Buildings for Advanced Technology Workshop II
Mesa, Arizona

January 21st, 22nd, and 23rd 2004

Workshop Introduction

Dr. Allan Chasey
Associate Professor
Arizona State University
Del E. Webb School of Construction
Director, CREATE

Ahmad Soueid
Principal/ Senior Vice President
HDR Architecture, Inc.
Workshop Topics/Format

Day One: Wednesday January 21st, 2004
**Defining Science Needs**

Day Two: Thursday January 22nd, 2004
**Outlining Trends / Developing Solutions**

Day Three: Friday January 23rd, 2004
**Protecting the Investment**

Contributing Organizations and Firms
Day One: Defining Science Needs

Wednesday January 21

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Topic</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 am–noon</td>
<td>Registration</td>
<td></td>
</tr>
<tr>
<td>11:00 am–noon</td>
<td>Welcome Lunch</td>
<td>Buffet style lunch provided</td>
</tr>
<tr>
<td>12:15 – 1:00 pm</td>
<td>Workshop Introduction</td>
<td>Dr. Greg Raupp, Vice President, Office of Research and Economic Affairs, Arizona State University</td>
</tr>
<tr>
<td>Day 1-Introduction</td>
<td>Keynote Speaker: Overview of the National Nanotechnology Initiative, Nanotechnology Research Directions.</td>
<td>Dr. E. Clayton Teague, Director, National Nanotechnology Coordination Office</td>
</tr>
<tr>
<td>1:00 – 2:00 pm</td>
<td>Brookhaven National Laboratory, Center for Functional Nanomaterials</td>
<td>Dr. Robert Hwang, Director of Center for Functional Nanomaterials, Brookhaven National Lab</td>
</tr>
<tr>
<td>2:00 – 3:00 pm</td>
<td>Sandia National Laboratories, Center for Integrated Nanotechnologies (CINT), A New Model for a Nanoscience Research User Facility</td>
<td>Dr. Neal O. Shine, Manager of the Surface and Interface Science Department, Sandia National Laboratories</td>
</tr>
<tr>
<td>4:15 – 5:15 pm</td>
<td>Reception</td>
<td>Networking Reception, Hors D’oeuvres provided and cash bar available, sponsored by HDR and Create</td>
</tr>
</tbody>
</table>

Day Two: Outlining Trends / Developing Solutions

Thursday January 22

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Topic</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 – 8:00 am</td>
<td>Breakfast</td>
<td>Continental breakfast provided, sponsored by Mr. Cathy and M+W Zander</td>
</tr>
<tr>
<td>8:00 – 8:15 am</td>
<td>Day 2-Introduction</td>
<td>Ahmad Soueid, Principal / Senior Vice President, HDR Architecture, Inc.</td>
</tr>
<tr>
<td>8:15 – 9:00 am</td>
<td>Analytical Instrumentation Facility Requirements For Nanotechnology</td>
<td>Dr. Tom Isabell, Assistant TEM Product Manager, JEOL USA, Inc.</td>
</tr>
<tr>
<td>9:00 – 10:15 am</td>
<td>Architectural Trends, Solutions, and Case Studies</td>
<td>Tom Gerbo, Vice President, HDR Architecture, Inc.</td>
</tr>
<tr>
<td></td>
<td>Moderator</td>
<td>Dr. Michael Knotek, Consultant, Knotek Consulting</td>
</tr>
<tr>
<td>10:30 – 11:45 am</td>
<td>Mechanical, Process Engineering</td>
<td>Norm Toussaint, Senior Mechanical Engineer, HDR Architecture, Inc.</td>
</tr>
<tr>
<td></td>
<td>Moderator</td>
<td>Chris Case, Project Manager, Affiliated Engineers, Inc.</td>
</tr>
<tr>
<td>11:45 – 1:00 pm</td>
<td>Lunch</td>
<td>Buffet meal, sponsored by HDR and CREATE</td>
</tr>
<tr>
<td>1:00 – 2:00 pm</td>
<td>Electrical, EM, Grounding</td>
<td>Dave Schweitzer, Electrical Section Manager, HDR Architecture, Inc.</td>
</tr>
<tr>
<td></td>
<td>Moderator</td>
<td>Lee Vitale, President and Chief Engineer, Vitale Engineering, LLC.</td>
</tr>
<tr>
<td>2:00 – 3:00 pm</td>
<td>Mechanical Systems Noise Issues</td>
<td>Hal Nuck, VP, Technology Development, Colin Gordon and Associates</td>
</tr>
<tr>
<td></td>
<td>Moderator</td>
<td>Amir Yazdani, Principle Acoustics Consultant, Arup Acoustics</td>
</tr>
<tr>
<td>3:15 – 5:00 pm</td>
<td>Meeting user requirements</td>
<td>Dr. David Janes, Associate Professor of Electrical and Computer Engineering, Purdue University</td>
</tr>
<tr>
<td></td>
<td>Moderator</td>
<td>Phil Haswell, Director of Facilities, University of Alberta, Canada</td>
</tr>
</tbody>
</table>
## Day Three: Protecting the Investment
### Thursday January 22

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 – 8:00 am</td>
<td>Breakfast</td>
<td>Continental breakfast provided</td>
</tr>
<tr>
<td>8:00 – 9:15 am</td>
<td>Scope Development, Programming, Cost, Cost Control, Project Control</td>
<td>Abbie Gregg, AGI; Greg Parker, Currie and Brown</td>
</tr>
<tr>
<td>10:15 – 11:00</td>
<td>ASU AZ Bio Design Facility</td>
<td>Brett/Dominguez GPR; Brett/Helm GPR; Terry Abair, Sundt Construction, Inc.</td>
</tr>
<tr>
<td>11:30 – noon</td>
<td>Wrap Up</td>
<td></td>
</tr>
<tr>
<td>1:00 – 4:45 pm</td>
<td>Golf Event</td>
<td>Extra Cost – Not included in Program fee</td>
</tr>
</tbody>
</table>

### Day One

**Buildings for Advanced Technology Workshop II**
Mesa, Arizona

**Day One**

Wednesday 21, January
# Day One: Defining Science Needs

**Wednesday January 21**

<table>
<thead>
<tr>
<th>Time</th>
<th>Topic</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>10:00 am–noon</td>
<td>Registration</td>
<td></td>
</tr>
<tr>
<td>11:00 am–noon</td>
<td>Welcome Lunch</td>
<td>Buffet-style lunch provided</td>
</tr>
<tr>
<td>10:00 am–noon</td>
<td>Workshop Introduction</td>
<td>Dr. Greg Raupp, Vice President, Office of Research and Economic Affairs, Arizona State University</td>
</tr>
<tr>
<td>12:15 – 1:00 pm</td>
<td>Keynote Speaker: Overview of the National Nanotechnology Initiative, Nanotechnology Research Directions.</td>
<td>Dr. E. Clayton Teague, Director, National Nanotechnology Coordination Office</td>
</tr>
<tr>
<td>1:00 – 2:00 pm</td>
<td>Brookhaven National Laboratory, Center for Functional Nanomaterials</td>
<td>Dr. Robert Hwang, Director of Center for Functional Nanomaterials, Brookhaven National Lab</td>
</tr>
<tr>
<td>2:00 – 3:00 pm</td>
<td>Sandia National Laboratories, Center for Integrated Nanotechnologies (CINT), A New Model for a Nanoscience Research User Facility</td>
<td>Dr. Neal D. Shine, Manager of the Surface and Interface Science Department, Sandia National Laboratories</td>
</tr>
<tr>
<td>4:15 – 5:15 pm</td>
<td>Interdisciplinary Innovation At The Nano-Scale And Its Impact On Laboratory Construction</td>
<td>Dr. Frederic Zenhausern, Arizona State University</td>
</tr>
<tr>
<td>5:15 – 6:45 pm</td>
<td>Reception</td>
<td>Networking Reception, Hors d’oeuvres provided and cash bar available, sponsored by HDR and Create</td>
</tr>
</tbody>
</table>

---

**12:15 – 1:00 pm**

**Overview of the National Nanotechnology Initiative, Nanotechnology Research Directions.**

**Dr. E. Clayton Teague**
Director, National Nanotechnology Coordination Office
Day One: Defining Science Needs

1:00 – 2:00 pm

Brookhaven National Laboratory, Center for Functional Nanomaterials

Dr. Robert Hwang
Director of Center for Functional Nanomaterials
Brookhaven National Lab

Day One: Defining Science Needs

2:00 – 3:00 pm

Sandia National Laboratories, Center for Integrated Nanotechnologies (CINT)

A New Model for a Nanoscience Research User Facility

Dr. Neal D. Shinn
Manager of the Surface and Interface Science Department
Sandia National Laboratories
Break: 3:00 – 3:15 pm

Refreshments Sponsored by:
McCarthy
ASU Technopolis

Wednesday 21, January

Day One: Defining Science Needs

3:15 – 4:15 pm

Research Facilities To Serve The Needs Of 21st. Century Biology:
A Nexus Of Disciplines, Technologies And Discoveries

Dr. Michael Knotek
Consultant
Knotek Consulting
Day One: Defining Science Needs

4:15 – 5:15 pm

Interdisciplinary Innovation At The Nano-Scale And Its Impact On Laboratory Construction

Dr. Frederic Zenhausern
Arizona State University

Reception: 5:15 – 6:45 pm

Buildings for Advanced Technology Workshop II
Mesa, Arizona

Wednesday 21, January
Contributing Organizations and Firms

BUILDINGS for ADVANCED TECHNOLOGY WORKSHOP II

Contributing Organizations and Firms

Buildings for Advanced Technology Workshop II
Mesa, Arizona

Introduction
Day Two

Ahmad Soueid
Principal/ Senior Vice President
HDR Architecture, Inc.

Thursday 22, January
<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Topic</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30 – 8:00 am</td>
<td>Breakfast</td>
<td>Continental breakfast provided, sponsored by McCarthy and M+W Zander</td>
</tr>
<tr>
<td>8:00 – 8:15 am</td>
<td>Day 2 - Introduction</td>
<td>Ahmad Soueid, Principal / Senior Vice President, HDR Architecture, Inc.</td>
</tr>
<tr>
<td>8:15 – 9:00 am</td>
<td>Analytical Instrumentation Facility Requirements For Nanotechnology</td>
<td>Dr. Tom Isabell, Assistant TEM Product Manager, JEOL USA, Inc.</td>
</tr>
<tr>
<td>9:00 - 10:15 am</td>
<td>Architectural Trends, Solutions, and</td>
<td>Tom Gerbo, Vice President, HDR Architecture, Inc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ken Filar, Senior Architect, M+W Zander</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ahmad Soueid, Moderator</td>
</tr>
<tr>
<td></td>
<td></td>
<td>David Gilley, Sustainable Design Coordinator, HDR Architecture, Inc.</td>
</tr>
<tr>
<td></td>
<td>Breakfast</td>
<td></td>
</tr>
<tr>
<td>10:30 - 11:45 am</td>
<td>Mechanical, Process Engineering</td>
<td>Norm Toussaint, Senior Mechanical Engineer, HDR Architecture, Inc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Chris Case, Project Manager, Affiliated Engineers, Inc.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Steve Riojas, Moderator</td>
</tr>
<tr>
<td></td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>11:45 – 1:00 pm</td>
<td>Refreshments, sponsored by Colin Gordon &amp; Associates</td>
<td></td>
</tr>
<tr>
<td>1:00 – 2:30 pm</td>
<td>Mechanical Systems Noise Issues</td>
<td>Hal Amick, VP, Technology Development, Colin Gordon and Associates</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Amir Yazdanniyaz, Principle Acoustics Consultant, Arup Acoustics</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Steve Westfall, Moderator</td>
</tr>
<tr>
<td></td>
<td>Lunch</td>
<td></td>
</tr>
<tr>
<td>2:00 – 3:00 pm</td>
<td>Meeting user requirements</td>
<td>Dr. David Janes, Associate Professor of Electrical and Computer Engineering, Purdue University</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Case Studies (Round Table)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Phil Haswell, Director of Facilities, University of Alberta, Canada</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Jack Stallans, Senior Project Manager, Oak Ridge National Laboratory</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Tom Gerbo, Moderator</td>
</tr>
<tr>
<td>3:15 - 5:00 pm</td>
<td>Refreshments, sponsored by Colin Gordon &amp; Associates and Abbie Gregg, Inc.</td>
<td></td>
</tr>
</tbody>
</table>
Day Two: Outlining Trends / Developing Solutions

9:00 – 10:15 am

Architectural Trends, Solutions and Sustainable Design

Moderator: Ahmad Soueid

Tom Gerbo
Vice President
HDR Architecture, Inc.

Ken Filar
Senior Architect
M+W Zander

David Gibney
Sustainable Design Coordinator
HDR Architecture, Inc.

Buildings for Advanced Technology Workshop II
Mesa, Arizona
Break: 10:15 – 10:30 am

Sponsored by:
Colin Gordon & Associates

Thursday 22, January
Day Two: Outlining Trends / Developing Solutions

10:30 – 11:45 am

Mechanical, Process Engineering Solutions

Norm Toussaint  
Senior Mechanical Engineer  
HDR Architecture, Inc.

Moderator: Steve Riojas

Chris Case  
Project Manager  
Affiliated Engineers, Inc.

William Acorn  
Principal and Founder  
Acorn Consulting Services

Buildings for Advanced Technology Workshop II  
Mesa, Arizona

Lunch: 11:45 – 1:15 pm

Sponsored by:  
HDR Architecture, Inc.  
CREATE

Thursday 22, January
Day Two: Outlining Trends / Developing Solutions

1:15 – 2:15 pm

Electrical, EMI, Grounding

Dave Bechtol
Electrical Section Manager
HDR Architecture, Inc.

Lou Vitale
President and Chief Engineer
Vitatech Engineering, LLC

Moderator: David Janes

2:15 – 3:30 pm

Mechanical Systems Noise Issues – Case Studies

Hal Amick
VP Technology Development
Colin Gordon and Associates

Amir Yazdanniyaz
Principle Acoustics Consultant
Arup Acoustics

Moderator: Steve Westfall
Break: 3:30 – 3:45 pm

Thursday 22, January

Day Two: Outlining Trends / Developing Solutions

3:45 – 5:00 pm

Meeting user requirements Case Studies (Round Table)

Moderator: Tom Gerbo

Dr. David Janes
Associate Professor of Electrical and Computer Engineering
Purdue University

Phil Haswell
Director of Facilities
University of Alberta, Canada

Jack Stellern
Senior Project Manager
Oak Ridge National Laboratory
Contributing Organizations and Firms

Buildings for Advanced Technology Workshop II
Mesa, Arizona

Dr. Allan Chasey
Associate Professor
Del E. Webb School of Construction at Arizona State University
Director, CREATE

Introduction
Day Three
Friday 23, January
Day Three: Protecting the Investment

Friday January 23

8:00 – 9:15 am
Scope Development, Programming, Cost, Cost Control, Project Control

Moderator: Allan Chasey

Abbie Gregg
Engineering Consultant
Abbie Gregg, Inc.

Greg Parker
Vice President
Currie and Brown, Inc.
Buildings for Advanced Technology Workshop II
Mesa, Arizona

Break: 9:15 – 9:30 am

Hors D’oeuvres Sponsored by:
Abbie Gregg, Inc.
M+W Zander

Friday 23, January

Day Three: Protecting the Investment

9:30 – 10:15 am

Project Management (contract delivery, commissioning, quality, expertise)

Moderator: Allan Chasey

Robert Harper
Vice President, Senior Business Development Manager
Gilbane Building Company

Michael Christeson
Regional MEP Director
Gilbane Building Company
Day Three: Protecting the Investment

10:15 – 11:00 am

ASU AZ Bio Design Facility

Brett Dominguez
Preconstruction Manager
DPR Construction

Brett Helm
Construction Manager
DPR Construction

Terry Abair
Project Director
Sundt Construction, Inc.

Moderator: Allan Chasey

Contributing Organizations and Firms