovative Approach to the Study of Dust Exposure in the Manual Weigh-Out of Chemical Powders</u>, February, 1987.

Certificate of Appreciation from the National Institute for Occupational Safety and Health for <u>Contributions to the Success of the First National Symposium on Prevention of Leading WorkRelated Diseases and Injuries</u>, May, 1985.