

# 2012 BOARD OF DIRECTORS ELECTION NOMINEE QUALIFICATION STATEMENT

NAME: **PAYAL VORA**  
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## Employment History:

2001 - 2003 Magnequench International (MQI)  
2003 - 2006 Electron Energy Corporation (EEC)  
2008 - 2009 Page & Turnbull (P&T)  
2009-2011 Wiss, Janney, Elstner Associates (WJE)  
2011-present Simpson Gumpertz & Heger Inc. (SGH)

## Education:

1997 - 2001 Purdue University  
2009 - 2011 The University of Texas at Austin

## Selected Preservation Projects:

Sep 2010 - present Conditions assessment, repair recommendations, repair design – War Memorial Veterans Building, San Francisco, California (SGH)  
Oct 2010 - present Investigation and repair recommendations for historic brick, mortar, and underlying structural steel deterioration in a historic fire station – Fire Station 30, San Francisco, California (SGH)  
Aug 2010 - Aug 2011 Engineering consultation services and research for remediation of crude oil from historic Fort Livingston, LA which was contaminated by the BP Oil Spill (National Park Service)  
Jan 2010 – Apr 2010 Building envelope investigation to locate structural evidence of a removed spectator balcony for a historic courtroom restoration - Bexar County Courthouse, San Antonio, Texas (WJE)  
Aug 2009 – Dec 2010 Construction administration for plaza waterproofing and repaving at the Lyndon B. Johnson Library and Plaza Austin, Texas (WJE)  
2008 Window survey and treatment recommendations for historic wood windows - The Fairmont Hotel, San Francisco, California (P&T)

## Publications / Lectures:

"Laboratory Evaluation of Selected Masonry Cleaners for Fort Livingston", *American Institute for Conservation (AIC) Annual Meeting*, Philadelphia, PA. June 2011  
"Evaluation of Cleaners for Removal of Crude Oil from Historic Structures", *George Wright Society Conference on Parks, Protected Areas & Cultural Sites*, New Orleans, LA. March 2011 (invited)  
"Evaluation of Past Preservative Treatments", *Association for Preservation Technology International (APTI) Conference 2010*, Denver, CO. October 2010

## Awards:

2009 - 2011 Various scholarships and grants (please see attached CV)

## Membership in Professional Organizations:

APTI, AIC, USGBC, Cleantech

## Experience with APTI and other Preservation Organizations:

I have helped organize various events for organizations including the Cleantech Open Forum 2011. I am currently on the Legacy Committee for the USGBC's annual conference, Greenbuild 2012. The Legacy Project

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### **NOMINEE QUALIFICATION STATEMENT**

aims to leave behind a lasting legacy in the conference's host city each year.

#### **Other Information:**

Please see attached CV.

#### **Vision Statement for APTI –Western Chapter:**

Within the next 1 year I would like to help make a more complete website for the WCAPT that serves as a resource for Chapter events, information, and publicity. In the next 3 – 5 years I would like to help increase professional and student membership in WCAPT through more events, collaboration, outreach, and incentives such as scholarships and awards. In the long term, I envision WCAPT having members, leadership committees, and events that, in addition to California, represent Arizona, Hawai'i, Nevada, and New Mexico.

# Payal Vora

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919-264-3845 • [vorapayal@yahoo.com](mailto:vorapayal@yahoo.com)

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I am a materials scientist and engineer interested in sustainability, building materials, and building conservation.

## **EDUCATION**

MS in Historic Preservation – University of Texas at Austin (UT), Austin, TX **Aug 2011**  
**MS Thesis:** *Fort Livingston, Louisiana: Remediation of Brick Masonry in Historic Structures Impacted by the Deepwater Horizon/British Petroleum Oil Spill*

BS in Materials Science and Engineering (MSE) – Purdue University, West Lafayette, IN **May 2001**

## **EXPERIENCE**

SIMPSON GUMPERTZ & HEGER INC. (SGH), San Francisco, CA 94105 ([www.sgh.com](http://www.sgh.com))

### **Staff I**

**Sep 2011 – present**

- Forensics + Materials Science
  - Investigation of building materials including built-up roofing, metal, terra cotta, stone, brick
  - Materials testing to meet requirements for specified ASTM standards
- Building Envelope Investigation + Remediation
  - Exterior conditions assessment and repair recommendations – War Memorial Veterans Building, San Francisco, California
  - Conditions assessment and repair recommendations – Newton Vineyard, St. Helena, California
  - Investigation and repair recommendations for historic brick, mortar, and underlying structural steel deterioration in a historic fire station – Fire Station 30, San Francisco, California
- Engineering + Consultation
  - Consultation and maintenance plan for limestone gateway and wall – Stanford University, Palo Alto, California

NATIONAL PARK SERVICE – NCPTT, Natchitoches, LA 78722 ([www.ncptt.nps.gov](http://www.ncptt.nps.gov))

### **Contractor**

**Aug 2010 – Aug 2011**

- Materials Science + Engineering
  - Development of laboratory methods for preparing soiled brick samples, accelerated weathering, selection of Surface Washing Agents (SWA), and sample cleaning
  - Development of a non-contact colorimetry method for sample evaluation at various stages
  - Development of laboratory methods to evaluate soiled, weathered, and cleaned samples
- Documentation + Writing + Consultation
  - Documentation of representative deterioration conditions on site
  - Recommendations for cleaners and methods suitable for use at the Fort
  - Recommendations for additional analytical research and methods for crude oil removal

WISS, JANNEY, ELSTNER ASSOCIATES (WJE), Austin, TX 78722 ([www.wje.com](http://www.wje.com))

### **Associate I – Austin**

**Jul 2009 – Aug 2011**

### **Associate I – Chicago**

**Apr 2009 – Jul 2009**

- Forensics + Materials Science
  - Assistance with investigation of building materials including stone, brick, stucco, EIFS, concrete
  - Assistance with meeting testing and material requirements for specified ASTM standards
  - Monitoring of piezometers, strain gauges, and other devices at project sites

- Assistance with other forensic investigations, materials analysis, and reports
- Preservation + Conservation
  - Principal investigator to locate structural evidence of a removed spectator balcony for a historic courtroom restoration - Bexar County Courthouse, San Antonio, Texas
  - Investigation and repair recommendations for underwater limestone deterioration in an artesian spring pool - Balmorhea State Park, Toyahvale, Texas
  - Exterior conditions assessment and report - Texas Historical Commission Library, Austin, Texas
  - Conditions assessment and documentation - St. Elizabeths Hospital, Washington DC
- Engineering + Consultation
  - Assistance with on-site investigation of buildings and infrastructure
  - Assistance with construction administration, consultation, and litigation services

PAGE & TURNBULL (P&T), San Francisco, CA 94108 ([www.page-turnbull.com](http://www.page-turnbull.com))

**Project Assistant**

**Jun 2008 – Jan 2009**

- Engineering + Conservation
  - Window survey and treatment recommendations for historic wood windows - The Fairmont Hotel, San Francisco, California
  - Conditions assessment and treatment recommendations for ivy removal and limestone restoration - Koshland House “Le Petit Trianon” San Francisco, California
- Documentation + Writing + Consultation
  - Assistance with the Historic Structure Report (HSR) - James R. Browning Court of Appeals, San Francisco, California
  - Field reports and final project reports for various projects
  - New drawings for details such as balusters in historic buildings that lack documentation

ELECTRON ENERGY CORPORATION (EEC), Landisville, PA 17538 ([www.electronenergy.com](http://www.electronenergy.com))

**Process Manager**

**Jun 2004 – Aug 2006**

- Process manager for Alloy Manufacturing, Powder Compaction, and Sintering

**Process Engineer**

**Feb 2004 – Aug 2006**

- Process engineer for 4 departments – Alloy Manufacturing, Magnet/Powder Compaction, Sintering, R&D
- Research and development for DoD, DoE, DARPA, NASA, US Navy, Army, and Air Force projects

MAGNEQUENCH INTERNATIONAL INC. (MQI), Research Triangle Park, NC 27709 ([www.magnequench.com](http://www.magnequench.com))

**Associate Research Scientist**

**Jul 2001 – Nov 2003**

- Co-inventor of a nano-structured alloy for a \$200-million leader in rare earth permanent magnets
- Co-developer of custom-designed alloy for \$1 billion electronics division of a Japanese client
- Thermal, mechanical, and magnetic testing of compacted powder and polymer-based magnets

**SCHOLARSHIPS & GRANTS**

American Institute for Conservation of Historic and Artistic Works (AIC) George Stout Grant (2011)

National Trust for Historic Preservation Scholarship (2010)

Texas Architectural Foundation Scholarship Honoring Brooks Martin, FAIA (2010)

- Independent research grant to study the impact of conservation treatments on Spanish Missions in Queretaro, Mexico

Association for Preservation Technology International (APT) Student Scholar (2010)

Claude M. Pendley, Jr. Memorial Scholarship Fund (2009-2010)

University of Texas Recruitment Scholarship (2009-2010)

## PRESENTATIONS & PUBLICATIONS

### Materials Conservation

- **P. Vora**, "Laboratory Evaluation of Selected Masonry Cleaners for Fort Livingston", *American Institute for Conservation (AIC) Annual Meeting*, Philadelphia, PA. June 2011
- **P. Vora**, "Evaluation of Cleaners for Removal of Crude Oil from Historic Structures", *George Wright Society Conference on Parks, Protected Areas & Cultural Sites*, New Orleans, LA. March 2011 (invited)
- **P. Vora**, "Evaluation of Past Preservative Treatments", *Association for Preservation Technology International (APTI) Conference 2010*, Denver, CO. October 2010

### Magnetics

- J. F. Liu, M. Marinescu, **P. Vora**, S. Wu, M.P. Harmer, "Effect of temperature and vacuum on magnetic properties and compositional changes of high temperature Sm-Co magnets", *Journal of Applied Physics*, Vol. 105 (2009)
- J. F. Liu, **P. Vora**, P. Dent, M. H. Walmer, C. Chen, J. Talnagi, S. Wu, M. P. Harmer, "Thermal stability and radiation resistance of Sm-Co based permanent magnets", *Proceedings of Space Nuclear Conference*, Boston, MA, Paper 2036 (2007)
- M. Marinescu, J. F. Liu, D. Sultana, **P. Vora**, G. C. Hadjipanayis, "New hybrid permanent magnets for high-temperature applications", *10<sup>th</sup> Joint MMM/Intermag Conference*, Baltimore, MD. January 2007
- J. F. Liu, **P. Vora**, M. H. Walmer, "Overview of Sm-Co based magnets and their applications", *Proceedings of the 19<sup>th</sup> International Workshop on Rare-Earth Permanent Magnets and their Applications (REPM)*, Beijing, China. September 2006. *Journal of Iron and Steel Research International*, Vol. 13, Supplement 1, pp.383--387 (2006)
- J. F. Liu, **P. Vora**, M. H. Walmer, "Temperature-compensated high temperature Sm-Co magnets for traveling wave tubes", *International Vacuum Electronics Conference (IVEC)*, Noordwijk, The Netherlands, pp.473 (2005)
- C. Chen, J. Talnagi, J. F. Liu, **P. Vora**, A. Higgins, M. H. Walmer, D. Lee, S. Liu, "The effect of neutron irradiation on Sm<sub>2</sub>Co<sub>17</sub>-based high temperature magnets and Nd-Fe-B magnets", *Digests of the IEEE International Magnetics Conference (Intermag 2005)*, Nagoya, Japan, pp.1967--1968 (2005)
- C. Chen, J. Talnagi, J. F. Liu, **P. Vora**, A. Higgins, S. Liu, "The effect of neutron irradiation on Nd-Fe-B and Sm<sub>2</sub>Co<sub>17</sub>-based high temperature magnets", *IEEE Transactions on Magnetics*, Vol. 41, No. 10, pp.3832--3834 (2005)
- J. F. Liu, **P. Vora**, M. H. Walmer, E. Kottcamp, "Microstructure and magnetic properties of sintered Nd-Fe-B magnets with improved impact toughness", *Journal of Applied Physics*, vol. 97 (2), pp.100--101 (2005)
- J. F. Liu, **P. Vora**, M. H. Walmer, "Magnetic properties of temperature-compensated high temperature Sm-Co magnets" *49<sup>th</sup> Annual Conference on Magnetism and Magnetic Materials (MMM)*, Jacksonville, FL. November 2004

## CURRENT PROFESSIONAL AFFILIATIONS

- U.S. Green Building Council (USGBC and USGBC-NCC)
- American Institute for Conservation of Historic and Artistic Works (AIC)
- Association for Preservation Technology International (APT)
- National Trust for Historic Preservation (NTHP)
- Preservation Texas