



# SMART DRIVING CARS

## 2<sup>nd</sup> Annual Princeton SmartDrivingCars Summit

*Bringing Together  
Buyers, Sellers & Facilitators  
That are Making It Happen Well*

*Opportunities & Implications for Communities, Corporations & Consumers:  
Achieving Safety, Convenience & Mobility for All*

*Evening Reception, Tuesday, May 15, 2018  
Technical Sessions, Wednesday & Thursday May 16 & 17, 2018*

**Princeton University**  
Princeton, New Jersey

### Presenting & Sponsored by

Velodyne; Carmera, Ouster  
FMCSA; California DMV; NHTSA  
Morgan Stanley; LiveDriveRepeat  
National Renewable Energy Laboratory  
Automated Public Transit Risk Consulting  
Stratyfy; Brulte & Co.; Grush-Niles Strategies  
Princeton University; Princeton Mellon Initiative  
Department of Operation Research & Financial Engineering  
University Transportation Research Consortium, Region 2  
Insurance Council of NJ, New Jersey Agents Alliance  
Munich Re; New Jersey Manufacturers Insurance  
Alliance for Transportation Innovation, AT121  
Insurance Institute for Highway Safety (IIHS)  
Sam Schwartz Transportation Consultants  
Advanced TRansit Association (ATRA)  
Rosco; Bel Air Partners; Soterea, Inc.  
NVIDIA; AutoKAB; Drive Sweden  
Intelligent Material Solutions  
Didi Chuxing; Lyft; Uber  
Ambarella, 4Dialog  
Local Motors  
Voyage





# Program

## Bringing together: Buyers, Sellers and Facilitators

**Tuesday, May 15**

6:30pm -> 9:30pm **Welcome Reception** *42 Cleveland Lane, Princeton (Peach House, Orange Door)*

**Wednesday, May 16**

8:00am -> 8:30am **Registration and Continental Breakfast** *Carl Fields Center (corner of Olden St. & Prospect Ave)*

8:30am **Welcome & Framework** Emily Carter, Dean, School of Engineering & Applied Sciences, Princeton University & Co-Chairs: Prof. Kornhauser & Christine O'Brien, Pres. Ins. Council of NJ *Carl Fields Center*

8:45am-> Noon **The Global View.**

**Moderator:** [Alain Kornhauser](#), Princeton University

8:45am **The Business Case:** Adam Jonas, Managing Director, Research Division, Morgan Stanley

9:05am **What's really in the Showroom today?** Alex Roy, Blogger, LiveDriveRepeat

9:25am **Where's Washington on SmartDrivingCars?** Paul Brubaker, CEO, Alliance for Transportation Innovation (ATI21.org)

9:45am **Implications of the Changing Demographics on SmartDrivingCars:** James W. Hughes, Professor & Dean Emeritus, Bloustein School of Planning & Public Policy, Rutgers

10:05am **The Changing Mobility Landscape of our Largest Cities:** Sam Schwartz, Principal, Sam Schwartz Transportation Consultants

10:25am [AV Mobility: Opportunities & Challenges for Communities:](#) Bern Grush, Principal, Grush Niles Strategic

**10:45 -> 10:55 Break**

10:55am **Update on: How well does ACA work in a Testing Environment:** Matt Moore, Senior VP, Highway Loss Data Institute

11:10am **Advances in LIDAR State of the Art:** John Eggers, Director of Automotive, Velodyne

11:25am **Doing it with Vision,** Alberto Broggi, Ambarella

11:40am **Transforming Transportation with AI in the Data Center and in the Car:** Danny Shapiro, Senior Director, Automotive, NVIDIA

11:55am [Local Near-term Opportunities:](#) Alain Kornhauser, Prof., Princeton University





Noon -> 1:45pm **Lunch & Regulators: Facilitating Technological Innovation in AVs.**

**Moderator/Discussant:** Prof. Bryant Walker Smith: Prof. U. of South Carolina Law School *Carl Fields Center*

12:30pm – 1:45pm Panel **Facilitating SmartDrivingCars (Trucks & Buses):** Bernard Soriano, Dep. Dir. California DMV, Nathaniel Beuse, Assoc. Adm., NHTSA, Raymond Martinez, Adm., FMCSA, Derek Kan, Undersecretary, US DoT (invited)

2:00pm -> 5:00pm **Continuing to move the Ball forward by those that have the most to gain: Insurance, Mobility Providers & Innovators** *Carl Fields Center*

2:00pm **How Insurance has begun to Facilitate the adoption of Safe-Driving (Collision Avoidance) Technology.**

**Moderator:** Jerry Spears, Trust Ops Director, Montana Assoc. of Counties

1. **Pierce Transit: Extending the Washington State Bus Transit Experience:** Jerome Lutin, retired, NJ Transit Exc.
2. **Advances and remaining challenges of Facilitating the adoption of AV technology by Insurance Pools:** Ann Gergen, Executive Director, National Assoc. of Insurance Pools (AGRIP)
3. **A view from the Underwriter:** Michael Scrudato, Executive VP, Munich Re
4. **Anticipating Reduced LOSS using AI a New approach for Actuaries?:** Michael Cherkassky, CEO & Laura Kornhauser, President, Stratyfy
5. **Dealership Opportunities & Challenges in Selling Insurance, Safety, Self-driving** Sheldon Sandler, CEO, Bel Air Partners.

3:00pm **Progress in China, Europe with Self-Driving Technology**

**Moderator:** Michael Sena, Editor, *The Dispatcher* and Independent Consultant

1. **European Progress with Self-driving:** Michel Parent, Co-founder AutoKAB
2. **Progress by Drive Sweden & more:** Jan Hellaker, Program Director, Drive Sweden
3. **Co-Exist: Logics for Automated Driving:** Adriano Alessandrini, Professor, U of Florence
4. **Automated Driving Competitions in China:** Prof. Mei-ling YANG, Prof. Dept.t of Automation, Beijing Institute of Technology
5. **Safe Driving for Commercial Vehicles in China:** Lawrence Liu, Co-Founder & CEO, Soterea China

4:00pm **Ride Hailing: Why it Needs Technology, Where it is as a Business; Where it is as a Developer/Tester; Where it wants/Needs to be as a Developer of Driverless.**

**Moderator:** Melba Kurman, Author of *Driverless: Intelligent Cars & the Road Ahead*

1. **Experience to Date with Ride-Hailing**, Bruce Schaller, Principal, SchallerConsulting
2. **Lyft's Vision of Partnerships with Aptiv and other SmartDrivingCar Initiatives**, Sami Naim, Manager of Public Policy, Lyft
3. **AV's & AI's Roles in Didi's 10x Growth Vision to Serve 250M trips/day**, Fengmin Gong, Head, Didi Research Institute
4. **What aTaxis Must Learn from the Jitney, Taxi, App-based Ride-Hailing R/Evolution**, Matthew W. Daus, Esq. former Commissioner, NYC Taxi & Limo Comm., Distinguished Lecturer, UTRC





5:00pm -> 6:30pm **Mobility Demonstrations & Exhibits for All: What is Available Today** *Convocation Room, Friend Center & Nearby Parking Lots*

**Simultaneous Presentations, Demonstrations & Refreshments.**

**Orchestrated by:** Michel Parent, CoFounder, AutoKAB, Kevin Dennehy, Founder, Driverless Report & Alex Roy, Blogger, LiveDriveRepeat

**Live Full-scale Demonstrations**

1. Progress in making buses safe: Live Demonstration of Bus Pedestrian Detection System, Ben Englander, President & Nick Aplin, National Sales Manager, Rosco (*eQuad Parking Lot*)
2. Velodyne Live LiDAR Demonstrations, John Eggers, Director of Automotive, Velodyne (Convocation Room)
3. Carmera Force One: Live Demonstration of Creating Real-time HD Maps, Ro Gupta, CEO (*Sherrerd Parking Lot*)

**Auto Dealers: Displays of the best Safe-driving Cars in showrooms today** (*Sherrerd Parking Lot*)

1. Cadillac CT6 w SuperCruise
2. Volvo
3. Mercedes
4. Nissan
5. Porche, Audi, VW
6. BMW

**Presentations Table-top Demonstrations**

4. Ouster Lidar, Rafi Mardirosian, VP, Corp. Development
5. Voyage mobility service in the Villages using Camera's Data (Invited)
6. Ambarella, Computer Vision for Automated Driving, Alberto Broggi
7. AutoKAB, Michel Parent, Co-founder
8. **Introducing Oli**, Local Motors, Curtis Hodge
9. **4-D Simulation of Mobility in Cities**, Matt Lesh, NA Business Development for 4Dialog
10. **2getThere systems around the world**, Wessel van der Pol, Applications Engineer
11. Stratyfy, **AI for Quantifying Expected Liability of AV by make, model, options, VIN** Michael Cherkassky, CEO
12. Soterea, Lawrence Liu, CoFounder
13. Intelligent Material Solutions, Smart Paint, Howard Bell
14. SBS Systems, Pavement Markings, Burton Sutker, President
15. Easy Mile, demos around the world, Gilbert Gagnaire (Co-founder, Easy Mile) (Invited)

6:30pm **Reception** & 7:30pm **Banquet** (Ticket required) *Prospect House, Center Campus*

**Open Discussion of today's presentations and preparation for tomorrow's Workshops**



## Thursday, May 17

8:30am -> 9:00 am **Continental Breakfast** *Carl Fields Center*

9:00am -> 12:30pm: **3 parallel morning Workshop Sessions each having the following structure:**

9:00am **Setting the table: Presentations by Stakeholders**  
 10:30am **Open Discussion of Opportunities by Stakeholders and everyone else**  
 11:30am **Preparation of Key Findings, Needs & Actionable Next Steps Noon -> 12:30**

### Workshop 1: Near-term Deployment (US) *Carl Fields Center*

**Moderator:** Russ Mitchell Technology Editor, LA Times

9:00am **Setting the Table Presentations:** (5-10 minute presentations)

**Crafting the Deployment of SmartDrivingCars to create Smart Cities.** Bern Grush  
**Automated Electric Vehicle Campus Demonstration,** Joah Sapphire Managing Partner Axial Capital Partners  
[Greenville SC, The Poster Child for SmartDrivingCars](#) Fred Payne Greenville County Council,  
**Update on Contra Costa CA** Gary Hsueh Independent Transportation Planner  
**California Update** Grayson Brulte Co-Founder / President Brulte & Company  
**aTaxi Near-term Opportunities for Central Jersey** Alain Kornhauser Prof, Princeton University  
**Implications on Energy** Stan Young Team Leader, Mobility Systems, NREL  
**Implications on Parking** Shannon McDonald Assoc. Prof, So. Ill. Univ.  
**Houston University District AV Transit Circulator System** Sam Lott, Prof, Texas So. Univ.

10:30am **Open Discussion of Opportunities & Challenges**

**Issues:** Obtaining permission to 'Share the Road', Gated communities, Connecting the Disadvantaged, 1<sup>st</sup>/Last Mile Accessibility to Conventional Systems, Extension of ATNs... Insurance, Sources of Revenue: (Parking, citations), Police, Zoning & Land use...

Above speakers plus the following Discussants:

Adriano Alessandrini Prof. Univ. of Florence & Director CityMobil2  
 Ben Grush Principal, Grush Niles Strategic  
 Matt Lech, NA Business Development for 4Dialog  
 Scott LeVine Assist. Professor (Urban Planning), SUNY @ New Paltz  
 Michel Parent President AutoKAB  
 Paul Brubaker, CEO, ATI21  
 Bernard Soriano, Assoc. Administrator, CA DMV  
 Michael Lin, CIO, LA DoT (former)  
 Aaron Shkuda, Princeton University  
 Ann Gergen Executive Director, AGRIP, National Association of Insurance Pool

11:30am -> Noon **Preparation of Key Findings, Needs & Actionable Next Steps**



**Workshop 2: Insurance & Dealerships: Accelerating Adoption of SDC by Individuals, Corporations and Transit Agencies** *125 Sherrerd Hall*

**Moderator:** John Cichowski, The Road Warrior columnist for The Record and NorthJersey.com & Sheldon Sandler (CEO Bel Air Partners)

9:00am **Setting the Table Presentations:** (10- minute presentations)

**Autonomous Vehicles: Update on Pros & Cons,** Jerry Spears, Trust Ops Director, Montana Assoc. of Counties  
**Issues in Virginia** David Harmer Administrator Virginia Transit Reliability Pool

**View from the Insurance Agencies** Joe Zigler NJ Agents Alliance

**Actuarial Science, Does Anything Need to Change?** Richard Mudge, President, Compass Transportation and Technology Inc.

**Accounting for Insurance Pools** Chris Korgut, Principal Consulting Actuary

**European View of SmartDrivingCar Insurance & Risk Management** Jacques Amselem Head of IoT, [Allianz Technology\\*](#)

10:30am **Open Discussion of Opportunities & Challenges**

**Issues:** Reducing LOSS, Reducing Premiums, OSHA, Unions, Accessibility of workforce, opportunities for the Roadway provider. Insurance regulation, Who will lead? What about Goods movement & logistics, Where is product liability?

Above speakers plus the following Discussants:

Rick Gorvett Senior Actuary Casualty Actuarial Society

Christine O'Brien President, Insurance Council of NJ

Jerome Lutin Principle, JM Lutin Consultants

Matt Moore, Senior VP, Highway Loss Data Institute

[Sheldon Sandler](#) CEO, Bel Air Partners

Michael Scudato, EVP, Munich Re

Dick Mudge, Principal, Compass Transportation & Technology

Michael Cherkassky, CEO, Stratyfy

Matt Hardison, President, Hardison Consulting, Former Amtrak Executive

11:30am -> Noon **Preparation of Key Findings, Needs & Actionable Next Steps**





**Workshop 3: Sensors, AI/Software & Data 101 Sherrerd Hall**

**Moderator:** [Fred Fishkin](#) Editor [Techstination](#)

**9:00am Setting the Table Presentations (10- minute presentations)**

- Advances in LiDAR**, Raffi Mardirosian, VP, Corp. Development, Ouster
- Affordable mapping** Ro Gupta'00 CEO, Co-founder Carmera
- AV Safety, The Role of a Driver's License for Driverless Vehicles**, Rahul Mangharam, Prof. U. Penn
- A Rational Approach to Safety and Automated Emergency Braking** Michel Parent, CoFounder, AutoKAB
- Simulation Efforts at NYU** Kaan Ozbay, Prof. NYU
- Intelligent and Connected Vehicles: GAC as a top OEM Player in China**, Yonggang Xu, Distinguished Engineer, Guangzhou Automobile Corporation R&D Center
- The Virtues of Virtual Reality** Artur Filipowicz'17, Princeton U.
- A look at the Billion Person Trips taken across the USA on a typical Day**, Kyle Marocchini'18, Princeton U.
- What would it take and What would we get if aTaxis replaced personal cars**, Jack Magill'19, Princeton U.

**10:30am Near-term Technological Opportunities & Challenges**

**Issues:** How far can Deep Learning go? How far can VR take us? Can Regulators/Legislators use VR as a tool? How do we obtain the Public's Trust? How Transparent Can/Should we be??

Above speakers plus the following Discussants:

- Alberto Broggi, Ambarella
- John Eggert Director of Automotive Velodyne LiDAR Inc.
- Alain Kornhauser, Professor, Princeton University
- Larry Reich, Founder, DigitalAge1

**11:30am -> Noon Preparation of Key Findings, Needs & Actionable Next Steps**

Noon -> 1:30pm **Lunch** & Local Issues

12:15: Transparency, Oliver Cameron, CEO, Voyage, via Video & Ken Pyle, Managing Editor, Viodi

12:30 **Where is New Jersey Fitting In**, Vinn White, Senior Policy Advisor, Office of the Governor Phil Murphy (Invited) [Carl Fields Center](#)

Afternoon Workshops:

**1:30pm -> 3:30pm: 3 parallel afternoon Workshop Sessions each having the following structure:**

- 1:30pm **Setting the table: Presentations by Stakeholders**
- 2:30pm **Open Discussion of Challenges & Opportunities by Stakeholders and everyone else**
- 3:15pm **Preparation of Key Findings, Needs & Actionable Next Steps**





**Workshop: 4 Near-term Deployment (China & Europe) *Carl Fields Center***

**Moderator:** Michael Sena, Editor, *The Dispatcher* and Independent Consultant

**Drive Sweden: AV Update** Jan Hellaker, Program Director, Drive Sweden

1:30pm **Setting the Table Presentations: Expanded Update on Demonstrations & Deployments** (10-15 minute presentations)

**Challenges and Opportunities for SmartDrivingCar Demonstrations in China**, Lawrence Liu, Co-Founder & CEO Soterea China

**Drive Sweden: AV Update** Jan Hellaker, Program Director, Drive Sweden

**Relationship between IoT and SmartDrivingCars** Jacques Amselem Head of IoT, Allianz Technology

**2getThere systems around the world**, Wessel van der Pol, Applications Engineer

**Beyond CityMobil2** Adriano Alessandrini Prof. Univ. of Florence & Director CityMobil2

**Oli in Buffalo**, Curtis Hodge, Local Motors

2:30pm **Open Discussion of European & Chinese Opportunities, Challenges and Current Road Blocks**

**Issues:** Regulations/Politics, Public Acceptance, Insurance, Legacy Transportation Institutions, Technology Maturity/Availability, Organized Labor

Above speakers plus the following Discussants:

Lu SUN, Chair Professor, South China University of Technology

Yi YANG, Professor, Beijing Inst. Of Technology

Wenjie "Rancho" SONG, Beijing Inst. Of Technology

Michel Parent President AutoKAB

3:15 -> 3:45 **Preparation of Key Findings, Needs & Actionable Next Steps**

**Workshop 5: Ride Hailing: Advances in Conventional, Self-driving & Driverless *101 Sherrerd Hall***

**Moderator:** Matthew W. Daus, Esq. former Commissioner, NYC Taxi & Lino Comm., Distinguished Lecturer, UTRC

1:30pm **Setting the Table Presentations:** (15- minute presentations)

**Assessing Impacts of Transport Innovations – Electrification Automation, and Sharing – Through Ride-Hailing Research**, Alejandro Henao, PostDoc, NREL

**A Deeper Look at Experience to Date with Ride-Hailing and the Prospects for Substantial Ride-sharing**, Bruce Schaller, Principal, SchallerConsulting

2:30pm **Open Discussion of Opportunities & Challenges**

**Issues:** Taxing Ride-hailing and Driverless. How best to encourage Ride-sharing. Are these Public Utilities or should it be a free-for-all completion for riders? What Driverless Ride-Hailing should avoid.

Above speakers plus the following Discussants

Sami Naim, Manager of Public Policy, Lyft

Fengmin Gong, Head, Didi Research Institute

3:15 -> 3:45 **Preparation of Key Findings, Needs & Actionable Next Steps**





**Workshop 6: Metropolitan Planning ... Delivering Improved Mobility for All while Achieving Energy & Environmental Goals (new) 125 Sherrerd Hall**

**Moderator:** Stan Young, NREL, Jerome Lutin, retired NJ Transit Exec.

1:30pm **Setting the Table Presentations:** (10- minute presentations)

“An Economic Framework for Evaluating AV Benefits” David Montgomery

“Transforming a Car-Centered City – LA – in time for the Olympics” Michael Lin, CIO, LA DoT (former)

“Civic Infrastructure Re-Design for AEV” SR Raj

[“aTaxis, The Missing Mobility Piece to Effectively Enable Amazon to Revitalize Newark”](#) Jerome Lutin

“Quantifying the spatial efficiency of automated-vehicle parking”, Scott LeVine Assist. Professor (Urban Planning), SUNY @ New Paltz

“Energy Implications of Alternative AV Deployment Scenarios”, Alejandro Henao, NREL

“Planning & Operations that Achieves Ride-sharing of aTaxis in Our Cities & Suburbs” Grayson Brulte Co-Founder / President Brulte & Company

[Houston’s Univ District Automated Vehicle Transit Circulator System:](#) Sam Lott, Prof, Texas So. Univ.

2:30pm **Open Discussion of Opportunities & Challenges**

Paul Brubaker, CEO, ATI21

Aaron Shkuda, Princeton University

Ben Grush Principal, Grush Niles Strategic

Camile Kamga, Prof. CCNY, Director, Region 2 Transportation Research Center

3:15 -> 3:45 **Preparation of Key Findings, Needs & Actionable Next Steps**

3:45 -> 5:00pm **Summit Findings & Next Steps Carl Fields Center**

**Moderator:** Alain Kornhauser, Princeton University

3:45 pm – 4:30 **Summaries of each Workshop: Carl Fields Center**

3:40 Workshop 1 Findings Discussion & Next Steps: Russ Mitchell, Technology Editor, LA Times

3:50 Workshop 2 Findings Discussion & Next Steps: John Cichowski, The Road Warrior columnist for The Record and NorthJersey.com

4:00 Workshop 3 Findings Discussion & Next Steps: Fred Fishkin Editor, Techstination

4:10 Workshop 4 Findings Discussion & Next Steps: Michael Sena\*, Editor, The Dispatcher & Consultant

4:20 Workshop 5 Findings Discussion & Next Steps: Matthew W. Daus, Esq., Distinguished Lecturer, UTRC

4:30 Workshop 6 Findings Discussion & Next Steps: Stan Young, NREL

4:50 pm **Other Issues & Closing Remarks:** Alain Kornhauser, Princeton University *Carl Fields Center*

**Save the Date for**  
**The 3<sup>rd</sup> Annual Princeton SmartDrivingCar Summit**  
**May 15 & 16, 2019**



[Link to Other Photos](#)



**[1<sup>st</sup> Annual Princeton SmartDrivingCars Summit Program Participants \(May 2017\)](#)**