Ballot Position: DIERS Chair

Harold G. Fisher Principal Consultant FisherInc (304) 776-6371 fisherhg@suddenlink.net



Professional Biography

Harold retired in 2001 from the Union Carbide Corporation Reaction Systems Group after 40-1/4 years as a Principal Engineer and the corporate reactive technologist for reactive emergency relief system design. He then founded a consultancy and affiliated with Fauske & Associates, LLC.

Harold graduated from Syracuse University in 1961 with a BSChE. He earned MSChE, MSE (IE) and MBA degrees from West Virginia University in 1968, 1971, and 1974. He retired in 1991 from the US Army Reserve as a Colonel of Ordnance (Ammunition) after 30 years of service.

Harold is a 54 year member and Fellow of AIChE. In 1976 he became Chair of the DIERS research program two-phase flow onset / disengagement committee and in 1981 he became the Technical Chair of DIERS. In 1986 he was elected as Chair of the newly formed DIERS Users Group and has since been reelected every two years.

Harold taught Process Safety in the MSChE programs of West Virginia University and Marshall University. In 1986 he was a founding instructor of the AIChE / DIERS continuing education course "Emergency Relief Systems Design Using DIERS Technology" and taught the course through 2012. He was the editor and contributor to the AIChE / DIERS 1992 DIERS Project Manual. He was co-editor and contributor to the three AIChE / DIERS International Symposia books on "Runaway Reactions, Pressure Relief Design, and Effluent Handling" published in 1995, 1998, and 2005. He is an editor and contributor to the second edition of the CCPS / DIERS book "Guidelines for Pressure Relief and Effluent Handling Systems" to be published in 2015. He has published numerous journal articles.

Position Statement: DIERS Chair

The DIERS research program changed a chemical engineering paradigm – the methodology used to size pressure relief devices for runaway reactions involving two-phase flow venting. DIERS has become the relevant RAGAGEP technology.

The DIERS Users Group was formed by the 29 companies that participated in the DIERS research program. The company based membership increased to over 250 to include approximately 75 percent domestic and 25 percent international companies. 54 semi-annual 3-day technical meetings and three International Symposia have been conducted in 30 cities to include three meetings in Canada and one Joint US – European DIERS meeting in Hamburg, Germany during the last 28 years. Approximately 625 technical presentations have provided a learning environment for the company representatives. 19 industrial (chemical production plants; SRV, RD, and BV manufacturing facilities; and equipment supplier laboratories) visits and 12 computer and laboratory equipment training sessions have also been conducted in conjunction with the semi-annual technical meetings. A combination of computational and / or experimental round-robin exercises have been conducted almost every year since the formation of the DIERS Users Group.

DIERS has recently become involved with a research program started by others to understand the stability and prevent chattering of safety relief valves. DIERS will host a full track (27 papers) in nine sessions during the April AIChE / CCPS Global Congress on Process Safety. DIERS members will also participate in the Second Joint US – European

DIERS meeting in Düsseldorf, Germany during June. The semi-annual Fall DIERS meeting will be held in Houston during the period late September to early November.

The reorganization of DIERS from corporate representation to individual membership will provide a basis for further growth. The election in February of a seven person operating committee with specific duties for each position and well as a chair and vice-chair / secretary will provide a new and expanded leadership structure. New general (non-funded) and special (funded) projects as well other initiatives and activities are planned and underway to increase the scope and breadth of DIERS technical and outreach programs.

There will be many opportunities for all to suggest, participate, champion, and lead DIERS activities. Corporate suggestions for new funded and unfunded initiatives and projects are welcomed and are being solicited. The technical ideas and leadership efforts of individual members will do much to advance and complete these and other new projects. All are encouraged to become DIERS Members and to become involved with and participate in the many activities of the new DIERS.

Ballot Position: DIERS Vice Chair/Secretary (1/2)

Candidate 1:

Georges A. Melhem, Ph.D. President and CEO ioMosaic Corporation (603) 893-7009 melhem@iomosaic.com



Professional Biography

Dr. Melhem is President and CEO of ioMosaic Corporation. Since 1988, he has conducted and participated in numerous risk management and quantitative risk assessment studies. These studies primarily focused on the risks associated with process industries fixed facilities, facility siting, business interruption, and transportation.

Dr. Melhem is an internationally known pressure relief systems design, chemical reaction systems, process safety, and risk analysis expert. In this regard he has provided consulting and design services, expert testimony and incident investigation support and reconstruction for a large number of clients.

Prior to founding ioMosaic Corporation, Dr. Melhem was president of Pyxsys Corporation; a technology subsidiary of Arthur D. Little Inc. Prior to Pyxsys and during his twelve years tenure at Arthur D. Little, Dr. Melhem was a vice president and managing director of Arthur D. Little's Global Environmental, Health, Safety, and Risk Management Practice and its Process Safety and Reaction Engineering Laboratory.

Dr. Melhem holds a Ph.D. and an M.S. in Chemical Engineering, as well as a B.S. in Chemical Engineering from Northeastern University. In addition, he has completed executive training in the areas of Finance and Strategic Sales Management at the Harvard Business School. He is a Fellow of AIChE.

Position Statement: DIERS Vice Chair/Secretary

I am a seasoned and experienced technology and management executive. I attended my first DIERS Users Group meeting in 1992. Since that time I have been at every meeting and continue to be a very active member. I have been a significant contributor to DIERS over the past 22 years.

If elected to the vice chair position, I will focus on several key objectives that will grow and enhance the DIERS organization and its outreach including but not limited to:

- (1) Align and increase cross-collaboration between DIERS and other leading industry associations such as API and ASME in the areas of relief and flare systems.
- (2) Development of practical guidance to enhance industrial safety by using DIERS knowhow through a variety of training avenues, publications, software, and guidelines.
- (3) Development and funding of industrial research programs geared at solving practical industrial problems that enhance safety and environmental stewardship.
- (4) Launch of a new outreach and marketing programs for more exposure and to increase membership.

Ballot Position: DIERS Vice Chair/Secretary (2/2)

Candidate 2:

Dustin Smith, P.E.

Principal Engineer Smith & Burgess (713) 802-2647 Dustin.Smith@SmithBurgess.com



Professional Biography

Dustin has been actively involved in relief systems design for over fifteen years. His engineering career began as a consultant with Berwanger in 1998, continuing after the company's acquisition by Siemens in 2006. In 2007, he and John Burgess formed their own company, Smith & Burgess. As a Principal Engineer for Smith & Burgess, Dustin continues to solve complex relief systems problems for clients around the world.

Dustin graduated from Texas A&M University in 1998 with a BSChE and obtained his P.E in 2007. He became involved with DIERS in 2011 and remains an active member, regularly presenting on numerous topics. Currently, Dustin is leading several industry efforts and task groups associated with the American Petroleum Institute's Subcommittee on Pressure-Relieving Systems (SCPRS).

Position Statement: DIERS Vice Chair/Secretary

In the past, the DIERS research program changed the chemical engineering paradigm. Currently, the DIERS Users Group has become a place to discuss technical topics relevant to relief systems and associated RAGAGEP technology. If elected to this position, it is my intent to focus on the following:

Increase membership and meeting attendance...

- ... by increasing awareness of DIERS meetings and topics covered through the use of social media, e-mail marketing, and other communication tools.
- ... by partnering with local universities and working with students to provide opportunities for select student presentations during DIERS meetings.
- ... by coordinating the attendance of a local DIERS delegate at AIChE group meetings prior to DIERS meetings. For instance, the DIERS group should have a presence, with or without a booth, at the 6th Annual AIChE Southwest Process Technology Conference meeting on October 9-10, 2015 in Houston prior to the Fall DIERS meeting. Participation will allow us an opportunity to network with AIChE members and promote our organization locally.

Increase speaker diversity...

... by working with the other committee members to support our newer members (or others who have not previously presented) by deflecting criticism and by providing topics and mentoring in the area of presentation development.

Start a new member funnel...

... through partnerships with other committee members and senior DIERS members to promote our group's identity within the educational marketplace through direct speaking engagements at universities, AIChE group meetings, and in safety-related classrooms.

Ballot Position: DIERS Operating Committee – At-Large Position #1: Finance Chair

Wayne Chastain, P.E.

Engineering Associate Eastman Chemical Company (423) 224-0553 <u>chastain@eastman.com</u>



Professional Biography

Mr. Chastain is an Engineering Associate at the Kingsport, TN site of Eastman Chemical Company. Wayne has worked in various areas of process safety since starting work with Eastman Chemical in 1992. Mr. Chastain's areas of expertise are in Process Hazards Analysis, risk management, layer of protection analysis, reactive chemical safety, dust hazards, safety instrumented systems and emergency relief.

Mr. Chastain is a senior member of AIChE and has served as the chair of the CCPS subcommittees for Guidelines for Independent Protection Layers and Initiating Events for LOPA and Guidelines for Enabling Conditions and Conditional Modifiers for LOPA, and served on the CCPS subcommittee for Guidelines for Probability of Ignition of Flammable Releases and Guidelines for Developing Quantitative Safety Risk Criteria. He has also served as a peer reviewer of other CCPS texts. He has presented multiple papers at the annual Global Congress on Process Safety and served as a session co-chair at a GCPS symposium. He has conducted a CCPS webinar on Advances in Layer of Protection Analysis and has been invited to author the new section on Layer of Protection Analysis in the upcoming 9th edition of Perry's Chemical Engineers' Handbook. He has also conducted an American Chemistry Council webinar on Reactive Materials. He is the chair for the upcoming Design Institute for Emergency Relief Systems Symposium being held at the 2015 Global Congress for Process Safety and will begin serving as a director for AIChE's Safety and Health Division starting in 2015.

In addition to various areas of process safety, Wayne's career has included flowsheet development, equipment design, process improvement engineering, and plant start-up. Wayne holds a B.S. degree in chemical engineering from Clemson University. He is a licensed professional engineer in Tennessee.

Position Statement: DIERS Operating Committee - Finance Chair

DIERS continues to lead the chemical and petroleum industries in the development of the science of pressure relief systems. To support this effort, funding is required for ongoing research into the dynamics of pressure relief systems, two phase flow behavior, and reactive systems relief. As the Operating Committee and the membership of DIERS develop special projects to investigate these areas of research, the Finance Chair serving on the Operating Committee will be charged with leading the effort to secure the funding necessary. In addition, the Finance Chair is charged with preparing, monitoring, and maintaining the budget for the DIERS organization.

I believe that I am a strong candidate for the position of DIERS Finance Chair. As an employee of an operating company, I am in a good position to reach out to other operating companies which are likely to be a significant source of funding. I have an adequate background in the DIERS methodologies and research to allow me to effectively communicate the benefit of proposed research to potential backers. I have a good relationship with AIChE and CCPS leadership and will work with those organizations to attempt to secure funding from the professional organization or from governmental sources. I have a strong network of professional associates that I can draw on both within and outside of the DIERS community to assist in making contacts to support research activities.

The other duties of the Finance Chair include maintaining the budgets for the DIERS organization. The majority of the activities of the DIERS Users Group have been handled by the current chair of the organization, Harold Fisher, for a number of years. As we transition to a new operating structure, I believe that I can work with Mr. Fisher to assume the duties related to the budgeting process and successfully continue the organization of the budget for this group to maintain proper accounting for receipts and expenditures for all of the activities of DIERS.

In addition to fulfilling the specific duties of the Finance Chair, I believe that I am strong candidate for a member of the Operating Committee for DIERS. I have many years of experience working in the field of pressure relief design and bring both an understanding of the technology and an appreciation for its importance to the Operating Committee. However, I also bring an extensive background in many additional aspects of process safety and consideration of how pressure relief design can fit into the overall risk mitigation strategy. In addition, I am an advocate for a DIERS organization that is more open to the broader process safety community. I believe that DIERS has a tremendous amount to offer the chemical processing industry that can improve our safety, but a significant barrier has been a lack of communication and publicizing of technical advances within the DIERS organization. I intend to work with the other Operating Committee members to seek new ways of making the community aware of cutting edge improvements in DIERS technologies.

Ballot Position: DIERS Operating Committee – At-Large Position #2: General Technology Projects Chair

Gregory G. Hendrickson, P.E. Senior Fellow Engineer Chevron Phillips Chemical Company (281) 359-6592 hendrgg@cpchem.com



Professional Biography

Greg is a Senior Fellow Engineer for Chevron Phillips Chemical Company (CPChem). He has worked at CPChem, and its predecessor Chevron Chemical Company, for over 25 years. He works in the Research and Technology Center providing technical support to the operating facilities. This support includes process development, troubleshooting, hazard analysis, and incident investigations. He is a key contact for complex pressure relief system analyses and implementation of corporate flare and relief system standards.

Greg received his BSChE degree from Texas Tech University in 1976 and his MSChE from the University of Houston in 1980. He is a registered engineer in Texas and an AIChE Senior Member.

Greg has been a Company representative to DIERS since 2007. Since that time he has participated in numerous computational round-robin and benchmarking exercises comparing the results of various methods to calculate flare and relief system performance. Improvements in the computational methods have been implemented by the software suppliers based on feedback from the benchmarking results.

Position Statement: DIERS Operating Committee - General Technology Projects Chair

The DIERS methodology to design emergency pressure relief systems to handle runaway reaction and two-phase venting scenarios was developed from test data and documentation of applicable methods. Since completion of the original DIERS project, the DIERS User Group has conducted numerous projects to further the science associated with emergency pressure relief systems evaluations. A recent example is the program to understand the stability and chattering of pressure relief valves.

As the General Technology Projects Chair my focus will be to continue the strong DIERS tradition of delivering technical advances through project execution. As an employee of an operating company, I am aware of problems relevant to the chemical processing industries. With this background, and through interfacing with other Operating Committee members, I will prioritize and rank potential projects. By application of my career experience, I will provide input to develop project goals and objectives. I will utilize my technical skills to provide a technical review of each project's results. Finally, I will provide regular progress updates to the Operating Committee.

Ballot Position: DIERS Operating Committee – At-Large Position #3: Meeting Arrangements Chair

Russell B. Merriam, P.E. Senior Principal Engineer Farris Engineering Services (337) 478-6844 rmerriam@curtisswright.com



Professional Biography

Russ is currently a Senior Principal Engineer for Farris Engineering Services. Russ has worked with Farris Engineering Services for 11 years where he has been using company proprietary software (iPRSM®) in documenting and auditing relief system installations for various client around the world, including refineries, petrochemical, nuclear power, and chemical processing plants in accordance with API520/521, ASME Section VIII, Section III, and Section I, DIERS technologies, NFPA, and Compressed Gas Association requirements.

Prior to Farris Engineering Services, Russ worked for Sasol North America (and predecessors) for 21 years in the Corporate Process Engineering Department, as well as multiple plant locations as Process Engineer and Operations engineer.

Russ graduated from the University of Kentucky in 1981 with a BSChE. He earned his Professional Engineering License in the state of Louisiana in 1995.

Russ is a senior member of AIChE and has been the company's representative to DIERS since 2008.

Position Statement: DIERS Operating Committee – Meeting Arrangements Chair

The Meetings Arrangements Chair responsibilities include Venue Selection, Meeting Dates, Meeting Notices, Registration, Attendance, Location, and Hotel Contract/Catering. Since I started attending meetings in 2008, this job responsibility has rested basically on the DIERS Users Group Chair. As Harold has always done a remarkable job performing these responsibilities, I plan on maintaining the quality of our meeting location, facility, catering, etc, to which we have been accustomed.

In keeping with the new direction of DIERS, these duties have been removed from the Chair's direct responsibilities so the Chair can spend his/her time working on DIERS organization, growth, etc, spreading the various jobs that the Chair has been performing to the 7 Operating Committee positions. I feel that in order for DIERS to grow and thrive, we need to have more people completing the tasks necessary for effective meetings and projects, especially as our path forward is for Harold to be Chair for only 3 more years. I think all would agree that it would be impossible to replace Harold without changes to the organization.

A key responsibility of the Meeting Arrangements Chair is to select the venue and negotiate the contract with the hotel. While AIChE will have final responsibility for the contract, the leg work is performed by the Meeting Arrangements Chair. While I don't have any direct experience in these negotiations, I would rely on Harold to get me up to speed on this quickly.

I would be doing some leg work in investigating future meeting locations. While it is certainly important to get input from the attendees as to the location of the upcoming meetings, there may be locations other than Houston and Las Vegas that meet the basic meeting location requirements and provide for variety and continued strong attendance numbers. I would be soliciting possible meeting locations prior to the meeting where the location will be selected and have pros and cons for each location.

As Meeting Arrangements Chair, I would recommend to the Operating Committee for DIERS to invest in technology so we can be less dependent on the hotel providing audio/visual items at our meetings. We should consider investing in a Projector, Wireless microphone, a remote control (or wireless mouse) for the presenter to interface with their computer, as well as a laser pointer. The Meeting Arrangements Chair would be responsible for getting these items to each of the meetings as well as making sure each is operational prior to the meetings.

Ballot Position: DIERS Operating Committee – At-Large Position #4: Membership & Resource Chair

Marc E. Levin, Ph.D. Process Safety Advisor Shell Exploration & Production Company (832) 337-4519 marc.levin@shell.com



Professional Biography

Marc has worked with Shell Oil Company for 28 years in a variety of roles, primarily in process safety. In recent years, he has served as a Process Safety Advisor, evaluating explosion overpressure risk and building siting, conducting bowtie analysis with LOPA, as well as working on Safety Critical Element Performance Standard development. He also has 18 years of experience as technical lead for Shell's Reactive Hazards program with emphasis on calorimeter testing and analysis, two-phase reactive relief evaluation, scenario identification, consequence assessment, and LOPA. His work at Shell includes 5 years of hydrotreating catalyst evaluation and development along with modeling of trickle-bed reactor performance.

Marc graduated from the University of Washington in 1980 with Bachelor of Science degrees in Chemical Engineering as well as Mathematics. He earned M.S. and Ph.D. degrees in Chemical Engineering from the University of California at Berkeley in 1983 and 1987, respectively.

Marc is a 34-year Senior Member of AIChE. He has been a regular attendee of DIERS Users Group meetings since 1993 and has made numerous presentations at DIERS Users Group meetings, chiefly on reactive chemistry. He has served as co-chair of the Mathematical Modeling Subcommittee of the DIERS Users Group as well as the Chair of the ad hoc SuperChems Evaluation Committee. He has participated in the DIERS UG Administration Committee, has been active in the DIERS Transition Committee in the past year, and has helped to negotiate with the AIChE in finalizing the new DIERS Bylaws. He has also helped teach several offerings of the 2-day AIChE Emergency Relief Systems Design course.

He served as a session chair and contributor to the three AIChE / DIERS International Symposia on "Runaway Reactions, Pressure Relief Design, and Effluent Handling" in 1995, 1998, and 2005. He is a contributor to the second edition of the CCPS / DIERS book "Guidelines for Pressure Relief and Effluent Handling Systems" to be published in 2015. He has published numerous journal articles.

Marc is also a member of the Technical Advisory Committee of the Mary Kay O'Connor Process Safety Center and has served as a Track Chair for their annual International Symposium for many years.

Position Statement: DIERS Operating Committee - Membership & Resource Chair

Duties of the Membership & Resource Chair include engaging with DIERS members, ensuring upkeep and availability of the DIERS website(s) to members, and administering DIERS publications and related materials.

The ever-increasing financial and time pressures in companies have had a negative impact on meeting attendance in recent years. While the technical content developed and shared within the group is unequaled in industry, we also need to instill a sense of community and of belonging to foster improved meeting attendance and participation. To bring about long-

term viability and growth of DIERS, it is important to promote a welcoming atmosphere to current and prospective members.

DIERS members are also keenly aware of the rich resources available at the DIERS website(s). Keeping website content up-to-date is a task important to the membership. Moreover, making sure all DIERS members (and DIERS members alone) have access to key material, such as meeting presentations and membership lists, is of high value. Likewise, further development of the DIERS website(s) to function as a resource library would bring additional benefit. Clearly, success in these endeavors requires good working relationships with the website owners. It would also enable the Chair and Vice Chair/Secretary to focus their attention on other vital DIERS matters.

If elected as Membership and Resource Chair, I would dedicate the time needed to accomplish the foregoing objectives.

Ballot Position: DIERS Operating Committee – At-Large Position #5: Outreach Chair

Robert D'Alessandro, P.E.

Director Process Technology Evonik Corporation (Retired) (251) 626-3893 <u>ChemE1978@gmail.com</u>



Professional Biography

Robert D'Alessandro has over 35 years of experience in chemical engineering as department manager, project manager, process engineer, and technology specialist. This experience includes process development, process improvement, process troubleshooting, process debottlenecking, process hazard analyses, process design during the conceptual, basic, and detailed engineering phases of capital projects, and process plant startups. Employments include large and small CPI corporations in operating companies, process technology companies and engineering & construction companies.

He recently retired from Evonik Corporation after more than twenty-three years of service in various positions. In his last position at Evonik, he served as the Director of the Process Technology Department where he led a team of more than 40 engineers and technicians in providing process engineering services at Evonik sites in both North America and South America to improve existing process plants and to design new process plants.

Robert received his BS in Chemistry and Mathematics from Fordham University in 1976, his BS in Chemical Engineering from Columbia University in 1978, and his MS in Chemical Engineering from Manhattan College in 1981. He is a Registered Professional Engineer in the State of Alabama and a Fellow of the American Institute of Chemical Engineers (AIChE).

Robert has been an active member of the AIChE Design Institute for Emergency Relief Systems (DIERS) Users Group since its inception in 1986. Since 2004, Robert has served as the elected secretary of this organization. He is on the editorial board of Process Safety Progress, a peer reviewed journal published by the AIChE. And he teaches the AIChE course on Emergency Relief System Design Using DIERS Technology.

Position Statement: DIERS Operating Committee - Outreach Chair

As the Outreach Chair, I am planning to increase the visibility of DIERS at related organizations in the government, the industrial sector, and the education system both domestically and internationally. In each of these related areas, presentations, short descriptions, and letters would be prepared and distributed in order to increase awareness of the DIERS organization and the benefits it delivers. Ultimately this increased awareness should help increase participation and financial support.

Ballot Position: DIERS Operating Committee – At-Large Position #6: Program Chair

Warren A Greenfield, P.E.

Sr. Manager, Process Safety Ashland Inc. (908) 243-3523 wgreenfield@ashland.com



Professional Biography

Warren Greenfield is the Senior Manager of Process Safety at Ashland, Inc. and he is currently located in Bridgewater, NJ. He has over thirty five years of experience in the chemical industry in manufacturing, process development, process engineering, process design and process safety. His responsibilities include all areas of Process Safety including the Process Safety Laboratory.

Warren is a senior member of AIChE and represents Ashland on both the CCPS Advisory Board and the CCPS Technical Steering Committee. He also represents Ashland on the Process Safety Committee of the American Chemistry Council (ACC). He has been very active in both the CCPS and DIERS organizations over the last twenty years and currently is the Chair of the DIERS PSM and Incident Investigation committees.

Some of the projects and work products where he has been a major contributor include:

- 3rd Annual Symposium on Runaway Reactions, Featured Speaker
- "Pressure Relief Design and Effluent Handling", CCPS Book, Committee member
- "Layer of Protection Analysis", CCPS book, Committee member, Primary Author
- "Guidelines for Process Safety in Batch Reactions", CCPS Book, Committee member
- "Guidelines for Pressure Relief Design-2nd edition", CCPS Book, Committee member
- "Guidelines for Safe Handling of Powders and Bulk Solids", CCPS Book, Committee member.
- "Guidelines for Auditing Process Safety Management Systems"2nd edition, CCPS Book, Committee member
- 2009 Fire Protection Research Association Symposium: Dust Recognition and Control: New Strategies, Panelist
- "A Probabilistic Approach to Dust Explosion Propagation Hazard Evaluations"- XISHPMIE-2014, Co-Author

Warren received his chemical engineering BCHE at the City College of New York, his MCHE from the University of Delaware and his MBA from Rutgers University. Warren is a professional engineer currently licensed in New Jersey.

Position Statement: DIERS Operating Committee - Program Chair

Warren's visions for DIERS meetings involve the following:

- Development of meetings that will address all areas of emergency pressure relief system design
- Promoting the inclusion of presentations and activities that will appeal to all levels of experience from the novice to the most experienced engineers.
- Increasing the awareness that the field of relief system design interacts with and is entwined with many of the basic process safety elements.
- Increasing the connection with academia and supporting the universities as they incorporate new ABET requirements to the curriculum.

Topics such as management of change, asset integrity and reliability, process safety information, process hazard analysis and risk assessment, as well as incident investigations all can contribute to the expertise of those involved in the various stages of designing, installing and maintaining emergency pressure relief systems. Other important topics include physical property determinations, laboratory equipment and experiments, software tools and application as well as discussions on RAGAGEP (Recognized and Generally Accepted Good Engineering Practice) and regulatory updates.

DIERS has always had international representation and the programs that are developed should also strive to increase global participation.

In summary, DIERS meetings should have content that appeal to a diverse global audience. The meeting programs should benefit new generations of engineers interested in learning about the various aspects of DIERS methodology as well as provide a forum for technical exchange for the more experienced technical experts who are constantly driving to move the technology forward.

Ballot Position: DIERS Operating Committee – At-Large Position #7: Special Technology Projects Chair

Joseph C. Leung, Ph.D. President Leung Inc. (310) 265-7739 <u>leunginc@cox.net</u>



Professional Biography

Joseph C. Leung has over thirty years of experience in the area of chemical process safety. He has been extensively involved with the AIChE Design Institute for Emergency Relief Systems (DIERS) research project since 1981 and was a key contributor in the development of the DIERS Bench Scale Reaction Apparatus (commercially known as the Vent Sizing Package or VSP). Currently, he is actively involved in the DIERS Users Group and has chaired its Design/Testing Committee since 1986. He has been a safety consultant to a wide range of chemical industries and has conducted frequent seminars in pressure relief design in the U.S.A., Canada, Belgium, Italy, Japan, and Taiwan. He has been involved with accident investigations and has served as expert witness. His research and consulting efforts include runaway reaction calorimetry, multiphase flow, two-phase heat/mass transfer, emergency pressure relief, and the associated containment system design.

Dr. Leung has published more than 60 articles in archival journals and meeting proceedings on chemical process pressure relief systems, runaway chemical reactions, two-phase flow, and heat transfer. He has served on the editorial review board of the AIChE Process Safety Progress Journal since 1991. His previous industrial experience includes Argonne National Laboratory and Amoco Corporation. He received his training from the University of Denver (BSChE, summa cum laude) and Northwestern University (MS, PhD), all in chemical engineering.

Dr. Leung is the author of several proprietary runaway dynamic simulation programs for Polystyrene, Polyvinyl chloride, Polypropylene and Polyethylene reactors. He has been consulted world-wide in the area of pressure relief for runaway reactions.

Position Statement: DIERS Operating Committee - Special Technology Projects Chair

The Chair of Special Technology Projects oversees DIERS projects funded by corporations and institutions. While each sponsored project will have its own committee and committee chair to plan and execute the project according to stated goals and objectives, the Special Technology Projects Chair will give high-level guidance to each project committee as well as provide an independent technical check on the soundness of the project's outcome. With my experience in a variety of complex technical endeavors, I expect to be able to fulfill this role, if elected. Where obstacles are encountered during the execution of projects, I hope to be able to offer assistance and to suggest options for overcoming the problems. I would also give progress reports on each project to the Operating Committee.