

1982 Index

IEEE Transactions on Microwave Theory and Techniques

Vol. MTT-30

This index covers all items—papers, correspondence, reviews, etc.—that appeared in this periodical during 1982, and items from prior years that were commented upon or corrected in 1982. The index is divided into an Author Index and a Subject Index, both arranged alphabetically.

The *Author Index* contains the primary entry for each item; this entry is listed under the name of the first author and includes coauthor names, title, location of the item, and notice of corrections and comments if any. Cross-references are given from each coauthor name to the name of the corresponding first author. The location of the item is specified by the journal name (abbreviated), year, month, and inclusive pages.

The *Subject Index* contains several entries for each item, each consisting of a subject heading, modifying phrase(s), first author's name—followed by + if the paper has coauthors—and enough information to locate the item. For coauthors, title, comments, and corrections if any, etc., it is necessary to refer to the primary entry in the Author Index. Subject cross-references are provided as required by the subject matter. Also provided whenever appropriate are listings under generic headings such as *Bibliographies* (for any paper with at least 50 references, as well as papers that are exclusively bibliographies), *Book reviews*, and *Special issues*.

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FET

abbr. of Field-effect transistor.

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abbr. of Frequency modulation.

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PCM

abbr. of Pulse-code modulation.

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Phase measurement

chromatic dispersion measurement in optical fibers using LEDs; phase shift technique. *Costa, Bruno, + , T-MTT Oct 82* 1497–1503

Phase shifters

electric-field sensor utilizing PVF₂ film in single-mode fiber interferometer. *Koo, Kee P., + , T-MTT Apr 82* 516–521
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Phase shifters; cf. Diode phase shifters; Semiconductor phase shifters

Phase-shift keying; cf. PSK

Photodiodes; cf. Avalanche photodiodes; Optical fiber communication receivers; p-i-n photodiodes

Piezoelectric transducers

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Plasmas; cf. Ionospheric propagation

PM

abbr. of Phase modulation.

PM communication

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Polynomial approximation

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Polynomials; cf. Chebyshev functions

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Propagation; cf. Electromagnetic propagation; Infrared propagation; Optical propagation; Waveguides

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PSK

abbr. of Pulse-shift keying.

PSK communication

11-GHz MIC QPSK modulator for regenerative satellite repeater. *Ohm, Gerhard, + , T-MTT Nov 82* 1921–1926
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Pulse propagation; cf. Transient propagation

Pulsed lasers

AlGaAs double-heterostructure lasers; nonlinear superhigh differential quantum efficiency and strong self-sustained pulsation. *Wang, Chi-Ming, + , T-MTT Apr 82* 441–447
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microwave high-power receiver protectors; rf-primed all-halogen gas plasma device. *Goldie, Harry, + , T-MTT Dec 82 2177–2184*
- Tracking; cf. Aircraft detection and tracking; Satellite tracking**
- Transducers; cf. Acoustic transducers; Acousto-optic transducers; Electric variables transducers; Magnetic transducers; Mechanical variables transducers; Optical transducers; Piezoelectric transducers; Temperature transducers; Underwater acoustic transducers**
- Transfer function matrices; cf. Scattering matrices**
- Transferred-electron devices; cf. Gunn devices**
- Transformers**
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- Transforms; cf. Discrete Fourier transforms; Hankel transform**
- Transient analysis**
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- Transient analysis; cf. Time-domain analysis**
- Transient propagation**
propagation of ps pulses on microwave striplines. *Li, K. K., + , T-MTT Aug 82 1270–1273*
- Transistors; cf. FETs; Microwave FETs; Microwave transistors; Schottky-barrier FETs**
- Transitions; cf. Finline transitions; Waveguide transitions**
- Transmission coefficient measurement; cf. Scattering parameters measurement**

Transmission lines

elliptical conducting rod between parallel ground planes; conformal mapping analysis. *Das, B. N.*, + , *T-MTT Jul 82* 1079–1085
 nonuniform transmission lines; equivalent representations using extended Kuroda's identity. *Kobayashi, Kunikatsu*, + , *T-MTT Feb 82* 140–146

TE₁₀ type waveguide mode in suspended substrate; accurate analytical model. *Cohn, Seymour B.*, + , *T-MTT Mar 82* 293–294. *Correction*, Aug 82 1291

Transmission lines; cf. Cables; Coupled transmission lines; Finline; Microstrip; Multiconductor transmission lines; Optical fibers; Slotline; Strip transmission lines; Stripline; Underground electromagnetic communication

Transmission-line circuits; cf. Distributed-parameter circuits

Transmission-line discontinuities

gap in central conductor of coaxial line; equivalent circuit. *Sen, Susanta*, + , *T-MTT Nov 82* 2026–2029

Transmission-line discontinuities; cf. Microstrip discontinuities; Stripline discontinuities

Transmission-line filters; cf. Millimeter-wave filters

Transmitters; cf. Optical transmitters

Traveling-wave amplifiers

dc – 12 GHz monolithic distributed amplifiers using GaAs MESFETs. *Strid, Eric W.*, + , *T-MTT Jul 82* 969–975

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Traveling-wave devices

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LiNbO₃ waveguide modulator with 1.2- μ m-thick electrodes fabricated by lift-off technique. *Liu, Pao-Lo*, *T-MTT Oct 82* 1768–1770

rutile traveling-wave maser for radio astronomy; experimental design. *Askne, Jan I. H.*, + , *T-MTT Aug 82* 1252–1255

waveguide electrooptic modulators; tutorial review. *Alferness, Rod C.*, *T-MTT Aug 82* 1121–1137

Traveling-wave lasers; cf. Ring lasers

Trigonometric functions; cf. Periodic functions

Tumors; cf. Biomedical radiation applications

Tunable filters

electronically tunable microwave bandpass filters. *Hunter, I. C.*, + , *T-MTT Sep 82* 1354–1360

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Tuners; cf. Varactor tuners

Tunnels; cf. Underground electromagnetic communication

Two-port circuits

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lumped – distributed two-ports containing active elements; frequency-domain analysis and optimization using Hessian matrix. *Iobst, Kenneth W.*, + , *T-MTT Dec 82* 2167–2171

microwave transistor noise and gain determination using noise-figure measurement. *Martines, Giovanni*, + , *T-MTT Aug 82* 1255–1259

scatter matrix of multipoint device; measurement technique using two-port network analyzer. *Tippet, John C.*, + , *T-MTT May 82* 661–666

U

UHF (ultra-high frequency, 300 – 3000 MHz); cf. Microwave (3 – 30 GHz)

UHF amplifiers; cf. UHF FET amplifiers

UHF circulators

tunable low-loss cryogenic circulators for operation at UHF frequencies. *Kadlec, Jarda*, *T-MTT Feb 82* 173–176

UHF communication

effect of trains in rectangular tunnel on cutoff frequency and field at VHF, UHF, and SHF bands. *Chiba, Jiro*, + , *T-MTT May 82* 757–759

UHF FET amplifiers

GaAs monolithic negative-feedback amplifier covering 1 – 7 GHz range. *Terzian, Philip A.*, + , *T-MTT Nov 82* 2017–2020

lossy-match GaAs MESFET amplifiers; design and performance. *Niclas, Karl B.*, *T-MTT Nov 82* 1900–1907

monolithic GaAsFET 1 – 13-GHz traveling-wave amplifiers. *Ayash, Yalcin*, + , *T-MTT Jul 82* 976–981

ultra wide band variable-gain amplifier using dual-gate FETs to cover 100-MHz to 17-GHz bandwidth; theoretical design and experimental results. *Mamodaly, N.*, + , *T-MTT Jun 82* 918–919

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UHF filters; cf. Acoustic surface-wave filters

UHF frequency conversion

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high-speed GaAs Schottky diode FET logic divider circuit. *Walton, Emory R., Jr.*, + , *T-MTT Jul 82* 1020–1026

UHF measurements

automatic permittivity measurements in 200 MHz – 18 GHz range; application to anisotropic fluids. *Parneix, J. P.*, + , *T-MTT Nov 82* 2015–2017

UHF measurements; cf. Electromagnetic radiation effects/protection

UHF radiation effects/protection; cf. Biomedical radiation effects/protection, electromagnetic; Electromagnetic radiation effects/protection

UHF radiometry

microstrip loop radiators for inducing local hyperthermia at 433, 915 and 1300 MHz. *Bahl, Inder J.*, + , *T-MTT Jul 82* 1090–1093

UHF waveguides

miniature implantable probe for microwave bioeffects studies at 2450 MHz; calibration using waveguide method. *Hill, Douglas A.*, *T-MTT Jan 82* 92–99

Ultra-high frequency; cf. UHF (300 – 3000 MHz)

Ultrasonic ...; cf. Acoustic ...

Underground electromagnetic communication

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Underwater acoustic transducers

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Underwater communication cables

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Varactor tuners

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Varactors

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Variational methods

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covered coupled microstrips on anisotropic substrates; mode capacitance calculation using Fourier transform and variational method. *Horno, Manuel*, *T-MTT Nov 82* 1888–1892

VHF

abbr. of Very high frequency.

VHF amplifiers

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VHF antennas

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VHF communication

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VHF filters; cf. Acoustic surface-wave filters

VHF measurements

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Voltage measurement; cf. Voltage transducers

Voltage transducers

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Voltage-controlled oscillators

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Wave diffraction; cf. Diffraction**Wave propagation; cf. Propagation****Waveguide antennas**

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Waveguide arrays

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Waveguide bends

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Waveguide communication; cf. Optical fiber communication**Waveguide discontinuities**

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scattering by abrupt discontinuities on planar dielectric waveguides; numerical solution and physical interpretation. *Brooke, G. H., + , T-MTT May 82 760–770*

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Waveguide discontinuities; cf. Waveguide bends; Waveguide junctions; Waveguide mounts; Waveguide transitions**Waveguide filters**

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Waveguide filters; cf. Cavity-resonator filters; Microwave filters**Waveguide junctions**

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Waveguide switches

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Waveguides

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Waveguides; cf. Circular waveguides; Corrugated waveguides; Dielectric waveguides; Elliptical waveguides; Ferrite-loaded waveguides; Finline; Infrared waveguides; Loaded waveguides; Microstrip; Millimeter-wave waveguides; Multimode waveguides; Optical fibers; Parallel-plate waveguides; Ridge waveguides; Semiconductor-loaded waveguides; Slotline; Stripline; Transmission lines; UHF waveguides; Underground electromagnetic communication

Wire communication; cf. Optical fiber communication; Underground electromagnetic communication

Wire communication cables

comparison of microwave, coaxial, and lightwave digital transmission technologies. *Jones, J. Richard, T-MTT Oct 82 1512–1524*

Wire communication cables; cf. Underwater communication cables

Y

YIG

abbr. of Yttrium iron garnet.

YIG films/devices

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YIG filters

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