**Comparison Table**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Performance** | | | **Security** | | |
| **Computational Cost** | **Communicational Cost** | **Packet Delivery Rate** | **Authentication** | **Message Security** | **Privacy Preservation** |
| **BBAAS: Blockchain-Based Anonymous Authentication Scheme for Providing Secure Communication in VANETs** | 0.49 ms for anonymous authentication of 100 user | 2048 bits (authentication phase) |  | PKI and CA based authentication | Blockchain security | Real identities stored in TA |
| **Secure Trust-Based Blockchain Architecture to Prevent Attacks in VANET** | 0.49 ms |  | Enhance 2.4 % from existing solutions | Leightweight authentication based on smart cards | Blockchain security | Public key and digital signature based communication |
| **A Privacy-Preservation Framework based on Biometrics Blockchain (BBC) to Prevent Attacks in VANET** | 0.1 ms |  | 0.99 | PKI based authenitcation plus vehicle registration in mobile vehicle driver and TA | protected by hash function, signature and match functions | Real identity is not revealed in communication |
| **Blockchain-Based Pseudonym Management Scheme for Vehicular Communication** | Reduce authentication delay | Increased message exchange  Not efficient for high laods |  | Lightweight absed authentication | Blockchain security | Real identity is not revealed in communication |
| **A Secured Message Transmission Protocol for Vehicular Ad Hoc Networks** |  | Max throughput 12Mbps  Safety messages sent through internet  Whole network is for non-safety messages |  | PKI and CA based authentication | Messges encrypted by RSA-1024 cryptographic algorithm.  Blockchain security | real identity is stored only in the CA and not used in communication |
| **DrivMan: Driving Trust Management and Data** **Sharing in VANETs with Blockchain and Smart Contracts** | time for SHA-256 is less than 0.01ms per 1 KB of input  storage overhead for one blockchain is 1602 MB/year |  |  | PKI and CA based authentication | Blockchain security | Real identity is not revealed in communication |