| Publication I | Ref ID | Publication ID | Title | Author | Year | Pub type | Source |
|---|---|---|---|---|---|---|---|
| 1 | P1 | althobaiti2016asse | Assessing u | Althobaiti, | 2016 | phdthesis | gs |
| 6 | P2 | marasco2023biom | Biometric r | Marasco, E | 2023 | article | gs |
| 7 | P3 | bruun2014usability | Usability of | Bruun, And | 2014 | inproceeding | gs |
| 10 | P4 | mathew2013novel | A novel mu | Mathew, G | 2013 | article | gs |
| 11 | P5 | de2013comparativ | A compara | De Cristofa | 2013 | article | gs |
| 12 | P6 | nanda2024examini | Examining | Nanda, Ash | 2024 | article | gs |
| 13 | P7 | reese2019usability | A usability | Reese, Ken | 2019 | inproceeding | gs |
| 14 | P8 | wiefling2023usabil | Usability, s | Wiefling, St | 2023 | phdthesis | gs |
| 16 | P9 | acemyan20182fa | 2FA might | Acemyan, ( | 2018 | inproceeding | gs |
| 19 | P10 | kruzikova2024two | Two-factor | Kruzikova, | 2024 | article | gs |
| 20 | P11 | abbott2020manda | How mand | Abbott, Jac | 2020 | inproceeding | gs |
| 22 | P12 | broders2020generi | A generic n | Broders, Ni | 2020 | inproceeding | gs |
| 23 | P13 | jeong2024user | User Chara | Jeong, Jong | 2024 | article | gs |
| 24 | P14 | icsler2019user | User perce | {\.I}{\c{s}}le | 2019 | inproceeding | gs |
| 25 | P15 | smith2024investiga | Investigatir | Smith, Luka | 2024 | inproceeding | gs |
| 27 | P16 | khaskheli2022com | A compara | Khaskheli, ( | 2022 | article | gs |
| 28 | P17 | krol2015they | "They brou | Krol, Kat ar | 2015 | article | gs |
| 30 | P18 | mamoudou2014ov | An Overvie | Mamoudou | 2014 | article | gs |
| 35 | P19 | carr2020evaluating | Evaluating | Carr, Joshu | 2020 | phdthesis | gs |
| 38 | P20 | sollie2005security | Security an | Sollie, Roar | 2005 | mastersthesis | gs |
| 48 | P21 | weir2010usable | Usable sec | Weir, Cathe | 2010 | article | gs |
| 56 | P22 | gunson2011user | User perce | Gunson, Na | 2011 | article | gs |
| 70 | P23 | al2011investigatio | An investig | Al-Fairuz, M | 2011 | phdthesis | gs |
| 73 | P24 | algarni2024fingerp | Fingerprint | Algarni, Mc | 2024 | article | gs |
| 82 | P25 | das2019security | Security m | Das, Sancha | 2019 | inproceeding | gs |
| 83 | P26 | fallahi2024usability | On the Usa | Fallahi, Ma | 2024 | article | gs |
| 84 | P27 | oogami2020observ | Observatio | Oogami, W | 2020 | article | gs |
| 90 | P28 | kurikka2013balanc | Balancing u | Kurikka, Jo | 2013 | article | gs |
| 95 | P29 | roy2013usability | Usability er | Roy, Graem | 2013 | article | gs |
| 98 | P30 | jubur2021security | On the Sec | Jubur, Moh | 2021 | phdthesis | gs |
| 99 | P31 | vega2022empirical | An empiric | Vega, Franc | 2022 | mastersthesis | gs |
| 100 | P32 | zeidieh2023usabili | Usability A | Zeidieh, Azi | 2023 | article | gs |
| 108 | P33 | hettervik2023user | The User E | Hettervik, E | 2023 | mastersthesis | gs |
| 118 | P34 | priisalu2016usable | USABLE SE | Priisalu, Jaa | 2016 | article | gs |
| 126 | P35 | weir2009user | User perce | Weir, Cathe | 2009 | article | gs |
| 128 | P36 | jubur2024usability | Usability ar | Jubur, Moh | 2024 | article | gs |
| 136 | P37 | senapartha2024usa | USABILITY | Senapartha | 2024 | article | gs |
| 147 | P38 | prakash2021count | Countering | Prakash, Ja | 2021 | inproceeding | gs |
| 218 | P39 | strouble2009produ | Productivity and usabil | | 2009 | article | rs |
| 219 | P40 | das2018why | Why Johnny doesn’t us | | 2018 | inproceeding | rs |
| 220 | P41 | reynolds2018tale | A tale of two studies: T | | 2018 | inproceeding | rs |
| 221 | P42 | nguyen2018tap | Tap-based user authen | | 2018 | article | rs |
| 222 | P43 | colnago2018not | “It's not actually that h | | 2018 | inproceeding | rs |
| 223 | P44 | weidman2017like | I like it, but i hate it: Er | | 2017 | inproceeding | rs |
| 224 | P45 | karapanos2015sou | Sound-Proof: Usable T | | 2015 | inproceeding | rs |
| 225 | P46 | dutson2019punish | Don't punish all of us: | | 2019 | inproceeding | rs |
| 226 | P47 | reynolds2020empi | Empirical Measuremer | | 2020 | inproceeding | rs |
| 227 | P48 | kruzikova2022usab | Usable and Agata Kruzi | | 2022 | article | rs |
| 228 | P49 | ackerman2014imp | Impediments to Adopt | | 2020 | inproceeding | rsrs |

229 P50 ogbanufe2018com Comparing Obi Ogbanı 2018 article rsrs

| Include/Exclude | RQ1: Year | RQ2: Authentication Methods | RQ2: Specific Technology |
|---|---|---|---|
| include | 2016 | K;B;P | fingeprint, secure key, smartca |
| include | 2023 | K;B | FingerPIN |
| include | 2014 | K;P | Tangible User Interface |
| include | 2013 | K;P | Graphical password, OTP app |
| include | 2013 | P | OTP token, OTP SMS/mail, OTP |
| include | 2024 | P | Yubikey 5C, Verimark Guard, M |
| include | 2019 | P | SMS, TOTP, pre-generated code |
| include | 2023 | K;P | mail security code |
| include | 2018 | K;P | SMS, OTP app, USB key, push |
| include | 2024 | P | NFC token, card |
| include | 2020 | GM | |
| include | 2020 | P | Google Authenticator, Firefox p |
| include | 2024 | P | PADs |
| include | 2019 | P | Google authenticator |
| include | 2024 | P | 6 MFA methods on Android ph |
| include | 2022 | P | OTP app |
| include | 2015 | P | secure key, smartcard, OTP SM |
| include | 2014 | GM | |
| include | 2020 | K;B | BCI |
| include | 2005 | K;P;B | password, smartcard, fingerpri |
| include | 2010 | P | OTP app, OTP single-use device |
| include | 2011 | P | OTP hardware token |
| include | 2011 | P | OTP |
| include | 2024 | K;B | Fingerprint Sequencing |
| include | 2019 | P | secure key (Yubikey) |
| include | 2024 | B | Brainwave authentication, eye |
| include | 2020 | B | fingerprint (Android WebAuthn |
| include | 2013 | P | OTP SMS, email, OTP app |
| include | 2013 | P | smartcard (CodeSure) |
| include | 2021 | P | Op-2FA |
| include | 2022 | GM | |
| include | 2023 | P | secure key (OnlyKey) |
| include | 2023 | GM;P | Microsoft Authenticator, OTP S |
| include | 2016 | P | ID card, Mobile ID, Bank auther |
| include | 2009 | P;K | OTP app, Card-Activated Token |
| include | 2024 | P | Push-based 2FA |
| include | 2024 | B;P;L | face authentication, geolocatio |
| include | 2021 | P | Replicate push notifcation desi |
| include | 2009 | GM | |
| include | 2018 | P | secure key (FIDO U2F) |
| include | 2018 | P | secure key (Yubikey) |
| include | 2018 | P;K | TapMeIn |
| include | 2018 | GM | |
| include | 2017 | P | Duo Mobile app |
| include | 2015 | P;L | Sound-proof, Google Authentic |
| include | 2019 | P | Duo |
| include | 2020 | P | Duo |
| include | 2022 | B;K;P | fingerprint, PIN, token, smartca |
| include | 2020 | GM | |

| | | | |
|---|---|---|---|
| include | 2018 | B;K;P | credit card, credit card + PIN, fi |

| RQ3: Experimental Setup Type | RQ3: Data Collection | RQ4: Limitations - Text |
|---|---|---|
| experimental - controlled | mixed | participants (young, educate |
| experimental - controlled | mixed | not mentioned |
| experimental - controlled | mixed | could extend scope to longit |
| experimental - controlled | mixed | not mentioned |
| ordinary use - self-reported | qualitative | sampling bias concerns, no v |
| experimental - longitudinal | mixed | samplig bias concerns - parti |
| experimental - longitudinal | mixed | not enough context examine |
| experimental - controlled | mixed | participants demographic, si |
| experimental - controlled | mixed | participants demographic, d |
| experimental - controlled | mixed | experiment flaws - only And |
| ordinary use - ethnographic | mixed | University context, technical |
| theoretical - conceptual framework | none | not mentioned |
| ordinary use - self-reported | quantitative | sampling bias concerns - mo |
| experimental - controlled | mixed | self-reported bias concerns, |
| experimental - controlled | mixed | not mentioned |
| experimental - controlled | quantitative | not mentioned |
| ordinary use - self-reported | mixed | sampling bias concerns (sma |
| theoretical - discussion | none | not mentioned |
| theoretical - discussion | mixed | sampling bias concerns (part |
| experimental - controlled | mixed | not mentioned |
| experimental - controlled | mixed | should be complemented wi |
| experimental - controlled | mixed | not mentioned |
| experimental - controlled | mixed | not mentioned |
| theoretical - design paper | quantitative | not mentioned |
| experimental - controlled | mixed | should expand with larger se |
| experimental - controlled | mixed | small sample size, specific p |
| experimental - controlled | mixed | sampling bias concerns - age |
| experimental - controlled | mixed | not mentioned |
| experimental - controlled | mixed | not mentioned |
| experimental - controlled | mixed | participants sample size con |
| ordinary use - self-reported | mixed | not mentioned |
| experimental - controlled | mixed | participants sample size con |
| ordinary use - self-reported | mixed | specific context (company), |
| experimental - controlled | mixed | not mentioned |
| experimental - controlled | mixed | future field based research a |
| experimental - controlled | quantitative | participants demographics (t |
| experimental - controlled | mixed | not mentioned |
| experimental - controlled | mixed | participants sample diversity |
| ordinary use - self-reported | mixed | military sample, limited scop |
| experimental - controlled | mixed | not mentioned |
| experimental - controlled | mixed | participants demographics, l |
| experimental - controlled | mixed | limited data set, not enough |
| ordinary use - ethnographic | mixed | concerns with self-reported |
| ordinary use - ethnographic | mixed | app is component of smartp |
| experimental - controlled | mixed | not mentioned |
| ordinary use - ethnographic | mixed | specific population context, |
| ordinary use - ethnographic | mixed | specific context (university, |
| experimental - controlled | quantitative | Only on Android users, parti |
| ordinary use - self-reported | mixed | specific participants sample, |

| | | |
|---|---|---|
| experimental - controlled | mixed | may be affected by previous |

| RQ4: Limitations: Categorization | RQ5: Demographics: Count |
|---|---|
| B1; B3; C1; D5 | 100 |
| A | 100 |
| D1 | 16 |
| A | 15 |
| B1; D2 | 219 |
| B1; B2; D2 | 23 |
| B1; B2; C1; C2 | 72 |
| B1; C1 | 65 |
| B1; D6 | 20 |
| C1; D5 | 337 |
| B1; C3 | 565 |
| A | X |
| B2 | 410 |
| C1; D3 | 25 |
| A | 19 |
| A | 50 |
| B1; D3 | 21 |
| A | X |
| B1 | 109 |
| A | 61 |
| D1; D5 | 141 |
| A | 62 |
| A | 188 |
| A | X |
| C2, D1 | 33 |
| B1; B2; D1 | 32 |
| B1; B2 | 10 |
| A | 6 |
| A | 112 |
| B2; C1 | 30 |
| A | 212 |
| B2; C2; C3; D1 | 10 |
| B1; B2, B3 | 122 |
| A | 20 |
| C1 | 50 |
| B1; C1; D2 | 65 |
| A | 24 |
| B1; C1 | 40 |
| B3; C2 | 313 |
| A | 61 |
| B1; C1 | 31 |
| C2; D1 | 41 |
| B3; D3 | 2047 |
| C2; D6 | 134 |
| A | 32 |
| C3; D3 | 4275 |
| C3 | X |
| B2; C3; D6 | 468 |
| B1; D4 | 90 |

| RQ5: Demographics: Gender Ratio | RQ5: Demographics: Recruitment |
|---|---|
| 50/50/0 | Physical |
| 68/31/1 | Na |
| 87/13/0 | Na |
| Na | Na |
| 62/38/0 | Online |
| 65/35/0 | Na |
| 45/55/0 | Physical |
| 72/26/2 | Online |
| 10/90/0 | Physical |
| 41/59/0 | Hybrid |
| 28/69/3 | Hybrid |
| X | X |
| Na | Hybrid |
| 44/56/0 | Na |
| Na | Na |
| 50/50/0 | Na |
| 48/52/0 | Hybrid |
| X | X |
| 58/42/0 | Online |
| Na | Physical |
| 45/55/0 | Hybrid |
| 50/50/0 | Na |
| 66/33/1 | Hybrid |
| X | X |
| Na | Hybrid |
| 53/47/0 | Hybrid |
| 50/50/0 | Na |
| 50/50/0 | Na |
| 51/49/0 | Na |
| 23/77/0 | Physical |
| 22/75/2 | Hybrid |
| 80/20/0 | Hybrid |
| 80/20/0 | Online |
| Na | Online |
| 52/48/0 | Na |
| 57/43/0 | Na |
| Na | Na |
| 60/40/0 | Online |
| Na | Online |
| 75/25/0 | Physical |
| 70/29/0 | Physical |
| 68/32/0 | Online |
| 53/45/2 | Online |
| 23/75/2 | Hybrid |
| 47/53/0 | Online |
| 56/43/0 | Online |
| X | X |
| 52/48/0 | Na |
| Na | Na |

| RQ5: Demographics: Age (Mean) | RQ5: Demographics: Age (Min-Max) |
|---|---|
| Na | Na |
| Na | 18-35 |
| 24 | Na |
| Na | 20-30 |
| 32 | 18-66 |
| Na | 18-60+ |
| Na | 18-39 |
| 24.57 | 19-33 |
| 20.2 | 18-22 |
| Na | 26-81 |
| 29 | 18-72 |
| X | X |
| Na | 18-60+ |
| Na | 18-55+ |
| Na | 10-14 |
| Na | Na |
| 32.4 | 16-69 |
| X | X |
| 39.85 | Na |
| Na | Na |
| Na | Na |
| Na | Na |
| Na | 18-57 |
| X | X |
| Na | 18-50 |
| Na | 18-44 |
| Na | 20-59 |
| 25 | Na |
| Na | 18-56+ |
| Na | 18-44 |
| 31 | 19-71 |
| Na | Na |
| Na | 20-60+ |
| Na | Na |
| Na | Na |
| Na | 18-45+ |
| Na | 20-25 |
| Na | Na |
| Na | Na |
| Na | 18-30+ |
| Na | 18-55 |
| 27.5 | 18-57 |
| Na | Na |
| 45.7 | Na |
| Na | 21-40+ |
| Na | Na |
| X | X |
| 50.75 | 26-55+ |
| Na | Na |

Na Na

| RQ5: Demographics: Age (Intervals) | RQ5: Demographics: Education Finished |
|---|---|
| 18-25: 65%; 26-30: 10%; 31-35: 20%; 35+: | 4/33/58/5 |
| 18-35: 94% | Na |
| Na | Na |
| 20-30: 100% | Na |
| 18-24: 22,4%;25-34:48,4%;34-44:17,8%;45 | 0,46/32/46,4/0,9 |
| 18-30: 22%;31-45: 43%; 46-60:22%;60+:13 | Na |
| 18-19:4%;20-29:88%;30-39:7% | Na |
| 19-33: 100% | Na |
| 18-22: 100% | 0/100/0/0/0 |
| 26-54: 44,8%; 55-81: 55,2% | X/57/42/X |
| Na | Na |
| X | X |
| Na | Na |
| 18-25: 24%; 25-35: 60%; 35-45: 4%; 45-55: | 0/8/92/0 |
| 10-14: 100% | Na |
| Na | Na |
| Na | 0/19/79/X |
| X | X |
| Na | 0/33/65/X |
| Na | Na |
| 0-35: 53%; 35-X: 47% | Na |
| 0-35: 38,7%; 35-X: 61,3% | Na |
| 18-27: 40%; 28-37: 48; 38-47: 9%; 48-57: 1 | 0/46/51/X |
| X | X |
| 18-20: 36%;21-30: 61%41-50: 3% | 0/61/39/0 |
| 18-24: 59%; 25-34: 31%; 35-44: 9% | 0/47/44/6 |
| 20-29: 30%; 30-39: 30%; 40-49: 20%; 50-5 | Na |
| Na | 0/0/100/0 |
| 18-35: 32%; 36-55: 38%; 56+: 29% | Na |
| 18-24: 30%; 25-34: 60%; 35-44: 10% | 0/9/91/0 |
| Na | 0/9/90/1 |
| Na | Na |
| 20-29: 30%; 30-39: 23%; 40-49: 22%; 50-5 | Na |
| Na | Na |
| 18-35: 50%; 35+: 50% | Na |
| 18-24: 25%; 25-34: 60%; 35-44: 12%; 45+: | 0/25/66/9 |
| Na | Na |
| X-20: 23%; 21-30: 75%; 31-40: 3% | Na |
| Na | Na |
| 18-20: 11%; 21-23: 74%; 24-26: 10%; 30+: | 0/100/0/0 |
| 18-25: 80%; 26-35: 12%; 46-66: 6% | 0/64/34/0 |
| Na | 0/0/100/0 |
| Na | Na |
| Na | Na |
| 21-30: 58%; 31-40: 25%; 40+: 17% | X/X/X69 |
| 18-24: 72%; 25-34: 14% | Na |
| X | X |
| 26-54: 49%; 55+: 51% | X/60/39/X |
| Na | 0/100/0/0 |

Na Na

| RQ5: Demographics: Technical or Cybersecurity Education | RQ5: Demographics: Nationality |
|---|---|
| Na | UK |
| Na | USA |
| Na | Denmark |
| Na | India |
| T: 22,8%, C: 5,4% | International |
| T: 70% | Australia |
| T: 60% above average | USA |
| Na | Germany |
| Na | USA |
| T: 6,5% | Czech Republic |
| Na | USA |
| X | France |
| Na | Australia |
| Na | Turkey |
| Na | UK |
| Na | Pakistan |
| Na | UK |
| X | Malaysia |
| Na | Canada |
| Na | Norway |
| Na | UK |
| Na | UK |
| T: 12% | Oman |
| X | Saudi Arabia |
| T: 64% | USA |
| Na | Germany |
| T: 10% | Japan |
| Na | Finland |
| Na | UK |
| T: 23% | USA |
| T: 64% | USA |
| Na | USA |
| Na | Norway |
| Na | Estonia |
| Na | UK |
| T: 75; C: 68% | USA |
| T: 33% | Indonesia |
| Na | USA |
| Na | USA |
| Na | USA |
| T: 70% | USA |
| Na | USA |
| Na | USA |
| Na | USA |
| Na | Switzerland |
| Na | USA |
| X | USA |
| Na | Czech Republic |
| Na | USA |

| RQ6: Usability Evaluated: Text | RQ6: Usability Evaluated (Attributes) |
|---|---|
| task completion time, satisfaction, se | E;S;SS |
| subjective user satisfaction (SUS), rob | K;O;R;SS |
| SUS, task completion time, qualitative | E;K;SS |
| task completion time (login, registrat | E;K;S;SS |
| ease of use, cognitive effort, trustwo | E;K;S;SS |
| survey on security attributes, quantit | O;R;S;SS |
| authentication time (learnability in ti | E;K;S;SS |
| survey - user acceptance questions, S | K;S;SS |
| task completion time, task completio | O;E;SS |
| percieved security (likert scale), satisf | E;S;SS |
| survey - perception of UX (NASA TLX) | O;R;SS |
| effectiveness, efficiency, safety | O;E;S |
| survey - simplicity, time, info support | K;O;E;R;SS |
| survey - effort expectation, anxiety, b | K;S;SS |
| task completion time, error rate, surv | O;E;SS |
| SUS (Likert scale) - application usefulr | K;O;E;SS |
| authentication diaries (authenticatior | O;R;SS |
| author's description only | SS |
| usability perceptions (TIPI, CRS), secu | K;S;SS |
| time to learn, speed of performance, | K;O;E;R;S;SS |
| understanding instructions, perceptic | K;S;SS |
| task completion time, SUS questionna | K;E;S;SS |
| completion task rate, task comletion | O;E;SS |
| usability (effort memory-wise, scalab | K;O;E;R;SS |
| interviews with questions (on topic o | K;O;S;SS |
| SUS questionnaire on usability, perce | K;O;S;SS |
| task completion rate, SUS scale | O;SS |
| efficiency (login time), task error rate | O;E;SS |
| usability score, task completion time, | O;E;SS |
| delay (time of task completion), error | O;E;SS |
| preference of methods, NASA-TLX - m | K;E;SS |
| accessible usability scale (likert scale) | K;O;SS |
| preference for methods, user experie | K;O;R;SS |
| effectiveness (rate of successful login | O;E;S;SS |
| efficiency, effectiveness, satisfaction | O;E;SS |
| authentication time, accuracy rates (T | K;O;E;SS |
| accuracy rates (TPR, FPR, HTER), qual | O;R;SS |
| task success, task time, efficiency (su | O;E;SS |
| subjective evaluation (usability, prod | O;E;SS |
| understanding, task completion rate, | K;O;E;S;SS |
| sources used during setup, task succe | K;O;E;SS |
| error rates (FRR, FNR, EER), demo att | O;E;R;S;SS |
| survey (adoption, perception) | K;SS |
| percieved ease of use, compatibility, | K;O;S;SS |
| acceptance rates (FAR, FRR), authenti | O;E;R;S;SS |
| ease of use and understanding, secur | K;S;SS |
| user count, login frequencies, authen | O;E;R;SS |
| perceived usability and security (7-po | K;S;SS |
| usability survey (Likert scale), attitude | K;S;SS |

usability (usefulness, convenience, trı S;SS

| RQ6: comparison or evaluation |
| --- |
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| Interesting Results |
| --- |
| Fingerprint authentication performed best; security awareness was low. |
| FingerPIN was rated higher than traditional MFA. |
| TUI combined with PIN achieved the highest usability. |
| MFA with a graphical password system was found to be usable. |
| The study was complex; two-factor authentication was perceived as usable, and exploratory factor |
| Sentiment towards Presentation Attack Detection (PAD) was positive. |
| There is a relationship between time, experience, and attitudes towards MFA. |
| Risk-based authentication was found to be more usable than two-factor authentication. |
| Google's two-factor authentication techniques were considered hard to use. |
| In a complex study, task completion time was predicted by gender, e-banking and smartphone use; |
| Mandatory two-factor authentication negatively impacted user experience and productivity. |
| Only a model proposal was presented. |
| Perceived usability differed by age, experience, and education; some features were more important |
| Mobile-based single-password authentication showed better usability and security than two-factor |
| Young people were able to understand and use MFA. |
| Single-factor authentication was found to be more usable than two-factor authentication. |
| Usability issues were reported with tokens, particularly the number of authentication steps and rem |
| The study provided only a general discussion. |
| A brain-computer interface (BCI) authentication system was proposed. |
| Single-factor fingerprint authentication was evaluated as the best. |
| Factors shaping attitudes towards authentication methods were discussed. |
| Attitudes towards usability and security were explored. |
| The study focused on online banking in Oman. |
| FingerPIN was discussed in detail. |
| Yubikey usability was evaluated. |
| Usability comparison was made between brainwave and eye-tracking methods. |
| Usability evaluation of WebAuthn was conducted. |
| A complex study examined authentication methods, factors affecting the security-usability balance, |
| The CodeSure card was evaluated as usable. |
| Op-2FA was found to be potentially more usable than OTP-2FA. |
| A complex study examined authentication failures, security evaluation, and sentiment towards two- |
| Most participants with low vision or blindness were unable to set up OnlyKey. |
| The average respondent found Microsoft Authenticator usable. |
| The study was complex. |
| Users tended to choose authentication methods based on usability rather than security. |
| In a complex study, Push-Compare-and-Confirm achieved a true positive rate over 95%, but only 50 |
| The balance of false acceptance rate (FAR) and false rejection rate (FRR) was discussed. |
| A complex study found that Tap push-based authentication had high task success, time efficiency, a |
| Two-factor systems were found to decrease usability and productivity. |
| Six primary concerns about FIDO usability were identified. |
| Usability of YubiKeys was examined; recommendations included standardizing setup, verifying succ |
| TapMeIn provided protection against shoulder surfing. |
| In a complex study of DUO 2FA, user misconceptions, insecure practices, and design issues were ide |
| Tokens were easier to use than DuoMobile, but DuoMobile was more compatible. |
| SoundProof was found to be more usable than Google 2-Step. |
| In a complex study of Duo 2FA, students had more negative perceptions than staff; recommendatio |
| Two-factor authentication burdens included device remembrance, fragmented login services, authe |
| Perceptions of usability and security were examined based on predictors such as age, gender, educa |
| Persuading users that technology is easy to use was found to be crucial. |

In a complex study, biometrics influenced security concerns, perceived usefulness, and trust.

analysis was conducted.

satisfaction depended on efficiency, aesthetics, and security perceptions.

t, with simplicity rated highly.
authentication.

noval of features negatively affecting user experience.

and user preferences in business cloud authentication.

-factor authentication.

% of fraudulent logins were identified, indicating a need for user education.

nd was engaging and fun; "Just Tap" outperformed PIN-based methods.

ess, allowing shared accounts, OS integration, and preventing lockouts.

ntified; recommendations were provided.

ns included reducing frequency and making UI changes.
ntication timeouts, failure and abortion rates, and variance in user experience.
ation, smartphone self-efficacy, security behavior, and knowledge; none were found to be related.