

# UTCA

## University Transportation Center for Alabama

The University of Alabama, The University of Alabama at Birmingham, and  
The University of Alabama in Huntsville

### **A Review of the Center's Activities in 2012**

*1/1/2012 – 12/31/2012*

#### **I. Center Mission and Theme**

The UTCA mission contributes to the overall mission of the US Department of Transportation (USDOT). Specifically, the UTCA seeks

To advance technology and expertise in the multiple disciplines that comprise transportation through the mechanisms of education, research, and technology transfer while serving as a university-based center of excellence (*2006 UTCA Strategic Plan*, p. 12)

The UTCA theme – *Management of Safety of Transportation Systems* – reflects the transportation needs of Alabama and the expertise of The University of Alabama System faculty. In allocating UTCA funding, the Executive Committee and Board of Advisors give priority to programs and projects that closely follow this theme.

## II. Active Center Projects

These are projects the center is involved with regardless of funding source or even if the project is funded.

### a. Projects started in 2012

| Project ID | Project Title                                                                                       | Status    | Faculty         | Campus   | Award Amount | Initial Start Date |
|------------|-----------------------------------------------------------------------------------------------------|-----------|-----------------|----------|--------------|--------------------|
| 12101      | ALDOT ITS Strategic Vision                                                                          | UTC       | Jones, S.       | UA       | 36,543       | 1/1/2012           |
| 12202      | Improving Bridge Load Rating Accuracy                                                               | UTC       | Salama, T.      | UAB      | 37,268       | 1/1/2012           |
| 12302      | Developing Sustainable Transportation Performance Measures for ALDOT                                | UTC       | Toutanji, H.    | UAH      | 37,778       | 1/1/2012           |
| 12401      | Natural Gas Encasement for Highway Crossings                                                        | Awarded   | Lindly, J.      | UA       | 128,428      | 6/19/2012          |
| 12402      | Safety & Operational Evaluation of Adaptive Traffic Signal Control                                  | Awarded   | Jones, S.       | UA       | 439,769      | 1/1/2012           |
| 12403      | Technical Assistance, Liaison and Coordination Services for Hiway Safety Research and Implem. Prog. | Awarded   | Turner, D.      | UA       | 47,005       | 1/1/2012           |
| 12404      | Bridge Rail Safety Analysis                                                                         | Awarded   | Jones, S.       | UA       | 129,485      | 3/23/2012          |
| 12405      | Financial Impact Analysis for Full Reciprocity Plan                                                 | Rejected  | Lou, Y.         | UA       | 84,902       | 6/1/2012           |
| 12406      | Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes (2012-089)                     | Awarded   | Lou, Y.         | UA       | 59,541       | 8/15/2012          |
| 12407      | Wisconsin DOT "Crash and Analysis Mapping Phase III                                                 | Awarded   | Graettinger, A. | UA       | 118,641      | 1/1/2012           |
| 12408      | Revision of Observation Sites for 2012 AL Occupant Restraint Survey Design                          | Awarded   | Lou, Y.         | UA       | 2,364        | 7/1/2012           |
| 12409      | Life Cycle Cost in ALDOT Infrastructure Projects                                                    | Awarded   | Lindly, J.      | UA       | 227,297      | 6/26/2012          |
| 12410      | ALDOT Economic Sustainability                                                                       | Awarded   | Batson, R.      | UA       | 50,384       | 8/16/2012          |
| 12411      | Revision of the Traffic Signal Design Guide and Timing Manual                                       | Awarded   | Jones, S.       | UA       | 45,179       | 10/19/2012         |
| 12412      | Travel Time Assessment of Adaptive Traffic Signal Control Systems                                   | Awarded   | Jones, S.       | UA       | 160,262      | 10/11/2012         |
| 12413      | Operational analysis of Diverging diamond Interchanges                                              | Submitted | Jones, S.       | UA - Sub | 56,429       | 4/1/2012           |
| 12414      | Red Light Running Camera Implementation Guide                                                       | Awarded   | Jones, S.       | UA       | 22,449       | 11/1/2012          |
| 12415      | Alabama Traffic Data Collection Analysis                                                            | Awarded   | Jones, S.       | UA       | 1,499,841    | 11/28/2012         |
| 12416      | Culvert Wing Tab Design Loads                                                                       | Submitted | Richardson, J.  | UA       | 190,488      | 10/1/2012          |

**\$3,374,053**

## b. Projects continued from previous years

| Project ID | Project Title                                                            | Status  | Faculty      | Campus | Award Amount | End Date   |
|------------|--------------------------------------------------------------------------|---------|--------------|--------|--------------|------------|
| 09402      | UTCA Research Forum                                                      | Ongoing | Lindly, J.   | UA     | 10,000       | 9/30/2012  |
| 09403      | Development of Access Management Criteria                                | Ongoing | Jones, S.    | UA     | 217,960      | 8/31/2012  |
| 10401      | Pilot Car Driver Certification Program                                   | Ongoing | Lindly, J.   | UA     | 113,222      | 8/30/2013  |
| 10404      | Scoping Study for Implementation of the Highway Safety Manual in Alabama | Ongoing | Turner, D.   | UA     | 301,279      | 9/30/2012  |
| 11103      | Role of Transit Service Providers in Land Development                    | Ongoing | Lou, Y.      | UA     | 58,133       | 6/30/2012  |
| 11106      | Alabama Transportation Strategic Vision                                  | Ongoing | Jones, S.    | UA     | 142,342      | 12/31/2012 |
| 11108      | Impact of Nighttime Construction on Work Quality                         | Ongoing | Grau, D.     | UA     | 62,918       | 7/31/2012  |
| 11202      | Effect of Increasing Truck Weight on Bridges                             | Ongoing | Waldron, C.  | UAB    | 66,816       | 9/30/2012  |
| 11305      | Analysis of Rural Public Transit in Alabama                              | Ongoing | Anderson, M. | UAH    | 76,368       | 8/31/2012  |
| 11402      | Contraflow Evacuation Planning for I-65 in Alabama                       | Ongoing | Lou, Y.      | UA     | 109,214      | 10/31/2012 |
| 11403      | Revenue Enhancement Alternatives for the Al. Dept. of Transportation     | Ongoing | Lindly, J.   | UA     | 132,739      | 7/31/2012  |

**\$1,290,991**

### c. Projects ending in 2012

| Project ID | Project Title                                                              | Status   | Faculty       | Campus | Award Amt. | End Date   |
|------------|----------------------------------------------------------------------------|----------|---------------|--------|------------|------------|
| 09402      | UTCA Research Forum                                                        | Complete | Lindly, J.    | UA     | 10,000     | 9/30/2012  |
| 09403      | Development of Access Management Criteria                                  | Complete | Jones, S.     | UA     | 217,960    | 8/31/2012  |
| 10404      | Scoping Study for Implementation of the Highway Safety Manual in AI        | Complete | Turner, D.    | UA     | 301,279    | 9/30/2012  |
| 11103      | Role of Transit Service Providers in Land Development                      | Complete | Lou, Y.       | UA     | 58,133     | 6/30/2012  |
| 11106      | Alabama Transportation Strategic Vision                                    | Complete | Jones, S.     | UA     | 142,342    | 12/31/2012 |
| 11108      | Impact of Nighttime Construction on Work Quality                           | Complete | Grau, D.      | UA     | 62,918     | 7/31/2012  |
| 11202      | Effect of Increasing Truck Weight on Bridges                               | Complete | Waldron, C.   | UAB    | 66,816     | 9/30/2012  |
| 11206      | Impacts of Transit in a Complete Streets Context                           | Complete | Sisiopiku, V. | UAB    | 70,298     | 2/15/2012  |
| 11305      | Analysis of Rural Public Transit in Alabama                                | Complete | Anderson, M.  | UAH    | 76,368     | 8/31/2012  |
| 11306      | Student Funding to Attend TRB Conference 2011                              | Complete | Anderson, M.  | UAH    | 30,002     | 2/28/2012  |
| 11402      | Contraflow Evacuation Planning for I-65 in Alabama                         | Complete | Lou, Y.       | UA     | 109,214    | 10/31/2012 |
| 11403      | Revenue Enhancement Alternatives for the ALDOT                             | Complete | Lindly, J.    | UA     | 132,739    | 7/31/2012  |
| 12101      | ALDOT ITS Strategic Vision                                                 | Complete | Jones, S.     | UA     | 36,543     | 12/31/2012 |
| 12202      | Improving Bridge Load Rating Accuracy                                      | Complete | Salama, T.    | UAB    | 37,268     | 12/31/2012 |
| 12302      | Developing Sustainable Transportation Performance Measures for ALDOT       | Complete | Toutanji, H.  | UAH    | 37,778     | 12/31/2012 |
| 12408      | Revision of Observation Sites for 2012 AL Occupant Restraint Survey Design | Complete | Lou, Y.       | UA     | 2,364      | 7/15/2012  |

**\$1,392,022** -

### III. Projects in Development

The list below shows transportation research projects for which proposals have been submitted or awarded through UTCA in 2013.

| Project ID | Pre-Proposal Title                                                                                               | PI                             | Budget  | Proposed Start Date | Proposed End Date | Status     |
|------------|------------------------------------------------------------------------------------------------------------------|--------------------------------|---------|---------------------|-------------------|------------|
| 13401      | Rail Highway At-Grade Crossing Prioritization and Ranking Program Analysis                                       | Lou 50%, Jones 50%             | 234,419 | 1/1/2013            | 8/15/2014         | Awarded    |
| 13402      | Development of the ALDOT Roundabout Design and Operations Manual                                                 | Jones                          | 307,618 | 1/1/2013            | 12/31/2014        | Awarded    |
| 13403      | Short Term, Quick Turnaround Services to Facilitate Safety Research and Implementation                           | Turner 33%, Jones 33%, Lou 33% | 59,494  | 1/28/2013           | 12/31/2013        | Awarded    |
| 13404      | Guidance for the Development and Application of Crash Modification Factors                                       | Lou                            | 49,994  | 4/1/2013            | 9/30/2015         | rejected   |
| 13405      | Developing a Frame Work for Sustainability Screening of Transit-Oriented Developing Projects                     | Jones                          | 104,830 | 8/16/2013           | 2/15/2015         | submitted  |
| 13406      | Guidebook for Selecting and Implementing Sustainable Highway Construction Practices                              | Grau 50%, Wang 50%             | 185,081 | 5/1/2013            | 4/31/15           | submitted  |
| 13407      | Engineering Consulting Services                                                                                  | Giannini, E                    | 3,000   | 6/1/13              | 8/31/13           | Awarded    |
| 14401      | Comparative Evaluation of Concrete Bridge Deck Sealers                                                           | Giannini 95%, Lindly 5%        | 61,895  | 1/1/14              | 8/31/14           | submitted  |
| N/A        | National Center for Rural Highway Safety Innovation (we are co/proposers with Montana State University)          | Lindly                         | 900,000 | 10/1/2013           | 9/30/2015         | submitted  |
| N/A        | Prospectus for a Regional Center in USDOT Region 4 (we are co/proposers with University of Tennessee and others) | Lindly                         | 156,000 | 10/1/2013           | 9/30/2015         | submitted  |
| N/A        | NCHRP Synthesis 20-05/Topic 45-07                                                                                | Lindly                         | 35,000  | 10/1/2013           | 9/30/2014         | inprogress |
| N/A        | Wet Weather Safety Analysis Tool                                                                                 | Tootle                         | 320,000 | 8/15/2013           | 8/14/2015         | inprogress |
|            |                                                                                                                  |                                |         |                     |                   |            |

## **IV. Center Participants**

### **a. Administration**

The UTCA headquarters is located in the Bevill Building on The University of Alabama campus. Each campus (UA, UAB, and UAH) has a branch office operating under the direction of an associate director. The executive director and associate directors form the Executive Committee, which provides guidance and direction for Center activities. Faculty members engaged in UTCA projects work in their own offices on their own campuses.

The six individuals listed below are continuously assigned to the UTCA, all on a part-time basis.

**Dr. Jay K. Lindly, Executive Director**

Department of Civil, Construction, and Environmental Engineering  
The University of Alabama  
Tuscaloosa, AL

**Dr. Michael Hardin, Associate Director**

College of Commerce and Business Administration  
The University of Alabama  
Tuscaloosa, AL

**Dr. Fouad H. Fouad, Associate Director**

Department of Civil, Construction, and Environmental Engineering  
The University of Alabama at Birmingham  
Birmingham, AL

**Dr. Houssam Toutanji, Associate Director**

Department of Civil and Environmental Engineering  
The University of Alabama in Huntsville  
Huntsville, AL

**Mrs. Connie Harris, Administrative Secretary and**

**Mr. Joseph Walsh, Editorial Assistant**

Department of Civil, Construction, and Environmental Engineering  
The University of Alabama  
Tuscaloosa, AL

## b. UA Faculty Working on UTCA Projects/Activities in 2012

| Faculty         | Dept. | Project ID | Project Title                                                      | PI | Fund Source |
|-----------------|-------|------------|--------------------------------------------------------------------|----|-------------|
| Batson, R.      | CCE   | 12410      | ALDOT Economic Sustainability                                      | X  | ALDOT       |
| Back, W.E.      | CCE   | 11108      | Impact of Nighttime Construction on Work Quality                   |    | UTCA        |
| Back, W.E.      | CCE   | 12409      | Life Cycle Cost in ALDOT Infrastructure Projects                   |    | ALDOT       |
| Cover, J.       | ELFS  | 12410      | ALDOT Economic Sustainability                                      |    | ALDOT       |
| Fonseca, D.     | ME    | 11402      | Contraflow Evacuation Planning for I-65 in Alabama                 |    | ALDOT       |
| Fridley, K.     | CCE   | 12409      | Life Cycle Cost in ALDOT Infrastructure Projects                   |    | ALDOT       |
| Grau, D.        | CCE   | 11108      | Impact of Nighttime Construction on Work Quality                   | X  | UTCA        |
| Graettinger, A. | CCE   | 12401      | Natural Gas Encasement for Highway Crossings                       |    | ALDOT       |
| Graettinger, A. | CCE   | 12407      | Wisconsin DOT - Crash and Analysis Mapping Phase III               | X  | WDOT        |
| Johnson, P.     | CCE   | 12401      | Natural Gas Encasement for Highway Crossings                       |    | ALDOT       |
| Jones, S.       | CCE   | 09403      | Development of Access Mgt. Criteria                                | X  | ALDOT       |
| Jones, S.       | CCE   | 11103      | Role of Transit Service Providers in Land Development              |    | UTCA        |
| Jones, S.       | CCE   | 11106      | Alabama Public Transportation Strategic Vision                     | X  | UTCA        |
| Jones, S.       | CCE   | 12101      | ALDOT ITS Strategic Vision                                         | X  | ALDOT       |
| Jones, S.       | CCE   | 12402      | Safety & Operational Evaluation of Adaptive Traffic Signal Control | X  | ALDOT       |
| Jones, S.       | CCE   | 12404      | Bridge Rail Safety Analysis                                        | X  | ALDOT       |
| Jones, S.       | CCE   | 12411      | Revision of the Traffic Signal Design Guide and Timing Manual      | X  | ALDOT       |
| Jones, S.       | CCE   | 12412      | Travel Time Assessment of Adaptive Traffic Signal Control Systems  | X  | ALDOT       |
| Jones, S.       | CCE   | 12414      | Red Light Running Camera Implementation Guide                      | X  | ALDOT       |
| Jones, S.       | CCE   | 12415      | Alabama Traffic Data Collection Analysis                           | X  | ALDOT       |
| Lindly, J.      | CCE   | 10401      | Pilot Car Driver Certification Program                             | X  | ALDOT       |
| Lindly, J.      | CCE   | 11103      | Role of Transit Service Providers in Land Development              |    | UTCA        |
| Lindly, J.      | CCE   | 11106      | Alabama Public Transportation Strategic Vision                     |    | UTCA        |
| Lindly, J.      | CCE   | 11403      | Revenue Enhancement Alternatives for ALDOT                         | X  | ALDOT       |
| Lindly, J.      | CCE   | 12401      | Natural Gas Encasement for Highway Crossings                       | X  | ALDOT       |
| Lindly, J.      | CCE   | 12409      | Life Cycle Cost in ALDOT Infrastructure Projects                   | X  | ALDOT       |
| Lindly, J.      | CCE   | 12414      | Red Light Running Camera Implementation Guide                      |    | ALDOT       |

## UA Faculty Working on UTCA Projects – continued from page 7

| Faculty      | Dept. | Project ID | Project Title                                                                             | PI | Fund Source |
|--------------|-------|------------|-------------------------------------------------------------------------------------------|----|-------------|
| Lou, Y.      | CCE   | 11103      | Role of Transit Service Providers in Land Development                                     | X  | UTCA        |
| Lou, Y.      | CCE   | 11106      | Alabama Public Transportation Strategic Vision                                            |    | UTCA        |
| Lou, Y.      | CCE   | 11402      | Contraflow Evacuation Planning for I-65 in Alabama                                        | X  | ALDOT       |
| Lou, Y.      | CCE   | 11403      | Revenue Enhancement Alternatives for ALDOT                                                |    | ALDOT       |
| Lou, Y.      | CCE   | 12101      | ALDOT ITS Strategic Vision                                                                |    | ALDOT       |
| Lou, Y.      | CCE   | 12404      | Bridge Rail Safety Analysis                                                               |    | ALDOT       |
| Lou, Y.      | CCE   | 12406      | Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes (2012-089)           | X  | STRIDE      |
| Lou, Y.      | CCE   | 12408      | Revision of Observation Sites for 2012 AL Occupant Restraint Survey Design                | X  | ADPH        |
|              |       |            |                                                                                           |    |             |
| Moynihan, G. | CCE   | 11402      | Contraflow Evacuation Planning for I-65 in Alabama                                        |    | ALDOT       |
|              |       |            |                                                                                           |    |             |
| Turner, D.   | CCE   | 09403      | Development of Access Mgt. Criteria                                                       |    | ALDOT       |
| Turner, D.   | CCE   | 12403      | Liaison and Coordination Services for Highway Safety Research and Implementation Programs | X  | ALDOT       |



**c. UA Research Scientists/Post-Doctoral Associates Working on UTCA Projects/Activities in 2012**

| Research Eng/ Post Doc | Dept. | Project ID | Project Title                                                      | Fund Source |
|------------------------|-------|------------|--------------------------------------------------------------------|-------------|
| Addy, S.               | CBER  | 11403      | Revenue Enhancement Alternatives for ALDOT                         | ALDOT       |
| Gurupackiam, S.        | CCE   | 11402      | Contraflow Evacuation Planning for I-65 in Alabama                 | ALDOT       |
| Gurupackiam, S.        | CCE   | 12101      | ALDOT ITS Strategic Vision                                         | ALDOT       |
| Gurupackiam, S.        | CCE   | 12402      | Safety & Operational Evaluation of Adaptive Traffic Signal Control | ALDOT       |
| Ijaz, A.               | CBER  | 11403      | Revenue Enhancement Alternatives for ALDOT                         | ALDOT       |
| Ijaz, A.               | CBER  | 12410      | ALDOT Economic Sustainability                                      | ALDOT       |
| Tedla, E.              | CCE   | 12402      | Safety & Operational Evaluation of Adaptive Traffic Signal Control | ALDOT       |
| Tedla, E.              | CCE   | 12411      | Revision of the Traffic Signal Design Guide and Timing Manual      | ALDOT       |
| Tedla, E.              | CCE   | 12414      | Red Light Running Camera Implementation Guide                      | ALDOT       |

#### d. UA Graduate Students Working on UTCA Projects/Activities in 2012

| GRA             | Dept. | Project ID | Project Title                                                                   | Fund Source |
|-----------------|-------|------------|---------------------------------------------------------------------------------|-------------|
| Adanu, E. K.    | CCE   | 12101      | ALDOT ITS Strategic Vision                                                      | ALDOT       |
| Biswas, S.      | CCE   | 12407      | Wisconsin DOT - Crash and Analysis Mapping Phase III                            | WDOT        |
| Cochran, C.     | CCE   | 12410      | ALDOT Economic Sustainability                                                   | ALDOT       |
| Green, F.       | CCE   | 11103      | Role of Transit Service Providers in Land Development                           | UTCA        |
| Green, F.       | CCE   | 11402      | Contraflow Evacuation Planning for I-65 in Alabama                              | ALDOT       |
| Lidbe, A.       | CCE   | 11403      | Revenue Enhancement Alternatives for ALDOT                                      | ALDOT       |
| Lidbe, A.       | CCE   | 12406      | Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes (2012-089) | STRIDE      |
| Lidbe, A.       | CCE   | 12408      | Revision of Observation Sites for 2012 AL Occupant Restraint Survey Design      | ADPH        |
| McElvy, R.      | CCE   | 11108      | Impact of Nighttime Construction on Work Quality                                | UTCA        |
| Mehta, G.       | CCE   | 11402      | Contraflow Evacuation Planning for I-65 in Alabama                              | ALDOT       |
| Mehta, G.       | CCE   | 11403      | Revenue Enhancement Alternatives for ALDOT                                      | ALDOT       |
| Mehta, G.       | CCE   | 12404      | Bridge Rail Safety Analysis                                                     | ALDOT       |
| Miralinaghi, M. | CCE   | 11403      | Revenue Enhancement Alternatives for ALDOT                                      | ALDOT       |
| Peiheng, L.     | CCE   | 11402      | Contraflow Evacuation Planning for I-65 in Alabama                              | ALDOT       |
| Sherer, M.      | CCE   | 12401      | Natural Gas Encasement for Highway Crossings                                    | ALDOT       |
| Stone, W.       | CCE   | 12407      | Wisconsin DOT - Crash and Analysis Mapping Phase III                            | WDOT        |

**e. UA Undergraduate Students Working on UTCA Projects/Activities in 2012**

| <b>Undergrad</b> | <b>Dept.</b> | <b>Project ID</b> | <b>Project Title</b>                                               | <b>Fund Source</b> |
|------------------|--------------|-------------------|--------------------------------------------------------------------|--------------------|
| Dye, D.          | CCE          | 12402             | Safety & Operational Evaluation of Adaptive Traffic Signal Control | ALDOT              |
| Dye, D.          | CCE          | 09403             | Development of Access Mgt. Criteria                                | ALDOT              |
| Farrell, S.      | CCE          | 12407             | Wisconsin DOT - Crash and Analysis Mapping Phase III               | WDOT               |
| Johnson, K.      | CCE          | 12401             | Natural Gas Encasement for Highway Crossings                       | ALDOT              |
| Lynch, D.        | CCE          | 12402             | Safety & Operational Evaluation of Adaptive Traffic Signal Control | ALDOT              |
| Perkins, L.      | CCE          | 12409             | Life Cycle Cost in ALDOT Infrastructure Projects                   | ALDOT              |
| Purkey, A.       | CCE          | 12407             | Wisconsin DOT - Crash and Analysis Mapping Phase III               | WDOT               |

## V. Internal Collaborations

UTCA is housed in the Department of Civil, Construction, and Environmental Engineering (CCE) at UA. The table below indicates other units (including other non-transportation civil engineering faculty) that participated in UTCA projects during 2012. The table below also includes UTCA faculty that were Co-PI's in other departments.

| Project ID | Project Title                                                    | PI/Co-Pis       | Dept.    | Title                                                        |
|------------|------------------------------------------------------------------|-----------------|----------|--------------------------------------------------------------|
| 11108      | Impact of Nighttime Construction on Work Quality                 | Back, W.E.      | CCE      | Director of Construction Engineering and Management          |
| 11108      | Impact of Nighttime Construction on Work Quality                 | Grau, D.        | CCE      | Asst. Professor, Civil, Construction and Env. Eng.           |
| 11402      | Contraflow Evacuation Planning for I-65 in Alabama               | Fonseca, D.     | ME       | Assoc. Professor, Mechanical Engineering                     |
| 11402      | Contraflow Evacuation Planning for I-65 in Alabama               | Lou, Y.         | CCE      |                                                              |
| 11402      | Contraflow Evacuation Planning for I-65 in Alabama               | Moynihan, G.    | CCE      | Assistant Director, Alabama Industrial Assessment Center     |
| 11403      | Revenue Enhancement Alternatives for ALDOT                       | Lindly, J.      | CCE      | Director, University Transportation Center for AI (UTCA)     |
| 11403      | Revenue Enhancement Alternatives for ALDOT                       | Lou, Y.         | CCE      | Asst. Professor, Civil, Construction and Env. Eng./UTCA      |
| 11403      | Revenue Enhancement Alternatives for ALDOT                       | Addy, S.        | CBER     | Director of Center for Business and Economic Research (CBER) |
| 11403      | Revenue Enhancement Alternatives for ALDOT                       | Ijaz, A.        | CBER     |                                                              |
| 12401      | Natural Gas Encasement for Highway Crossings                     | Graettinger, A. | CCE      | Assoc. Professor, Civil, Construction & Env. Eng.            |
| 12401      | Natural Gas Encasement for Highway Crossings                     | Johnson, P      | CCE      | Assoc. Professor, Civil, Construction & Env. Eng.            |
| 12401      | Natural Gas Encasement for Highway Crossings                     | Lindly, J.      | CCE      | Director, University Transportation Center for AI (UTCA)     |
| 12407      | Wisconsin DOT - Crash and Analysis Mapping Phase III             | Graettinger, A. | CCE      | Assoc. Professor, Civil, Construction & Env. Eng.            |
| 12409      | Life Cycle Cost in ALDOT Infrastructure Projects                 | Back, W.E.      | CCE      | Director of Construction Engineering and Management          |
| 12409      | Life Cycle Cost in ALDOT Infrastructure Projects                 | Fridley, K      | CCE      | Department Head of Civil, Construction & Env. Eng.           |
| 12409      | Life Cycle Cost in ALDOT Infrastructure Projects                 | Lindly, J.      | CCE      | Director, University Transportation Center for AI (UTCA)     |
| 12410      | ALDOT Economic Sustainability                                    | Batson, R.      | CCE      | Professor, Civil, Construction and Env. Eng.                 |
| 12410      | ALDOT Economic Sustainability                                    | Cochran, C.     | CCE      | GRA Student, Civil, Construction                             |
| 12410      | ALDOT Economic Sustainability                                    | Cover, J.       | ELFS     |                                                              |
| 12410      | ALDOT Economic Sustainability                                    | Ijaz, A.        | CBER     |                                                              |
| CAPS       | Evaluation of the AI Ticketing Aggressive Cars and Trucks (TACT) | Parrish, A      | CS, CAPS | Director of Center for Advanced Public Safety (CAPS)         |
|            |                                                                  | Brown, D.       | CS, CAPS | Deputy Director of CAPS                                      |
|            |                                                                  | Jones, S.       | CCE      |                                                              |

## VI. External Collaborations

The table below indicates individuals and entities outside UA that participated in UTCA projects during 2012.

| Project ID | Project Title                                                                   | Participants    | Organizations                                                                                           |
|------------|---------------------------------------------------------------------------------|-----------------|---------------------------------------------------------------------------------------------------------|
| 09403      | Development of Access Management Criteria                                       | Jones, S.       | Alabama Dept. of Transportation, funding                                                                |
| 10401      | Pilot Car Driver Certification Program                                          | Lindly, J.      | Alabama Dept. of Transportation, funding                                                                |
| 10404      | Scoping Study for Implementation of the Highway Safety Manual in Alabama        | Turner, D.      | Alabama Dept. of Transportation, funding                                                                |
| 11103      | Role of Transit Service Providers in Land Development                           | Lou, Y.         | US Dept. of Transportation, funding                                                                     |
| 11106      | Alabama Transportation Strategic Vision                                         | Jones, S.       | US Dept. of Transportation, funding &<br>UAB - subcontract                                              |
| 11108      | Impact of Nighttime Construction on Work Quality                                | Grau, D.        | US Dept. of Transportation, funding                                                                     |
| 11202      | Effect of Increasing Truck Weight on Bridges                                    | Waldron, C.     | UAB - PI &<br>US Dept. of Transportation, funding                                                       |
| 11305      | Analysis of Rural Public Transit in Alabama                                     | Anderson, M.    | UAH - PI &<br>US Dept. of Transportation, funding                                                       |
| 11402      | Contraflow Evacuation Planning for I-65 in Alabama                              | Lou, Y.         | Alabama Dept. of Transportation, funding                                                                |
| 11403      | Revenue Enhancement Alternatives for the Alabama Department of Transportation   | Lindly, J.      | Alabama Dept. of Transportation, funding                                                                |
| 12101      | ALDOT ITS Strategic Vision                                                      | Jones, S.       | US Dept. of Transportation, funding                                                                     |
| 12202      | Improving Bridge Load Rating Accuracy                                           | Salama, T.      | UAB - PI &<br>US Dept. of Transportation, funding                                                       |
| 12302      | Developing Sustainable Transportation Performance Measures for ALDOT            | Toutanji, H.    | UAH - PI &<br>US Dept. of Transportation, funding                                                       |
| 12401      | Natural Gas Encasement for Highway Crossings                                    | Lindly, J.      | Alabama Dept. of Transportation, funding                                                                |
| 12402      | Safety & Operational Evaluation of Adaptive Traffic Signal Control              | Jones, S.       | Alabama Dept. of Transportation, funding &<br>UAB, subcontract &<br>Southern Traffic Services - FL, sub |
| 12403      | Liaison and Coordination Services for Highway Safety Research and Implem. Prog. | Turner, D.      | Alabama Dept. of Transportation, funding                                                                |
| 12404      | Bridge Rail Safety Analysis                                                     | Jones, S.       | Alabama Dept. of Transportation, funding                                                                |
| 12406      | Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes (2012-089) | Lou, Y.         | University of Florida, funding                                                                          |
| 12407      | Wisconsin DOT & Crash and Analysis Mapping Phase III                            | Graettinger, A. | Wisconsin Dept. of Transportation, funding                                                              |
| 12408      | Revision of Observation Sites for 2012 AL Occupant Restraint Survey Design      | Lou, Y.         | Alabama Dept of Public Health, funding                                                                  |
| 12409      | Life Cycle Cost in ALDOT Infrastructure Projects                                | Lindly, J.      | Alabama Dept. of Transportation, funding                                                                |
| 12410      | ALDOT Economic Sustainability                                                   | Batson, R.      | Alabama Dept. of Transportation, funding                                                                |
| 12411      | Revision of the Traffic Signal Design Guide and Timing Manual                   | Jones, S.       | Alabama Dept. of Transportation, funding &<br>UAB - UA Sub with UAB                                     |

## External Collaborations – continued from page 13

| Project ID | Project Title                                                     | Participants | Organizations                                                                            |
|------------|-------------------------------------------------------------------|--------------|------------------------------------------------------------------------------------------|
| 12412      | Travel Time Assessment of Adaptive Traffic Signal Control Systems | Jones, S.    | Alabama Dept. of Transportation, funding &<br>Southern Lighting & Traffic - GA - Sub     |
| 12414      | Red Light Running Camera Implementation Guide                     | Jones, S.    | Alabama Dept. of Transportation, funding &<br>Alabama Dept. of Transportation, funding & |
| 12415      | Alabama Traffic Data Collection Analysis                          | Jones, S.    | Southern Traffic Services - FL - Sub                                                     |

## VII. Grants/Contracts Submitted

The information contained in the following chart was obtained through the Office for Sponsored Programs at UA for calendar year 2012.

| UTCA Project # | OSP Proposal # | Project Title                                                                       | PI             | Co. PI          | Co. PI      | Agency         | Submitted Date | Award Amount       |
|----------------|----------------|-------------------------------------------------------------------------------------|----------------|-----------------|-------------|----------------|----------------|--------------------|
| 12401          | 12-0204        | Natural Gas Encasement for Highway Crossings                                        | Lindly, J.     | Graettinger, A. |             | ALDOT          | 1/20/2012      | 128,428            |
| 12402          | 12-0182        | Safety & Operational Evaluation of Adaptive Traffic Signal Control                  | Jones, S.      | Gurupackiam, S  |             | ALDOT          | 1/10/2012      | 585,648            |
| 12403          | 12-0183        | Liaison and Coordination Services for Hiway Safety Research and Implem. Prog.       | Turner, D.     |                 |             | ALDOT          | 1/4/2012       | 47,005             |
| 12404          | 12-0341        | Bridge Rail Safety Analysis                                                         | Jones, S.      | Yingyan, L      |             | ALDOT          | 3/15/2012      | 129,485            |
| 12405          | 12-0427        | Financial Impact Analysis for Full Reciprocity Plan                                 | Lou, Y.        | Lindly, J.      | Ijaz, Ahmad | Oregon DOT     | 4/5/2012       | 84,902             |
| 12406          | 12-0471        | Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes (2012-089)     | Lou, Y.        |                 |             | Univ. of FL    | 5/11/2012      | 59,541             |
| 12408          | 12-0517        | Revision of Observation Sites for 2012 AL Occupant Restraint Survey Design          | Lou, Y.        |                 |             | ADPH           | 6/20/2012      | 2,364              |
| 12409          | 12-0571        | Life Cycle Cost in ALDOT Infrastructure Projects                                    | Lindly, J.     | Fridley, K.     | Back, E.    | ALDOT          | 7/31/2012      | 227,297            |
| 12410          | 12-0665        | ALDOT Economic Sustainability                                                       | Batson, R.     | Cover, J.       |             | ALDOT          | 9/11/2012      | 50,384             |
| 12411          | 13-0001        | Revision of the Traffic Signal Design Guide and Timing Manual                       | Jones, S.      | Tedla, E.       |             | ALDOT          | 10/1/2012      | 45,179             |
| 12412          | 13-0007        | Travel Time Assessment of Adaptive Traffic Signal Control Systems                   | Jones, S.      |                 |             | ALDOT          | 10/11/2012     | 160,262            |
| 12414          | 13-0008        | Red Light Running Camera Implementation Guide                                       | Jones, S.      | Lindly, J.      | Tedla, E.   | ALDOT          | 10/1/2012      | 22,449             |
| 12415          | 13-0046        | Alabama Traffic Data Collection Analysis                                            | Jones, S.      |                 |             | ALDOT          | 10/25/2012     | 1,499,841          |
| 12416          | 12-0627        | Culvert Wing Tab Design Loads                                                       | Richardson, J. | Graettinger, A. | Dao, T.     | ALDOT          | 8/15/2012      | 190,488            |
| 13401          | 13-0021        | Rail Highway At-Grade Crossing Prioritization and Ranking Program Analysis          | Lou, Y.        | Jones, S.       |             | ALDOT          | 10/25/2012     | 234,419            |
| 13402          | 13-0075        | Development of the ALDOT Roundabout Design and Operations Manual                    | Jones, S.      | Tedla, E.       |             | ALDOT          | 11/14/2012     | 307,618            |
| 13406          | 13-0078        | Guidebook for Selecting and Implementing Sustainable Highway Construction Practices | Grau, D.       | Wang, J.        |             | Univ. of Idaho | 11/14/2012     | 185,081            |
|                |                |                                                                                     |                |                 |             |                |                | <b>\$3,960,391</b> |

## VIII. Grants/Contracts Awarded

Section VIII shows externally funded contracts and grants awarded in 2012. This \$2.93M total is in addition to funding that UTCA has received annually from USDOT.

| UTCA Project # | OSP Proposal # | Project Title                                                                 | PI              | Co. PI      | Co. PI    | Agency     | Start Date | End Date   | Award Amount       |
|----------------|----------------|-------------------------------------------------------------------------------|-----------------|-------------|-----------|------------|------------|------------|--------------------|
| 12401          | 12-0204        | Natural Gas Encasement for Highway Crossings                                  | Lindly, J.      | Graettinger |           | ALDOT      | 6/19/2012  | 8/30/2013  | 128,428            |
| 12402          | 12-0182        | Safety & Operational Evaluation of Adaptive Traffic Signal Control            | Jones, S.       | Gurupackiam |           | ALDOT      | 1/1/2012   | 12/31/2012 | 439,769            |
| 12403          | 12-0183        | Liaison and Coordination Services for Hiway Safety Research and Implem. Prog. | Turner, D.      |             |           | ALDOT      | 1/1/2012   | 12/31/2013 | 47,005             |
| 12404          | 12-0341        | Bridge Rail Safety Analysis                                                   | Jones, S.       | Yingyan, L. |           | ALDOT      | 3/23/2012  | 12/31/2013 | 129,485            |
| 12406          | 12-0471        | Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes          | Lou, Y.         |             |           | Univ of FL | 8/15/2012  | 11/15/2013 | 59,541             |
| 12407          | 11-0583        | Wisconsin DOT & Crash and Analysis Mapping Phase III                          | Graettinger, A. |             |           | WI DOT     | 1/1/2012   | 8/31/2013  | 118,641            |
| 12408          | 12-0517        | Revision of Observation Sites for 2012 AL Occupant Restraint Survey Design    | Lou, Y.         |             |           | ADPH       | 7/1/2012   | 9/30/2012  | 2,364              |
| 12409          | 12-0571        | Life Cycle Cost in ALDOT Infrastructure Projects                              | Lindly, J.      | Fridley, K. | Back, E.  | ALDOT      | 6/26/2012  | 1/31/2013  | 227,297            |
| 12410          | 12-0665        | ALDOT Economic Sustainability                                                 | Batson, R.      | Cover, J.   |           | ALDOT      | 8/16/2012  | 1/31/2013  | 50,384             |
| 12411          | 13-0001        | Revision of the Traffic Signal Design Guide and Timing Manual                 | Jones, S.       | Tedla, E.   |           | ALDOT      | 10/19/2012 | 9/30/2013  | 45,179             |
| 12412          | 13-0007        | Travel Time Assessment of Adaptive Traffic Signal Control Systems             | Jones, S.       |             |           | ALDOT      | 10/11/2012 | 9/30/2013  | 160,262            |
| 12414          | 13-0008        | Red Light Running Camera Implementation Guide                                 | Jones, S.       | Lindly, J.  | Tedla, E. | ALDOT      | 11/1/2012  | 2/28/2013  | 22,449             |
| 12415          | 13-0046        | Alabama Traffic Data Collection Analysis                                      | Jones, S.       |             |           | ALDOT      | 11/28/2012 | 9/30/2013  | 1,499,841          |
|                |                |                                                                               |                 |             |           |            |            |            | <b>\$2,930,645</b> |



## IX. Grants/Contracts In-Force (Multi-year, externally-funded projects still active)

Section IX shows externally funded contracts that began in 2012 or that began prior to 2012 and were still active in 2012.

| UTCA Project # | OSP Proposal # | Project Title                                                                                       | PI              | Co. PI      | Co. PI       | Agency  | Start Date | End Date   | Award Amount |
|----------------|----------------|-----------------------------------------------------------------------------------------------------|-----------------|-------------|--------------|---------|------------|------------|--------------|
| 09402          | 09-0669        | UTCA Research Forum                                                                                 | Lindly, J.      |             |              | USDOT   | 9/24/2009  | 9/30/2012  | 10,000       |
| 09403          | 08-0549        | Development of Access Management Criteria                                                           | Jones, S.       |             |              | ALDOT   | 11/18/2009 | 8/31/2012  | 217,960      |
| 10401          | 09-0583        | Pilot Car Driver Certification Program                                                              | Lindly, J.      |             |              | ALDOT   | 4/8/2010   | 8/30/2013  | 113,222      |
| 10404          | 10-0673        | Scoping Study for Implementation of the Highway Safety Manual in Alabama                            | Turner, D.      | Jones, S.   | Lou, Y.      | ALDOT   | 10/21/2010 | 9/30/2012  | 301,279      |
|                |                |                                                                                                     |                 | Brown, D.   | Smith, R.    |         |            |            |              |
| 11402          | 11-0440        | Contraflow Evacuation Planning for I-65 in Alabama                                                  | Lou, Y.         | Fonseca, D. | Moynihan, G. | ALDOT   | 8/15/2011  | 10/31/2012 | 109,214      |
| 11403          | 11-0494        | Revenue Enhancement Alternatives for the Alabama Department of Transportation                       | Lindly, J.      | Lou, Y.     | Addy, S.     | ALDOT   | 9/1/2011   | 7/31/2012  | 132,739      |
|                |                |                                                                                                     |                 | Ijaz, A.    |              |         |            |            |              |
| 12401          | 12-0204        | Natural Gas Encasement for Highway Crossings                                                        | Lindly, J.      | Graettinger |              | ALDOT   | 6/19/2012  | 8/30/2013  | 128,428      |
| 12402          | 12-0182        | Safety & Operational Evaluation of Adaptive Traffic Signal Control                                  | Jones, S.       | Gurupackiam |              | ALDOT   | 1/1/2012   | 12/31/2012 | 439,769      |
| 12403          | 12-0183        | Technical Assistance, Liaison and Coordination Services for Hiway Safety Research and Implem. Prog. | Turner, D.      |             |              | ALDOT   | 1/1/2012   | 12/31/2013 | 47,005       |
| 12404          | 12-0341        | Bridge Rail Safety Analysis                                                                         | Jones, S.       | Lou, Y.     |              | ALDOT   | 3/23/2012  | 12/31/2013 | 129,485      |
| 12406          | 12-0471        | Comparative Analysis of Dynamic Pricing Strategies for Managed Lanes (2012-089)                     | Lou, Y.         |             |              | U of FL | 8/15/2012  | 11/15/2013 | 59,541       |
| 12407          | 11-0583        | Wisconsin DOT & Crash and Analysis Mapping Phase III                                                | Graettinger, A. |             |              | WI DOT  | 1/11/2012  | 8/31/2013  | 118,641      |
| 12409          | 12-0571        | Life Cycle Cost in ALDOT Infrastructure Projects                                                    | Lindly, J.      | Fridley, K. | Back, E.     | ALDOT   | 6/26/2012  | 1/31/2013  | 227,297      |
| 12410          | 12-0665        | ALDOT Economic Sustainability                                                                       | Batson, R.      | Cover, J.   |              | ALDOT   | 8/16/2012  | 1/31/2013  | 50,384       |
| 12411          | 13-0001        | Revision of the Traffic Signal Design Guide and Timing Manual                                       | Jones, S.       | Tedla, E.   |              | ALDOT   | 10/19/2012 | 9/30/2013  | 45,179       |
| 12412          | 13-0007        | Travel Time Assessment of Adaptive Traffic Signal Control Systems                                   | Jones, S.       |             |              | ALDOT   | 10/11/2012 | 9/30/2013  | 160,262      |
| 12414          | 13-0008        | Red Light Running Camera Implementation Guide                                                       | Jones, S.       | Lindly, J.  | Tedla, E.    | ALDOT   | 11/1/2012  | 2/28/2013  | 22,449       |
| 12415          | 13-0046        | Alabama Traffic Data Collection Analysis                                                            | Jones, S.       |             |              | ALDOT   | 11/28/2012 | 9/30/2013  | 1,499,841    |
|                |                |                                                                                                     |                 |             |              |         |            |            | \$3,812,695  |

## X. Publications

List the transportation research papers published in refereed journals and/or conference proceedings that resulted from projects funded by UTCA. Please list only those papers published in the calendar year 2012.

Gurupackiam, S., Jones, S., and Wang, P. “Sensitivity Analysis of Key Input Parameters in Microscopic Simulation of Under Saturated and Saturated Traffic Signals using SimTraffic and CORSIM.” *Journal of Civil Engineering and Architecture* Volume 6, No. 6, June 2012, pp. 651-664.

Gurupackiam, S. and Jones, S. “An Investigation of Lane Changing Parameters on an Urban Arterial for Different Traffic Congestion Levels.” *Advanced Studies In Transportation*, December 2012, pp. 31-45.

Gurupackiam, S. and Jones, S. “Empirical Study of Lane Changing and Control Adherence in Urban Street under Recurrent and Non-Recurrent Congestion.” *International Journal for Traffic and Transport Engineering*, December 2012, Vol.2, (4). pp. 306-422.

Jones, S., Lindly, J. and Wilkes, M., “Review of Escort Car Certification Programs.” *ITE Journal*, Volume 82, Issue 9, September 2012.

Kulshrestha, A., Lou, Y. and Yin, Y. (2012) “Pick-up Locations and Bus Allocation for Transit-based Evacuation Planning with Demand Uncertainty.” *Journal of Advanced Transportation* (accepted, doi:10.1002/atr.1221).

Kulshrestha, A., Lou, Y. and Yin, Y. (2012) “Pick-up Locations and Bus Allocation for Transit-based Evacuation Planning with Demand Uncertainty.” *Transportation Research Board 91st Annual Meeting Compendium of Papers DVD*, Paper No. 12-2941, Washington D.C., USA.

Mehta, G. and Lou, Y. (2012) “Safety Performance Function Calibration and Development for the State of Alabama: Two-lane Two-way Rural Roads and Four-lane Divided Highways.” *Transportation Research Record: Journal of the Transportation Research Board* (accepted).

Sisiopiku, V.P., Kallem B.R., and Sullivan A. (2012). “Qualification of Non-Recurring Congestion Using GPS Data.” *Journal of Modern Traffic and Transportation Engineering Research (MTTER)*, Vol. 1, Issue 2, pp. 54-60.

Uddin, N., Zhao, H., and Obrien, E., 2011 “Use of Weigh-In-Motion (WIM) Data for Site-Specific LRFR Bridge Rating.” *Proceedings of the 6th International Conference on Weigh-In-Motion ICWIM6*, Dallas, Texas (April 4-7, 2012).

## Publications – continued from page 18

Wang, P., Jones, S., and Yang, Q. “A Novel Conditional Cell transmission Model for Oversaturated Arterials.” *Journal of Central South University*. Volume 19, No. 5, 2012.

Zhao, H and Uddin, N. “Weigh-in-Motion (WIM) Data for Site-Specific LRFR Live Load Factor Calibration.” *18th International Association for Bridge and Structural Engineering (IABSE) Congress on Innovative Infrastructures toward Human Urbanism, Seoul, Korea, September 19-21, 2012*

Zuo, Q.H., L.E. Deganis, G. Wang (2012), “Elastic Waves and Damage Quantification in Brittle Material with Evolving Damage.” *Journal of Physics D: Applied Physics*. Vol. 45, 145302, pp. 1-8.

## XI. Presentations

List the transportation research papers presented at academic/professional meetings that resulted from projects funded by UTCA. Please list only those papers presented in the calendar year 2012.

Denny, S.J., McManus, B.M., Walters, M., Stavrinou, D. (2012, July). *Distracted Driving Impacts Merging Onto an Interstate for Teen and Young Adult Drivers*. Poster presented at the 2012 UAB Summer Undergraduate Research Expo, University of Alabama at Birmingham, Birmingham, AL. [First place prize for student poster competition]

Lindly, J.K., *Utility Training for DOTs*. 2012 AASHTO Subcommittee on Right of Way and Utilities Conference, Portland, OR, May 2, 2012.

Lou, Y., *Pick-up Locations and Bus Allocation for Transit-based Evacuation Planning with Demand Uncertainty*. Transportation Research Board 91st Annual Meeting, Washington D.C., January 2012, Poster.

Lou, Y., *Calibration Efforts and SPF Development in Alabama*. NCHRP 17-50 Lead State Initiative for Implementing the Highway Safety Manual, Baltimore, MD, August, 2012.

Lou, Y., *Determination of the Onset and Duration of Contraflow Operations under Uncertainties*. Institute for Operations Research and the Management Sciences Annual Meeting, Phoenix, AZ, October 2012.

Turner, Daniel S., *Summary of the UTC Spotlight Conference on Improving Roadway Safety Programs through University-Agency Partnerships*, Meeting of Transportation Centers, RITA, Washington, DC, January 22, 2012.

Turner, Daniel S., *Highlights from the UTC Spotlight Conference Improving Roadway Safety Programs Through University-Agency Partnerships*. Transportation Research Board Annual Meeting, Washington, DC, January 24, 2012

Turner, Daniel S., *Licensure of Professional Engineers*. Transportation Research Board Annual Meeting, January 23, 2012.

Turner, Daniel S., *Historical Perspective: Engineers, Attorneys and Tort Liability*. Transportation Research Board Annual Meeting, January 23, 2012.

Turner, Daniel S., *History of Engineering and Surveying in Alabama*. Southern Zone, National Council of Examiners for Engineering and Surveying, April 19, 2012

## **Presentations - continued from page 20**

Walters, M., McManus, B.M., Denny, S.J., Kim, S., Stavrinou, D. (2012, July). *Self-Reported Risky Driving Behavior Predicts Greater Speed While Merging*. Poster presented at the 2012 UAB Summer Undergraduate Research Expo, University of Alabama at Birmingham, Birmingham, AL. [First place prize for student poster competition]

Yates, D. and Waldron, C., *Effect of Increasing Truck Weight on Bridges*. 2012 ASCE Alabama Section, Summer Meeting, August 1-3, 2012, Orange Beach, AL

## **XII. Patents**

None.

## **XIII. Short Courses Presented**

List the transportation seminars, symposia, distance learning classes, etc. you conducted in the calendar year 2012 that resulted from projects funded by UTCA.

Turner, Daniel S., "Transportation Leadership Development Workshop," Raleigh, NC, January 5-6, 2012

Turner, Daniel S., "Transportation Leadership Development Workshop," Lexington, KY, April 17-18, 2012

Turner, Daniel S., "Transportation Leadership Development Workshop," Nashville, TN, September 26-28, 2012

## **XIV. Outreach Activities**

Refers to editorial boards of other groups that UTCA personnel served on, any institutes UTCA puts on for underprivileged school and/or high school students, and other outreach activities not previously listed.

*Drs. Lindly, Jones, and Lou teach transportation courses and advise transportation graduate students, in addition to carrying out research. Dr. Turner, who retired in December 2009, has ended his formal teaching and advising duties but continues to be an active member in the community of transportation professionals. The outreach activities of these four individuals are highlighted in this section.*

## **Outreach Activities – continued from page 21**

**Dr. Jay Lindly** directly participated in outreach in several ways:

- Member, Transportation Research Board Committee AFB70, Utilities
- Member, TRB Panel 44-11 for oversight of NCHRP Project “Managing Utilities on Highway Right-of-Way”.
- Member, Alabama Every Day Counts Innovative Initiative, Federal Highway Administration: Alabama Division
- Invited speaker at the 2012 AASHTO Subcommittee on Right of Way and Utilities Conference on the topic of Utility Training for DOTs, May 2, 2012.
- Paper reviewer for TRB Annual Meeting 2012

**Dr. Daniel Turner** was also active:

- Chair, Alabama Board of Licensure for Professional Engineers and Land Surveyors
- Secretary-Treasurer, Southern Zone, National Council for Examination of Engineers and Surveyors
- National Associate of the National Research Council of the National Academies
- Executive Board, Operations and Preservation Group, Transportation Research Board
- Member, Roadway Safety Committee Performance Committee, Transportation Research Board
- Member, Operational Effects of Geometrics Committee, Transportation Research Board
- Legislative and Policy Committee, Institute of Transportation Engineers
- Leadership Development Committee, Institute of Transportation Engineers
- Member, Task Committee on Technologist Credentialing, American Society of Civil Engineers
- Member, Foundation Board of Directors, American Society of Civil Engineers
- Presenter and Emcee, Alabama Road Builders Hall of Fame Induction Banquet, April 11, 2012

**Dr. Steven Jones** has engaged the community of transportation professionals worldwide:

- Transportation Research Board (TRB) Representative for the University of Alabama
- Contributing Editor, ASCE Journal of Professional Issues in Engineering Education and Practice
- University of Alabama ITE Student Chapter Faculty Advisor, 2009 – present
- Paper reviewer for TRB Annual Meetings, 2002 – 2011
- Paper reviewer for the ASCE Journal of Transportation Engineering
- Member & Communications Coordinator, TRB Technology Transfer Committee (ABG30)
- Member, ASCE Transportation & Development Institute Committee on Sustainability and Environment
- Member, ASCE Transportation & Development Institute Public Transportation Committee

## Outreach Activities – continued from page 22

### Dr. Steven Jones - continued

- Friend, TRB Transportation in the Developing Countries Committee (ABE90)
- Friend, TRB Transportation and Sustainability Committee (ADD40)
- Friend, TRB Transportation and Land Development Committee (ADD30)
- Co-Chair of the Conference Planning Committee for the ASCE 3<sup>rd</sup> *International Conference on Urban Transportation System* to be held in Paris, FR in November 2013.
- Member of the Scientific Review Committee for the ASCE *Green Streets and Highways Conference* to be held in Austin, TX in October 2013.
- Presented transportation research results at the headquarters of the African Union in Ethiopia in October 2012.

### Dr. Yingyan Lou also engaged in outreach activities around the world:

- Member, Committee on Transportation Network Modeling (ADB30), Transportation Research Board (2012-present)
- Member, Committee on Highway Safety Performance (ANB25), Transportation Research Board (2012-present)
- Member, Committee on User Information Systems (AND20), Transportation Research Board (2011-present)
- Member, American Society for Engineering Education (2012 – present)
- Member, Institute for Operations Research and Management Sciences (2006 – present)
- Member, Transportation Research Board (2008 – present)
- Editorial Board Member, *International Journal of Applied Management Science*, 2009 – present
- Area Editor, *Proceedings of the International Conference of Chinese Transportation Professionals* (published by ASCE), 2011 – 2012
- Reviewer for multiple journals, *ASCE Journal of Transportation Engineering*, *ASCE Journal of Urban Planning and Development* (Special issue on “Challenges in Transportation Planning for Asian Cities”), *Automatica*, *Computer-Aided Civil and Infrastructure Engineering*, *European Journal of Transportation and Infrastructure Research*, *IEEE Transactions on Intelligent Transportation Systems*, *IET Intelligent Transport Systems*, *International Journal of ITS Research*, *International Journal of Sustainable Transport*, *International Journal of Transportation* (Special issue on “Urban Mobility and Modal Shift towards Public Transport”), *Journal of Advanced Transportation*, *Journal of Intelligent Transportation Systems*, *Journal of systems Science and Systems Engineering*, *Journal of Transportation Safety and Security*, *Network Spatial and Economics*, *Transport Policy*, *Transportation* (Special issue on “Transit Planning, Operation and Management in Densely Populated Areas”), *Transportation Research Part A*, *Transportation Research Part B*, *Transportation Research Part C*, and *Transportation Research Part E*.
- Reviewer for multiple conferences, *Transportation Research Board Annual Meeting 2010 – 2013*, *International IEEE conference on Intelligent Transportation Systems 2007 – 2012*, *The 14th International HOV, HOT and Managed Lanes Conference*, 2012

## **Outreach Activities – continued from page 23**

**Dr. Yingyan Lou** - continued

- Proposal Reviewer for National Center for Intermodal Transportation for Economic Competitiveness and University of California Transportation Center.
- Technical Committee Member, The 14th International HOV, HOT and Managed Lanes Conference, Oakland, CA, June 2012

## **XV. Honors and Awards**

None

## **XVI. Minutes of Center Meetings**

N/A

## **XVII. Other Information**

UTCA's final funding as a Title III University Transportation Center (UTC) through the US Department of Transportation ended December 31, 2012. The UTC funds had been shared among UA, UAB, and UAH through a program of competitively-funded research proposals, with the Center (and national reporting responsibilities) being housed in the Civil, Construction, and Environmental Engineering Department at UA. Recognizing that UTCA was authorized through the Board of Trustees as a three-campus center, transportation faculty members on the UA campus believe that the end of UTC funding offers an opportunity to re-fashion UTCA as a single-campus center located at UA and hope that the UA administration will work to establish UTCA as a free-standing Center on this campus.

Re-configuring UTCA as a one-campus center is supported by current and anticipated transportation funding on the UA campus. In calendar-year 2012, new externally-funded contracts to UTCA to UA researchers totaled \$2.9M (this figure does not include any UTC funding). UA is currently in the second year of a two-year, \$2M umbrella agreement with the Alabama Department of Transportation (ALDOT). We are in discussions with ALDOT for a three-year, \$7.5M extension of the umbrella agreement (the \$7.5M figure is one being proposed by ALDOT).



## **Other Information – continued from page 24**

In addition to ALDOT funding, UTC has written proposals in 2013 to several national funding sources:

- The Department of Housing and Urban Development
- The National Cooperative Highway Research Program
- The US DOT (through UTC proposals as part of a team headed by Montana State University and as part of a team headed by the University of Tennessee)

2012 marked the highest level of new, external funding in UTCA's history. 2013 has started well and holds the promise of exceeding 2012's external funding totals. UTCA also appears well-positioned for strong research funding in future years.