



Cyber-physical Security for Electric Roadways and Vehicles

Ryan M. Gerdes
Virginia Tech

Security Perspective

- Trade-offs
 - Functionality
 - Cost
 - Time
- Process
 - Standards don't guarantee security
 - Compromise is inevitable
 - Build resilient systems
- What we have solved (or nearly so)
 - Authentication and data integrity
 - Alignment
 - Vehicle Identification
- What we haven't solved
 - Dynamic charging: none of the above
 - Timeliness

