Acronyms

3G Third Generation. 189

3GPP Third Generation Partnership Project. 189

4G Fourth Generation. 189

AIC Akaike Information Criterion. 133

AKV Average Kriging Variance. 258–260, 265

ANOVA Analysis of Variance. 95, 97, 168

AOV Analysis of Variance. 193

AP Access Point. 4, 62, 63, 65, 101, 114, 115, 117, 119, 123, 124, 126, 143, 149, 152, 158, 304

ASCII American Standard Code for Information Interchange. 192

ASN Access Service Network. 168, 171

ATG Air-to-Ground. 34

AWB Accton Wireless Broadband Corporation. 168, 171

BER Bit Error Rate. 139, 140

BLER Block Error Rate. 193

BS Base Station. 4, 105, 106, 156, 162, 164, 168, 173, 178, 180, 184, 186, 189, 192–194, 197, 205, 215, 221, 223, 238, 240, 247, 298

BSSID Basic Service Set Identifier. 67

CAT5 Category 5. 164

CCIR International Radio Consultive Committee. 31

CEPT European Conference of Postal and Telecommunications Administrations. 30

CINR Carrier to Interference and Noise Ratio. 166–168, 171, 173, 178, 180, 186, 254, 267

CIR Channel Impulse Response. 140

CMU Carnegie Mellon University. 4

COST-231 European Cooperation in the field of Scientific and Technical Research Action 231. 34, 51, 52, 58, 69, 77, 93, 94

COTSE Commercial Off The Shelf Equipment. 140, 141, 213, 302

CPE Client Premises Equipment. 62

CPU Central Processing Unit. 274

CQI Channel Quality Indicator. 193, 194

CR Cognitive Radio. 141

CSM Channel State Matrix. 139

CSV Comma Separated Value. 192

CU University of Colorado at Boulder. 63, 67, 105, 107, 156, 162, 184, 186, 189, 192, 210, 232–234, 237, 254, 255, 283, 292

CW Continuous Wave. 57

DEM Digital Elevation Model. 37, 70, 71, 349

DET Detection Error Tradeoff. 224, 240

DSM Digital Surface Model. 53

DTM Digital Terrain Model. 156

ECC Electronic Communication Committee. 30, 52

ECOT Engineering Center Office Tower. 186

EDAM Effective Directivity Antenna Model. 10, 42, 103

EIRP Effective Isotropic Radiated Power. 17, 62, 114, 115, 194, 326

ERSI Environmental Systems Research Institute. 255

ESNR Effective Signal to Noise Ratio. 166, 167, 171, 173, 178, 186, 212, 267

EVM Error Vector Magnitude. 166, 167, 173, 178, 186, 212

FCC Federal Communications Commission. 5, 27, 101, 303

FCS Frame Check Sequence. 58

FDM Finite Difference Method. 104

GENI Global Environment for Networking Innovation. 164, 168, 254

GIS Geographic Information System. 255, 302

GPGPU General Purpose Graphical Processing Unit. 304

GPS Global Positioning System. 6, 62, 65–67, 69, 119, 121, 122, 141, 164, 166, 167, 171, 191, 232, 237

GTG Ground-to-Ground. 34, 35

HTTP Hypertext Transport Protocol. 122

ICMP Internet Control Message Protocol. 122

IDW Inverse Distance Weighting. 137

IEEE Institute of Electrical and Electronics Engineers. 46, 141

ISI Inter-symbol Interference. 44, 140

ITM Irregular Terrain Model. 27, 39, 53, 69, 94, 101, 103, 104, 156, 347–349

ITS Institute for Telecommunications Sciences. 347

ITU International Telecommunications Union. 347

ITU-R International Telecommunications Union Radiocommunication Sector. 31, 38, 39, 53, 70, 93, 94

JDSU JDS Uniphase. 189, 192

KAIST Korea Advanced Institute of Science and Technology. 233

KML Keyhole Markup Language. 156

LCDB Landcover Classification Database. 70, 71

LiDaR Light Detection and Ranging. 105, 106, 109, 304

LOS Line of Sight. 34, 168, 344

LS Least Squares. 132

LTE Long Term Evolution. 10, 158, 162, 189, 192, 193, 197, 212, 213, 215, 240

MAD Median Absolute Deviation. 210

Mbps Megabits per second. 173

MIMO Multiple Input Multiple Output. 139

MIR Multiple Independent Runs. 273

MLE Maximum Likelihood Estimator. 132, 133, 161, 252

MOM Method Of Moments. 161

MSKV Mean Square Kriging Variance. 152, 223, 283, 292, 295

MTU Maximum Transmission Unit. 171

NCALM National Center for Airbourne Laser Mapping. 106

NDA Nondisclosure Agreement. 60

NIST National Institute of Standards and Technology. 34

NLOS No(n) Line of Sight. 22, 34, 168, 344

NSF National Science Foundation. 106

NTIA National Telecommunications and Information Administration. 347

OFDM Orthogonal Frequency Division Multiplexing. 139

OIT Office of Information and Technology. 162

OK Ordinary Kriging. 154, 158, 251, 303

OSM Open Signal Maps. 220, 232, 238, 250, 302

PDSCH Physical Downlink Shared Channel. 193

PL Path Loss. 192–194, 197, 213

POC Proof of Concept. 117, 119, 124, 126

SINR Signal to Interference and Noise Ratio. 17

SLAW Self-similar Least Action Walk. 232, 233

SNR Signal to Noise Ratio. 17, 48, 60, 66, 77, 115, 139–141, 156, 166, 167, 171, 173, 186, 192–194, 213, 223

SRS Sounding Reference Signal. 193

SRS Simple Random Sampling. 113, 116, 117, 135

SSA Spatial Simulated Annealing. 136, 252, 254, 265, 289

STL Stereo Lithography. 105, 106

SUI Stanford University Interim model. 52

TCP Transmit Control Protocol. 189

TFA Technology For All. 48, 65, 67

U-NII Unlicensed National Information Infrastructure. 62

UAV Unmanned Aerial Vehicle. 304

UCSD University of California San Diego. 233

UDP User Datagram Protocol. 168

UE User Equipment. 192–194, 205, 302

UHF Ultra High Frequency. 304

UK United Kingdom. 238

UK Universal Kriging. 158, 303

USB Universal Serial Bus. 65, 69, 121, 122, 213

USGS United States Geological Survey. 255, 349

UTD Uniform Theory of Diffraction. 10, 44, 104, 304

UTM Universal Transverse Mercator. 154

VHF Very High Frequency. 39

VISA Virtual Instrument Software Architecture. 164

VSG Vector Signal Generator. 59

WAND Waikato Applied Network Dynamics. 60

WART Wide Area Radio Testbed. 63, 67

WLS Weighted Least Squares. 132, 137, 158

WMP Wireless Measurement Project. 60, 93, 94, 97, 103, 104

WPE Weighted Kriging Variance. 258–260, 263, 265, 267, 273, 277, 285, 295, 386