

# Lachmi Khemlani

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## Summary

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Lachmi Khemlani is the founder and editor of AECbytes ([www.aecbytes.com](http://www.aecbytes.com)), an online publication that has been researching, analyzing, and reviewing technology products and services for the building industry since its establishment in 2003. She also consults extensively on the development and implementation of AEC technology, gives frequent presentations before both professional and academic audiences, and serves on juries for technology awards.

Lachmi completed her Ph.D. in Architecture at UC Berkeley, specializing in the application of computing technology to the building industry. Her thesis was focused on developing a computational representation of a building that could be analyzed and evaluated, in line with present-day BIM concepts. Her earlier credentials include a professional B.Arch. (Honors) degree from the Indian Institute of Technology, Kharagpur, India, and an M.Phil. in Architecture from the University of Cambridge, England. She worked on several design projects as a practicing architect in India and has taught CAD and 3D modeling for several years at UC Berkeley. In addition to writing in industry publications for several years, she has authored books on CAD and modeling. She continues to stay closely involved with the research community, recently serving on the editorial board of the journal, *Automation in Construction*, for which she continues to review journal submissions.

## Educational Qualifications

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### **Ph.D. in Architecture**

Aug 94 - Dec 00, University of California at Berkeley.

### **M.Phil. in Architecture**

Sep 92 - Aug 93, University of Cambridge, UK.

### **Honors Diploma in Systems Management** (*part-time*)

Aug 91 - July 92, National Institute of Information Technology, Pune, India.

### **Bachelor of Architecture (Hons.)**

July 85 - June 90, Indian Institute of Technology, Kharagpur, India.

## Work Experience

### **Founder and Editor, AECbytes**

Nov 03 – current

AECbytes is an online publication focused on researching, analyzing, and reviewing technology products and services for the building industry.

### **Founder, Arcwiz Consulting**

Jan 01 – current

Arcwiz provides consulting services in the area of computer-aided building design.

### **Independent Writer**

Jan 01 – Dec 05

Books, articles, product reviews, and tutorials in the area of software technology for the AEC (Architecture, Engineering, and Construction) industry.

### **Instructor**

Jan 01 – Aug 02, Department of Architecture, University of California at Berkeley

Courses on 3D modeling and digital design.

### **Graduate Student Instructor**

Aug 94 - Dec 00, Department of Architecture, University of California at Berkeley

Courses on 3D modeling, digital design, computer applications, and programming.

### **Architect**

Jan 94 - July 94, Suryakant Pawar and Associates, Architects & Planners, Pune, India.

Design development and CAD modeling of residential and commercial projects.

### **Assistant Architect**

Jan 91 - March 92, Vishwas Kulkarni, Architect, Pune, India.

Design development, CAD and hand drafting, primarily of apartment building projects.

### **Junior Architect**

Aug 90 - Dec 90, Auroservice D'Auroville, Architects & Planners, Pondicherry, India.

Design development and coordination of working drawings of the township plan for a new "steel city" in Vishakhapatnam, India.

### **Student Intern**

June 89 - Nov 89, Nozer Wadia Associates, Architects & Interior Designers, Bombay, India.

Design development and preparation of working drawings of private beach cottages near Mumbai, India.

## Books

### **form•Z 4: Modeling, Rendering, Animation**

McGraw-Hill, November 2003.

### **Into 3D with form•Z: Modeling, Rendering, Animation**

McGraw-Hill, June 1999.

## Research Papers

### **Book Review: Building Product Models by Charles Eastman**

Automation in Construction, Vol. 11, No. 4, 2002, Elsevier Science, New York.

**Intelligent Representation for Computer-Aided Building Design**

Coauthors: Anna Timerman, Beatrice Benne, and Yehuda Kalay  
Automation in Construction, Vol. 8, No. 1, 1998, Elsevier Science, New York.

**Integrated Model to Support Distributed Collaborative Design of Buildings**

Coauthors: Yehuda Kalay and Jin Won Choi  
Automation in Construction, Vol. 7, No. 1, 1998, Elsevier Science, New York.

**Semantically Rich Building Representation**

Coauthors: Anna Timerman, Beatrice Benne, and Yehuda Kalay  
ACADIA 97, Cincinnati, Ohio.

**Integrated Computing Environment for Collaborative, Multi-Disciplinary Building Design**

Coauthor: Yehuda Kalay  
CAAD Futures 97, Munich, Germany.

**GENWIN: A Generative Tool for Window Design in Energy-Conscious Architecture**

Building and Environment, Vol. 30, No. 1, 1995. Pergamon Press, London.

## Industry Publications

**BIM Evaluation Study Report**

Research Report for the AIA Large Firm Round Table (LFRT) CEO Committee, June 2010.

**Use of Microsoft Technologies to Streamline Processes and Workflows in AEC**

White paper for Microsoft, June 2008

**Top Criteria for BIM Solutions**

Survey and Research Report for Bentley, Oct 2007

**Autodesk Revit: Implementation in Practice**

White paper for Autodesk, March 2004

**Feature Articles, Product Reviews, and Newsletters (weekly)**

AECbytes, December 03 – current

**Cover Stories, Product Reviews, and biweekly AEC Tech Newsletter**

Cadence magazine, April 01 – Oct 03

**Autodesk Revit tutorials (monthly)**

Autodesk Toplines, February 03 – September 03

**Potential and Challenges: Building Information Modeling under the Microscope**

AEC Automation Newsletter, November 2003

**Autodesk Revit: A Fresh Approach to BIM**

AUGIworld, Nov-Dec 2003

## Teaching Experience

**Computer Applications in Architecture**

3D modeling using form•Z, Fall 94 – Spring 02, UC Berkeley

**Digital Design**

3D modeling using form•Z, architectural rendering using Piranesi, and image compositing using Photoshop  
Summer 97 – Summer 02, UC Berkeley

**IntelliCAD 2001**

Corporate training for Honeywell, Colorado Springs, March 2002

**Using Computers in Design Practice: CAD Level II**

Advanced AutoCAD 2000, Summer 01, UC Berkeley Extension

**Introduction to Computers**

Macintosh applications, HTML, and Javascript, Spring 95 – Fall 97, UC Berkeley

**Introduction to Computer Technology**

Macintosh applications, Summer 94 – Summer 95, UC Berkeley

**A.P. Computer Science, Part I**

Pascal programming, Summer 94 – Summer 95, UC Berkeley

**Invited Talks and Presentations****Building Information Modeling: Past, Present, and Future Perspectives**

Presentation at Vanir annual PM/CM Conference, Nov 2011

**Comparative Study of Architectural BIM Applications**

Presentation to the AIA Large Firm Round Table (LFRT) CEO Committee, April 2010

**BIM and Current Trends in AEC Technology**

Annual Fall Lecture at Department of Architecture, UC Berkeley, 2003 – 2009

**CMiC and Building Information Modeling (BIM)**

Presentation at CMiC Connect Conference, Chicago, Sep 2008

**Technology Trends, Changes, and Challenges in AEC**

Online webinar for Microsoft Professional Services Team, Dec 2007

**Building Information Modeling: Revolutionizing Technology and Processes in AEC**

Presentation at RSP Architects Project Management Forum, Minneapolis, Sep 2007

**Update on BIM and Supporting AEC Technologies**

Keynote Presentation at AEC Technology Strategies 2007 Conference, Las Vegas, June 2007

**Overview of BIM: Latest Developments, Adoption Status, and Future Trends**

Presentation at Ellerbe Becket Principals Retreat, Minneapolis, Oct 2006

**Moving from CAD to BIM: Revolutionizing Technology in the Building Industry**

Presentation at PBS&J BIM Meeting, Orlando, Sep 2006

**From CAD to BIM**

Presentation at GCSC Executive BIM Event, Vancouver, June 2006

**Latest Technological Developments and Future Trends in AEC Technology**

AIA TAP 2006 Conference, June 2006

**Building Information Modeling: Opportunities and Challenges**

Keynote Presentation at the BIM Symposium, University of Minnesota, February 2006

**From CAD to BIM: Revolutionizing Technology in the Building Industry**

Keynote Presentation at the Alabama Council AIA Annual Convention, August 2005

### **Moving from CAD to BIM**

Presentation for the Cooper Carry Leadership Group, June 2005

### **Progress Report on Building Information Modeling**

AIA TAP 2005 Conference, June 2005

### **Multi-disciplinary Building Information Models**

Presentation at Bentley's "Build As One" Seminar, December 2004

### **From CAD to BIM: A State of the Art Report from the AEC Industry**

Seminar at the Norwegian University of Science and Technology, November 2004

### **Building Information Modeling: The Next Step**

Presentations to professional AEC audiences in Mumbai and Delhi, India, July 2004

### **Future Strategies for CAD Software Implementation**

Moderator, Panel Discussion at eBIG CAD SIG Conference, November 2003

### **Digital Building Modeling**

AIA TAP 2003 Conference, October 2003

### **Integrated Building Modeling**

Seminar at Carnegie-Mellon University, May 2002

### **A Space-Structure Building Model**

Seminar at Stanford University, February 2002

### **Semantically Rich Building Representation**

Conference presentation at ACADIA, Cincinnati, October 1997

### **Integrated Computing Environment for Collaborative, Multi-Disciplinary Building Design**

Conference presentation at CAAD Futures, Germany, August 1997

## **Other Industry Engagements**

### **Juror for HOK's 2<sup>nd</sup> Annual BIM Awards**

Dec 2011

### **Juror for the AIA TAP BIM Awards**

Aug 2007

### **Juror for Bentley's BE Awards**

Aug 2004

## **Computer Skills**

### **Software Applications**

- CAD applications including AutoCAD, MicroStation, and VectorWorks
- 3D Modeling applications including form•Z and SketchUp
- BIM applications such as Autodesk Revit, ArchiCAD, and Bentley Architecture
- Microsoft Office applications including Word, Excel, PowerPoint, and Outlook
- Graphic Design applications including Adobe Photoshop and Illustrator
- Desktop Publishing applications including Adobe InDesign
- Web Design applications including Macromedia Dreamweaver

## **Programming**

- C/C++
- Java
- Javascript

## **Awards and Distinctions**

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### **Tuition Waivers**

Awarded by the Department of Architecture, University of California at Berkeley, for continued enrolment in the Ph.D. program. Aug 94 - Dec 00.

### **Certificate of Excellence**

Awarded by the Department of Architecture, University of California at Berkeley, for research work produced as a Ph.D. student in the department. May 95.

### **Cambridge ODA Shared Scholarship**

A full scholarship awarded by the Overseas Development Administration, UK, and the Cambridge Commonwealth Trust, to study for the M.Phil. in Architecture degree at the University of Cambridge. Oct 92 - Aug 93.

### **Gold Medals and Certificates of Excellence**

Awarded by the National Institute of Information Technology, Pune, India, for being the top-ranking student all through the program. Sep 92.

### **Institute Silver Medal and General Proficiency Prize**

Awarded by the Indian Institute of Technology, Kharagpur, India for being adjudged the best among the graduating students in Architecture. Aug 90.

### **Sarat Memorial Prize**

Awarded by the Indian Institute of Technology, Kharagpur, India for being adjudged the best woman student among those graduating from all B.Tech.(Hons.) and B.Arch.(Hons.) courses. Aug 90.

### **Membership of MENSA India**

Awarded for scoring a percentile rank of 99+ on an intelligence test. MENSA India is the national chapter of MENSA International, an organization founded in 1946 for members getting a high score on an intelligence test. 1990-91.

### **National Talent Search Scholarship and Certificate Of Merit**

Awarded by the National Talent Search Unit, National Council of Educational Research and Training, India, on the basis of performance in the nationwide Talent Search Examination held in May 1983. July 83 - April 90.

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