

## Nir Keren

Assistant Professor

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### Education

Ph.D. Interdisciplinary Engineering  
(Chemical Engineering Department), Mary Kay  
O'Connor Process Safety Center  
Texas A&M University, 2003

M.S. Management and Safety Engineering,  
Ben Gurion University, Israel, 1998

B.S. Mechanical Engineering,  
Ben Gurion University, Israel, 1990

### Honors and Awards

Graduated Maters Magna Cum Laude

### Recent Publications

Keren, N., S. Anand, and M.S. Mannan, *Calibrate Failure-Based Risk Assessment to Take into Account Chemical Processed in Equipment*, *Journal of Loss Prevention in the Process Industries*. In Print.

Mills, A., L. M O'Neill, W. D. Seider, U. Oktem, and N. Keren, *Consequence Modeling of Rare Events Using Accident Databases*, *Journal of Loss Prevention in the Process Industries*. In Print.

K. Park, M.S. Mannan, Y-D. Jo, J-Y. Kim, N. Keren, Y. Wang. *Incident Analysis of Bucheon LPG Filling Station - Pool Fire and BLEVE*. *Journal of Hazardous Material*. vol. 137, no. 1, September 2006, pp. 62-67.

Sumit Anand, Nir Keren, Marietta J. Tretter, Yanjun Wang, T. Michael O'Connor, M. Sam Mannan. *Harnessing Data Mining to Explore Incident Databases*. *Journal of Hazardous Material*. 130. 2006.

Mannan, M.S., H.H. West, K. Krishna, A.A. Aldeeb, N. Keren, S.R. Saraf, Y.-S. Liu, M. Gentile. *The Legacy of Bhopal: The Impact Over the Last 20 Years and Future Direction*. *Journal of Loss Prevention in the Process Industries*. vol. 18, no. 4-6, July-November 2005, pp. 218-224.

Keren, N., H.H. West, and M.S. Mannan, *Benchmarking of Emergency Preparedness and Response Practices in the Process Industry*, *Journal of Emergency Management*. vol. 3, no. 3, May/June 2005, pp. 25-32.

N. Keren, H. H. West, W. J. Rogers, J.P. Gupta, M.S. Mannan. *Use of Failure Rate Databases and Process Safety Performance Measurements to Improve Process Safety*. *Journal of Hazardous Material*. 104. 2003.

N. Keren, H.H. West, M.S. Mannan. *Benchmarking MOC Practices in the Process Industry*. *Process Safety Progress*. 2002.



### Teaching

Dr. Keren teaches TSM 276 Fire Protection and Prevention, TSM 472 Fundamentals of Industrial Hygiene, and lately he introduced a new course TSM 477X/ 577X System Safety Analysis.

### Research

Dr. Keren is an Assistant Professor of Occupational Safety in the department of Agricultural and Biosystems Engineering. His research interests fall into two broad categories: Behavioral Safety and Harnessing Incident Databases to enhance Loss Prevention.

In Behavioral Safety Dr. Keren's interest is in Safety Decision Making. As a graduate faculty in the Human Computer Interaction program he develops Virtual Reality Applications to research decision making. Among his current studies are modeling the effect of consequence severity on process and choice, the effect of stress on decision making processes among emergency responders, and the effect of safety climate on safety decision making.

In harnessing incident databases Dr. Keren is developing novel applications to support loss prevention efforts. In his research he utilizes publicly available and privately owned incident datasets. Recent works in this area include risk assessment of hazardous material transport, and development of calibration values for equipment failure rates in chemical processes.