

Congress program

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Monday 22 October

NTimeDescription

1

08:30

Opening session

Chairman: Filiberto Bilotti

2

09:30

Plenary talk: George V. Eleftheriades - Microwave metamaterials and applications: current status of the experimental and theoretical developments

Chairmen: Sergei Tretyakov, Alex Schuchinsky

3

10:30

Coffee

4

11:00

Plenary talk: Vladimir M. Shalaev - Optical metamaterials and applications: current status of the experimental and theoretical developments

Chairmen: Sergei Tretyakov, Alex Schuchinsky

5

12:00

Transfer

6
12:30
Lunch

7
13:30
Sessions 1

Focused session: Optical and microwave sensing, imaging and photolithography:

Chairman: Anatoly Zayats

13:30 -

E. Ozbay - Negative refraction, subwavelength focusing and beam formation using photonic crystals (invited)

14:00 -

V.A. Podolskiy, A.A. Goyadinov - Diffraction and dispersion management in active nanoplasmonic metamaterials (invited)

14:30 -

P. Alitalo, C.R. Simovski, L. Jylha, A.J. Viitanen, S.A. Tretyakov - Subwavelength imaging in the visible using a pair of arrays of metal nanoparticles (invited)

15:00 -

F. Keilmann - Infrared-to-THz spectroscopic near-field imaging of materials and metamaterials (invited)

15:30 -

J. Schilling - Uniaxial metallo-dielectric metamaterials with isotropic positive permeability

15:45 -

T. Taubner, M.L. Brongersma, C. Fietz, Y. Urzhumov, D. Korobkin, G. Shvets, R. Hillenbrand - Imaging process in superlens-based mid-infrared near-field microscopy

Focused session: Localization and channelling of light and microwave radiation:

Chairman: Mark Stockman

13:30 -

S.A. Maier - Plasmonics throughout the spectrum: Sub-wavelength energy confinement for waveguiding, spectroscopy and sensing (invited)

14:00 -

F.J.G. de Abajo, R. Sainidou, T.V. Teperik, M. Dennis, N.I. Zheludev - Light confinement at interfaces and Talbot effects in surface modes of various systems (invited)

14:30 -

G. Samelsohn - Localization, diffusion, and time reversal in anisotropic structures

14:45 -

Z.M. Zhang, B.J. Lee, Y.-B. Chen - Experimental demonstration of surface wave excitation between a truncated photonic crystal and a metal (invited)

15:15 -

M. Stockman - Nanoplasmonics: generation and control of nanoscale optical fields (invited)

15:45 -

E. Semouchkina, Y. Miyamoto, G. Semouchkin, S. Kirihaara, M. Lanagan - FDTD study of resonance phenomena at electromagnetic wave localization in 3D dielectric fractal and modified structures

Tunable and active metamaterials and surfaces:

Chairmen: Irina Vendik, Igor Nefedov

13:30 -

S. Gevorgian, D. Kuylenstierna, A. Vorobiev - 1D and 2D tuneable metamaterials based on ferroelectric varactors (invited)

14:00 -

R.R.A. Syms, L. Solymar, I.R. Young - Parametrically amplified magneto-inductive ring resonators

14:15 -

L. Jylha, A. Sihvola - Tunability of ferroelectric-polymer composite

14:30 -

G. Houzet, A. Marteau, G. Velu, E. Lheurette, L. Burgnies, J.C. Carru, D. Lippens - Voltage-controlled composite metamaterials via the loaded transmission line approach

14:45 -

S.A. Cummer, B.-I. Popa, T.H. Hand - Design and measurements of active RF metamaterials

15:00 -

A. Velez, J. Bonache, F. Martin - Tunable metamaterial transmission lines based on complementary split rings resonators (CSRRs)

15:15 -

R. Sainidou, F.J.G. de Abajo - Nanoparticles in microcavities as all-optical tunable systems

15:30 -

K. Aydin, E. Ozbay - Tunable split ring resonators at microwave frequencies

15:45 -

D. Huang, R. Liu, N.N. Wan, T.J. Cui, D.R. Smith - Analytic theory for active circuit metamaterials and applications in evanescent-wave amplification

Fabrication and processing of metamaterials and artificial electromagnetic surfaces:

Chairman: Richard Ziolkowski

13:30 -

K.W. Whites, T. Amert, K. Kirschenmann, S.M. Woessner - Monolithic fabrication of multi-material artificial electromagnetic surfaces and devices (invited)

14:00 -

Y. Chen, B.-R. Lu, S.-Q. Xie, Y. Sun, X.-P. Qu, R. Liu - Novel nanolithography for large area photonic gratings and metamaterials (invited)

14:30 -

N. Liu, H. Guo, L. Fu, H. Schweizer, H. Giessen - Stacking of split-ring resonator metamaterials in the optical regime

14:45 -

D.A. Pawlak, K. Kolodziejak, S. Turczynski, K. Rozniatowski, J. Kisielewski, B. Andrzejewski, T. Klimczuk -
Metamaterials and photonic crystals – potential applications for self-organized eutectic micro- and nanostructures

15:00 -

M.C. Martin, Z. Hao, B. Harteneck, A. Liddle, S. Cabrini, W. Padilla - Strong broadband near-IR resonances observed
from nano-lithographically fabricated metallic metamaterials

15:15 -

E.V. Naumova, V.Ya. Prinz, V.A. Seleznev, S.V. Golod, R.A. Soots, V.V. Kubarev, B.A. Knyazev, G.N. Kulipanov, N.A.
Vinokurov - Fabrication of metamaterials on the basis of precise micro- and nanoshells

15:30 -

V. Ovchinnikov - Properties of multilayer plasmonic metamaterials fabricated by ion-beam mixing and conformal
deposition

15:45 -

D.P. Korfiatis, K.-A. Th. Thoma, J.C. Vardaxoglou - Ultrafast laser micromachining of silicon surfaces

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16:00
Coffee

9

16:30
Sessions 2

Microwave devices:

Chairmen: Ferran Martin, Doug Werner

16:30 -

I. Vendik, O. Vendik, D. Kholodniak, P. Kapitanova - Design of miniature microwave devices based on a combination of
natural right-handed and metamaterial left-handed transmission lines (invited)

17:00 -

D. Kholodnyak, P. Kapitanova, I. Vendik - Design of directional couplers using fully-integrated left-handed transmission

lines

17:15 -

B. Jokanovic, L. Trifunovic, V. Crnojevic-Bengin - Novel left-handed unit cells for filter applications

17:30 -

A.J. Viitanen, I.S. Nefedov - Guided wave properties in Lorentz type resonant layer structures

17:45 -

M. Schuessler, C. Damm, R. Jakoby - Periodically LC loaded lines for RFID backscatter applications

18:00 -

I.A. Ibraheem, M. Koch - Coplanar waveguide incorporating complementary split ring resonators

18:15 -

O. Isik, K.P. Esselle, Y. Ge - Archimedean spiral resonators for super compact metamaterial filter design

Optical properties of metamaterials:

Chairmen: F. Javier G. de Abajo, Stefan Maier

16:30 -

M. Kociak, J. Nelayah, O. Stephan, M. Couillard, R.A. de la Concha, M. Tence, D. Taverna, L. Henrard, F.J.G. de Abajo, C. Colliex - Mapping electron excitations in the visible-UV range using sub-nm resolved STEM-EELS spectrum imaging (invited)

17:00 -

N.P. Johnson, B. Lahiri, D.A. Pawlak, S. Turczynski, K. Kolodziejak - Reflectance measurements of self-organized microstructure of Tb₃Sc₂Al₃O₁₂-TbScO₃ eutectic (invited)

17:30 -

W. Cai, U.K. Chettiar, H.-K. Yuan, V.P. Drachev, A.V. Kildishev, V.M. Shalaev, A. Boltasseva - Experimental observation of negative magnetic response in the visible spectral range

17:45 -

P. Banzer, S. Quabis, G. Leuchs, U. Peschel - Experimental investigation of magnetic and electric resonances of single

nano structures in the optical domain

18:00 -

A.A. Asatryan, L.C. Botten, M.A. Byrne, V.D. Freilikher, S.A. Gredeskul, R.C. McPhedran, I.V. Shadrivov, Y.S. Kivshar - Anderson localization in the presence of metamaterials

18:15 -

T.P. Meyrath, T. Zentgraf, H. Giessen - Circuit model for optical metamaterials: studies at the border between electronics and optics

Plasmonics (I):

Chairmen: Vladimir Shalaev, Mark Brongersma

16:30 -

Y. Fainman - Metamaterials for information systems (invited)

17:00 -

H. Jiang, J. Zhang, B. Gralak, M. Cathelinaud, G. Tayeb, M. Lequime, S. Enoch - Towards sub-wavelength resolution using transparent metal-dielectric stacks (invited)

17:30 -

T.V. Teperik, F.J.G. de Abajo, V.V. Popov, M.S. Shur - Tunable terahertz absorption bands in a scaled plasmonic crystal

17:45 -

I. Romero, T. Teperik, F.J.G. de Abajo - Plasmons in coupled voids

EBG and photonic crystals (I):

Chairmen: Francesco Chiadini, Christophe Craeye

16:30 -

A.P. Vinogradov, M. A. Merzlikin, A. V. Dorofeenko, M. Inoue, A. A. Lisyansky - Peculiar feature of photonic crystals containing anisotropic and gyrotropic ingredients (invited)

17:00 -

V. Dmitriev - FCC magnetic photonic crystals: symmetry analysis

17:15 -

M.Yu. Barabanenkov, Yu.N. Barabanenkov - Threadlike small filling factor 2D photonic structures

17:30 -

C.-S. Kee, S. Kim, J. Lee, J.-E. Kim, H.Y. Park - Novel properties of six-fold symmetric photonic quasi-crystal fibers

17:45 -

V. Mocella, S. Cabrini, D. Olynick, B. Harteneck, S. Dhuey, P. Dardano, L. Moretti, I. Rendina - Optical properties of zero-average refractive index photonic crystal heterostructure

18:00 -

V.S. Gorelik - Secondary emission of globular photonic crystals

18:15 -

S.G. Romanov, M. Bardosova, I.M. Povey, M. Pemble, C.M. Sotomayor Torres - Photonic crystals and hetero-crystals of mixed dimensionality from Langmuir-Blodgett colloidal multilayers

Tuesday 23 October

NTimeDescription

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08:30
Sessions 3

Special session: Quasicrystals (I):

Chairmen: Stefan Enoch, Vincenzo Galdi, Filippo Capolino

08:30 -

E. Di Gennaro, C. Miletto, S. Savo, A. Andreone, D. Morello, G. Castaldi, V. Galdi, V. Pierro - A parametric study of negative refraction and superlensing in 12-fold symmetric photonic quasicrystals (invited)

09:00 -

C.T. Chan - Quasi-crystal-like electromagnetic structures (invited)

09:30 -

D.N. Chigrin, A.V. Lavrinenko - Properties of octagonal quasi-crystals and their photonic applications (invited)

10:00 -

A. Della Villa, F. Capolino, V. Galdi, S. Enoch, V. Pierro, G. Tayeb - Analysis of modal propagation in slabs of photonic quasicrystals with Penrose-type lattice

Electromagnetic theory:

Chairmen: Ari Sihvola, Femke Olyslager

08:30 -

L. Solymar - 100 years of backward wave (invited)

09:00 -

V.G. Veselago - Light pressure in negative refraction materials (invited)

09:30 -

I.V. Lindell - Class of self-dual media (invited)

10:00 -

M.W. McCall - Covariance, negative refraction and dispersion

10:15 -

M.A. Ribeiro, C.R. Paiva - An equivalence principle for electrodynamics using geometric algebra

Metamaterials and antennas (I):

Chairmen: Filiberto Bilotti, Isabelle Huynen

08:30 -

D.H. Lee, A. Chauraya, J.A Flint, W.S. Park, J.C. Vardaxoglou - Reconfigurable metamaterial peano antenna (invited)

09:00 -

E. Saenz, R. Gonzalo, I. Ederra, P. Ikonen, S. Tretyakov, P. de Maagt - Modeling and measurements of a planar meta-surface based on grids of short dipoles and wires

09:15 -

A. Ourir, S.N. Burokur, A. de Lustrac - Active variable phase metamaterial cavity for directive antenna

09:30 -

S. Zhu, R. Langley - Dual band antennas on an EBG substrate

09:45 -

D. Bonafacic, S. Hrabar, D. Kvakon - Some considerations on radiation properties of antennas embedded into low-permittivity metamaterial

10:00 -

A. Ali, Z. Hu - Ultra wide band pass filter with frequency notch characteristic

10:15 -

R. Cret, E. Simion, M. Plesa, D.D. Micu - Numerical modelling of non-homogenous dielectrics with very different permittivities of components

Plasmonics (II):

Chairmen: Nader Engheta, Viktor Podolskiy

08:30 -

M.L. Brongersma, E. Bernard, A. Chandran, P. van Dorpe, Y. Chul, Jun, J. Liu, R. Pala, J.A. Schuller, J. White, T. Taubner, R. Zia - Plasmonics – the missing link between nanoelectronics and microphotonics (invited)

09:00 -

H.A. Atwater, H.J. Lezec, J.A. Dionne, C.E. Ross, L.A. Sweatlock, D. Pacifici, K. Diest, M. Dicken, V. Ferry - Active plasmonic structures and metamaterials (invited)

09:30 -

J. McVay, N. Engheta, A. Hoorfar - Three-dimensional Hilbert structures as compact resonant plasmonic elements in laterally-confined transmission lines at microwave frequencies (invited)

10:00 -

V. Myroshnychenko, F.J.G. de Abajo - Numerical simulation of electron energy loss in complex metallic nanoparticles

10:15 -

H. Guo, N. Liu, T. Zentgraf, T. Meyrath, L. Fu, H. Schweizer, H. Giessen - Optical properties of bowtie slot antenna metamaterials

11

10:30

Coffee

12

11:00

Sessions 4

Special session: Quasicrystals (II):

Chairmen: Stefan Enoch, Vincenzo Galdi, and Filippo Capolino

11:00 -

M. Notomi, H. Suzuki, T. Tamamura, K. Edagawa - Photonic quasicrystal distributed feedback lasers: lasing action due to quasiperiodicity (invited)

11:30 -

X. Zhang, Z. Feng, Y.-Q. Wang, Z. Li, B. Cheng, D.-Z. Zhang - Negative refraction and focusing of wave through high-symmetry quasicrystals (invited)

12:00 -

F.M. Huang, A. Schwaneke, P. Papasimakis, Y. Chen, F.J.G. de Abajo, N.I. Zheludev - Far-field subwavelength focusing and extraordinary transmission of light by a quasi-periodic array of nanoholes (invited)

Chirality and handedness:

Chairmen: Ismo Lindell, Ahmad Hoorfar

11:00 -

C.W. Qiu, S. Zouhdi, S. Tretyakov, L.-W. Li - Possibilities for chiral nihility to achieve negative-index materials (invited)

11:30 -

R. Marques, F. Mesa, L. Jelinek, J.D. Baena - Balanced right/left-handed mixtures of quasi-planar chiral inclusions

11:45 -

I.V. Semchenko, S.A. Khakhomov, S.A. Tretyakov - Chiral metamaterial with unit negative refraction index

12:00 -

K. Takano, T. Fujii, T. Nagashima, M. Tani, M. Hangyo, H. Miyazaki - Strong optical activity in metal screw arrays

12:15 -

J.R. Canto, C.R. Paiva, A.M. Barbosa - Bloch waves with negative phase velocity in multilayered structures containing uniaxial chiral media

Metamaterials and antennas (II):

Chairmen: Yiannis Vardaxoglou, David Jackson

11:00 -

J.R. Kelly, T. Kokkinos, A.P. Feresidis - Modelling and design of sub-wavelength metamaterial resonant cavity antennas

11:15 -

T.-H. Vu, K. Mahdjoubi, A.-C. Tarot, S. Collardey - Optimisation of EBG antennas with a combined PRS

11:30 -

A. Erentok, R.W. Ziolkowski - Metamaterial-inspired efficient electrically-small antennas: Designs and experiments of 2D and 3D electric and magnetic versions

11:45 -

I.K. Kim, V.V. Varadan - Millimeter wave dual-band microstrip antennas with metamaterial substrates using the LTCC process

12:00 -

T.-H. Vu, K. Mahdjoubi, S. Collardey, A.-C. Tarot - Prediction of the input impedance of primary sources placed inside FP and EBG antennas

Negative material parameters:

Chairmen: Ari Viitanen, Mario Silveirinha

11:00 -

M. Kafesaki, E.N. Economou, N. Katsarakis, I. Tsiapa, S. Foteinopoulou, C.M. Soukoulis, T. Koschny - Left-handed metamaterial designs in microwave and infrared frequencies (invited)

11:30 -

H. Wallen, H. Kettunen, A. Sihvola - Electrostatic resonances of negative-permittivity interfaces, spheres and wedges

11:45 -

A.K. Popov, S.A. Myslivets, T.F. George, V.M. Shalaev - Tailoring transparency of negative-index metamaterials with parametric amplification

12:00 -

S. Hrabar, A. Vuckovic, M. Vidalina, M. Masic - Influence of spatial dispersion on properties of waveguide filled with wire media – an experimental investigation

12:15 -

K. Guven, A.O. Cakmak, M.D. Caliskan, E. Ozbay - Negative refraction and negative phase velocity through cutwire/wire based metamaterial

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12:30

Lunch

14

14:00

Posters (I)

Chairmen: Jan Machac, Andrea Alù

1

G.A. Kraftmakher, V.S. Butylkin - Appearance and increase of resonant nonreciprocal microwave response of wave-guiding chiro-ferrite-metastuctures

2

V.S. Butylkin, G.A. Kraftmakher - Left- and right-handed pass-bands of bianisotropic and waveguide-bianisotropic metamaterials with gratings of double split rings

3

L. Akhoondzadeh-Asl, P.S. Hall - Element shape effect on the behaviour of artificial magnetic conductors

4

A. Rumberg, M. Berroth - Negative refractive index in stacked conventional structured printed circuit board material

5

P.Y. Chen, S.C. Wu, Y.C. Chen - Periodic porous-nanostructured left-handed material slab at optical frequencies

6

S.E. Bankov, M.D. Duplenkova - Waveguide components on the base of two-dimensional EBG structure

7

D.C. Skigin, R.A. Depine - Resonant and dynamical properties of compound gratings with metamaterials

8

J. Hao, Y. Yuan, L. Ran, T. Jiang, J.A. Kong, L. Zhou, C.T. Chan - Manipulating photon polarizations by anisotropic metamaterials

9

L.H. Moustafa, B. Jecko - Design of a broadband EBG resonator antenna using dual-resonant FSS

10

H. Mosallaei, A. Ahmadi - Electric and magnetic dipole moments of dielectric resonators: an all-dielectric metamaterial design

11

R. Brazis, V. Kazakevicius, R. Narkovic; - Single split-ring resonators and metamaterials

12

Q. Wu, H.-L. Wang, J. Wu, L.-W. Li - Investigation on the electric line source illumination of a lossless metamaterial covered dielectric cylinder

13

R. Kushal - Effect of variable MgO and Fe₂O₃ doping on structural, electrical and thermal properties of PZT (PbZr_{0.7}Ti_{0.3}O₃) nano-ceramics derived by Sol-Gel technology

14

S.A. Nikitov, Yu.K. Chamorovskii, E.A. Nekrashevich, M.V. Ryabko, V.A. Isaev - Polarization mode dispersion in holey fibers with two side holes

15

Z. Wang, Z. Zhang, X. Wang, S. Qin - Wave-absorbing property of an absorber with LHM and RHM structure

16

J. Shi, Z. Wang, Z. Zhang, X. Wang, S. Qin - Theoretical research on a LHM & RHM composed wave-absorber

17

A. Martinez, R. Ortuno, J. Marti - Subwavelength imaging by a negative-index photonic-crystal slab: role of the thickness and surface cut

18

J. Herrmann, I. Babushkin, A. Husakou - Supercontinuum generation in a nanowaveguide with slow nonlinearity

19

Yu.S. Dadoenkova, I.L. Lyubchanskii, Y.P. Lee, A. Lakhtakia - Brewster and pseudo-Brewster angles for bigyrotropic negative magnetic materials

20

G. Goussetis - Generalized scattering matrix of discontinuities embedded in electromagnetic band gap transmission lines

21

M.L. Shendeleva - Imaging through a negative-index slab with the use of ray tracing

22

C.-S. Kee, S. Kim, J. Lee, J.-E. Kim, H.Y. Park - Novel properties of six-fold symmetric photonic quasi-crystal fibers

23

C.M.J. Wijers, O. Voskoboynikov - Magneto-optical properties of layers of quantum dot molecules

24

M.-S. Wu, S.-G. Mao - Dispersion characteristics of compact composite right/left-handed and electromagnetic bandgap coplanar waveguide stubs

25

A.N. Gruzintsev, A.N. Redkin, Z.I. Makovey, E.E. Yakimov, C. Barthou, G.A. Emelchenko - Fabrication of the ZnO vertical nanorod arrays and their random lasing

26

G.A. Emelchenko, V.M. Masalov, M. Romanelli, A. Maître, C. Barthou, P. Benalloul, A.N. Gruzintsev, E.E. Yakimov - Angle-resolved self-activated luminescence of 3D photonic crystals opals

27

A. Alden, P. Bouliane, M. Zhang - A controllable resistance sheet using rectifying diodes

28

A.E. Serebryannikov, T. Magath - Applying fast coupled-integral-equations technique to photonic crystals and metamaterial gratings

29

F. Frezza, L. Pajewski, C. Ponti, G. Schettini - Band properties and directivity enhancement in 3D electromagnetic crystals for antenna applications

30

D. Draskovic, D. Budimir - Composite right/left handed coupler and its application to WiMAX power amplifiers

31

O.N. Kozina, L.A. Melnikov - Axial and off-axial laser effect in 1D photonic crystal with active layers

32

A.V. Ivanov, A.N. Shalygin, V.Yu. Galkin, A.V. Vedyayev, V.A. Ivanov - Optical Magnus effect in tunable metamaterials fabricated from amorphous ferromagnetic microwires

33

S. Simion, G. Sajin, R. Marcelli, G. Bartolucci, F. Craciunoiu - Silicon CPW composite right/left-handed coupled lines directional coupler

34

S. Simion, G. Sajin, R. Marcelli, F. Craciunoiu - CPW composite right/left-handed zeroth-order resonance antenna on silicon substrate

35

M.V. Golovkina - Two-layered waveguide containing a negative index material slab with resistive film

36

E.J. Sartori, H.E. Hernandez-Figueroa, J.E. Bertuzzo - Metamaterial behaviour of low cost PVC dielectric grids

37

A. Sanada - Negative refractive index media of infinite metallic wire array

38

A.A. Bulgakov, O.V. Shramkova - Three-wave interaction of electromagnetic and plasma waves in the layered semiconductor structures

39

S.A. Matos, C.R. Paiva, A.M. Barbosa - A coordinate-free approach to a pseudo-chiral omega medium

40

O. Takayama, L.-C. Crasovan, D. Artigas, S.K. Johansen, D. Mihalache, L. Torner - Excitation of Dyakonov surface wave in the Kretschmann configuration

41

T. Sengor - Possibilities creating higher chirality with a new metamaterial element

42

O. Karabasoglu, G. Kiziltas - Design optimization of artificial magneto-dielectrics for RF applications

43

M. Iwanaga - Effective magnetic response at visible frequency in stratified metal-dielectric metamaterials

44

K. Sakoda - Study on scaling law of the Menger sponge by LCAO approximation

45

S.K Ghosh, A. Ghosh - Study and development of diamagnetic ferrite substrate as magnetic super conducting substrate & core element at room temperature in an inhomogeneous magnetic field

46

G. Monti, L. Tarricone - Dispersion analysis of a metamaterial-loaded waveguide

47

C. Sibilia, A. Mandatori, V. Violante, E. Castagna, M. Bertolotti - Electromagnetic field behaviour at electrochemical interface of metallic electrodes

48

L. Crocco, F. Cuomo, T. Isernia - An effective generalized scattering matrix method for the characterization of 2D photonic crystals

49

F. Aznar, J. Garcia-Garcia, M. Gil, J. Bonache, F. Martin - Considerations for the miniaturization of electromagnetic resonators for metamaterial and LHM design

50

A. Anan'ev, A. Lipovskii, L. Maksimov, V. Polukhin, D. Tagantsev, B. Tatarintsev - Solid band gap photonic crystal fibers: design, materials, technology

51

G.C. Vietti Colome, L. Matekovits, M. Orefice - The effect of transverse periodicity in a modulated microstrip line

52

R. Karimzadeh Bae, G. Dadashzadeh, F. Geran Kharakhili - An equivalent circuit model for CSRR and using of its in size reduction of microstrip antenna

53

M.A. Abdalla, Z. Hu - A nonreciprocal left handed coplanar waveguide on ferrite substrate with only shunt inductive load

54

F.J. Herraiz-Martinez, V. Gonzalez-Posadas, D. Segovia-Vargas - Compact dual-mode and triple-frequency circular patch antenna based on metamaterial structures

55

M. Plesa, R. Cret, L. Cret, D. Duma - Numerical calculus of binary dielectric mixtures permittivity with inclusions of different geometrical shapes and sizes

56

A.F. Konstantinova, K.K. Konstantinov, V.V. Filippov, E.A. Evdishchenko, K.B. Imangazieva - Propagation of electromagnetic waves in layered anisotropic media

57

P.V. Dolganov, V.M. Masalov, E.N. Samarov, V.K. Dolganov, G.A. Emelchenko - Optical properties and band structure of opal and blue phase photonic crystals

58

C. Du, J. Ma, X. Luo - Surface plasmon modes from a hybrid metallic nanostructure array

59

X. Luo, J. Ma, C. Du - Light diffraction from grating like surfaces

60

N.Yu. Medvedeva, O.G. Vendik, S.P. Zubko - Modeling and characterization of structures containing spherical or ellipsoidal ferroelectric inclusions

61

S. Arslanagic, R.W. Ziolkowski, O. Breinbjerg - Radiation Properties of concentric metamaterial spheres excited by an electric hertzian dipole

62

I.A. Ibraheem, J. Schoebel, M. Koch - Group delay in coplanar waveguide left-handed media

63

M.C. Larciprete, A. Belardini, M. Centini, E. Fazio, C. Sibilia, M. Cappeddu, D. de Ceglia, M. Scalora, M. Bloemer, - Second harmonic generation from metallo-dielectric multilayer structures

64

A. Gopinath, N.-N. Feng, M.L. Brongersma, L. Dal Negro - Collective plasmon resonances and field enhancement in two-dimensional aperiodic arrays of metal nanoparticles

65

A.V. Akimov, A.A. Meluchev, D.A. Kurdyukov, A.V. Scherbakov, A. Holst, V.G. Golubev - Optical reflection and diffraction in opal-metal composites

66

A.A. Bulgakov, V.K. Kononenko, O.V. Kostilyova - The external fields influence on the properties of the waveguide between two periodic layered structures

15

15:00

Sessions 5

Special session: Quasicrystals (III):

Chairmen: Stefan Enoch, Vincenzo Galdi, Filippo Capolino

15:00 -

H. Giessen, Ch. Bauer, D. Nau - Disordered and quasicrystalline metallic photonic crystals (invited)

15:30 -

M. Hangyo, K. Takano, F. Miyamaru, H. Miyazaki - Resonant terahertz transmission through Penrose metal hole arrays (invited)

16:00 -

F.J. Garcia-Vidal, J. Bravo-Abad, A.I. Fernandez-Dominguez, L. Martin-Moreno - Theory of extraordinary optical transmission through quasi-periodic arrays of subwavelength holes (invited)

Cloaking and field transformations (I):

Chairmen: Viktor Veselago, Piergiorgio Uslenghi

15:00 -

S.A. Tretyakov, I.S. Nefedov - Field-transforming metamaterials (invited)

15:30 -

U. Leonhardt, T.G. Philbin - General relativity in electrical engineering (invited)

16:00 -

A. Alu, N. Engheta - Dispersion characteristics of metamaterial cloaking structures

16:15 -

P.L.E. Uslenghi - Invisible metamaterial trenches

Metamaterials and antennas (III):

Chairmen: Ramon Gonzalo, Vladimir Podlozny

15:00 -

S. Paulotto, P. Baccarelli, F. Frezza, D.R. Jackson - Full-wave dispersion analysis and broadside optimization for the microstrip CRLH leaky-wave antenna

15:15 -

F. Bilotti, C. Vegni - Design of metamaterial based patch antennas with reduced back-radiation for radio navigation systems

15:30 -

H.J. Lee, R.J. Langley, K.L. Ford - Tunable active EBGs

15:45 -

G. Lovat, P. Burghignoli, F. Capolino, D.R. Jackson, D.R. Wilton - Directive radiation from grounded wire-medium slabs covered with metal strip gratings

16:00 -

M. Schuehler, R. Wansch, M.A. Hein - A design formulation of a periodic high-impedance surface for a miniaturised antenna array

16:15 -

P.Y. Chen, S.C. Wu, J.H. Tsai - Band-notched UWB monopole planar antenna with split-ring resonator

Negative index metamaterials in optics:

Chairmen: Nikolay Zheludev, Costas Soukoulis

15:00 -

S. Linden, G. Dolling, N. Feth, M. Decker, C.M. Soukoulis, M. Wegener - Photonic metamaterials: artificial magnetism, negative refraction, and circular dichroism at optical frequencies (invited)

15:30 -

C. Garcia-Meca, R. Ortuno, R. Salvador, A. Martinez, J. Marti - Low-loss single-layer metamaterial with negative index of refraction at visible frequencies

15:45 -

K.L. Tsakmakidis, O. Hess - Efficient slow light in adiabatically tapered left-handed waveguides

16:00 -

Y.-G. Roh, Y. Segawa, S.G. Tikhodeev, T. Ishihara - Photo-induced voltage in perforated metal-dielectric-metal layered structures

16:15 -

A.-G. Kussow, A. Akyurtlu, A. Semichaevsky, N. Angkawisittpan - Superconductor-based optically isotropic negative refraction index metamaterial at visible frequencies

16
16:30
Coffee

17
17:00
Sessions 6

Homogenization of metamaterials:

Chairmen: Said Zouhdi, Lucio Vegni

17:00 -

F. Capolino, D.R. Wilton, D.R. Jackson, J. Chen, C. Craeye, W.A. Johnson, L. Bilio - Numerical methods for analyzing periodic metamaterials (invited)

17:30 -

A. Sihvola - Six-dimensional view of dielectric mixtures as metamaterials (invited)

18:00 -

A. Bossavit - Frequency-dependent homogenization: application to metamaterials (invited)

18:30 -

I. Huynen, X.Radu, S.Massaoudi, F. Capolino, C. Craeye - Investigation of coupling effects in SNG metamaterial based on spiral particles (invited)

Subwavelength imaging:

Chairmen: George Eleftheriades, Pavel Belov

17:00 -

R. Marques, M.J. Freire - Magnetoinductive lenses: basic principles and future trends (invited)

17:30 -

E. Shamonina - Near field imaging with metamaterials (invited)

18:00 -

Y. Zhao, P.A. Belov, Y. Hao - Amplification of evanescent spatial harmonics and subwavelength imaging inside of a wire medium slab

18:15 -

M.G. Silveirinha, P.A. Belov, C. Simovsky - Subwavelength imaging at infrared frequencies using an array of metallic nanorods

18:30 -

G. D'Aguanno, M.J. Bloemer, N. Mattiucci, M. Scalora, D. de Ceglia, N. Akozbek - Broadband super-resolution and energy transport in a metallo-dielectric lens

Enhanced transmission:

Chairmen: Mario Sorolla, Masaya Notomi

17:00 -

L. Martin-Moreno - Optical properties of subwavelength holes in metal films: finite size effects (invited)

17:30 -

M. Gorkunov, B. Sturman, E. Podivilov - Eigenmodes of metal-dielectric structures and transmission through subwavelength slits

17:45 -

Y.M. Strel'niker, D.J. Bergman, D.G. Stroud - Control of extraordinary transmission of light through nanohole arrays in metal films

18:00 -

M.G. Silveirinha, N. Engheta - Squeezing obliquely-incident electromagnetic waves through subwavelength regions or openings using epsilon-near-zero (ENZ) materials

18:15 -

M. Beruete, M. Navarro-Cia, M. Sorolla - Low-loss and miniaturized extraordinary transmission metamaterial

18:30 -

S.M. Kachan, A.N. Ponyavina - Enhanced resonance transmission of light through a dense layer of large noble-metal nanoparticles

18:45 -

D.R. Jackson, A.A. Oliner, J. Chen, F. Capolino, R. Qiang, G. Lovat, P. Burghignoli, D.R. Wilton - Plasmonic leaky-wave propagation and radiation on periodic silver films at optical frequencies

FSS and guiding structures:

Chairmen: Laszlo Solymar, Silvio Hrabar

17:00 -

F. Bilotti, S.E. Lauro, A. Toscano, L. Vegni - Design of ENG loaded coupled microstriplines with very high and very low coupling values (invited)

17:30 -

S. Hrabar, D. Zaluski - Subwavelength guiding of electromagnetic energy in structures based on anisotropic SNG metamaterials (invited)

18:00 -

D.H. Werner - Applications of frequency selective surfaces in the design of metamaterials (invited)

18:30 -

I. Puscasu, A. Shah, A. Greenwald, E. Johnson, W. Schaich - Hybrid FSS for resonant narrow band IR emission: A new generation of infrared sources and spectroscopic sensors

18:45 -

A. Di Falco, C. Conti, S. Trillo - Slow light tunneling of X waves through a stopband

Wednesday 24 October

NTimeDescription

18
08:30
Sessions 7

Cloaking and field transformations (II):

Chairman: Ulf Leonhardt

08:30 -

R.C. McPhedran, G.W. Milton, N.A. Nicorovici, L.C. Botten - External cloaking through plasmonic resonance (invited)

09:00 -

N. Engheta, A. Alu, M. Silveirinha, J. Li, A. Salandrino, B. Edwards - Metamaterial plasmonics for optical nanocircuits, cloaking, squeezing energy, and supermicroscopy (invited)

09:30 -

C. W. Qiu, L.-W. Li, S. Zouhdi - Study of cloakings on cylindrical scatterers: rotation effects, resonant scattering, and resonance shifts (invited)

10:00 -

M. Lassas - Invisibility cloaking and inverse problems

Focused session: Metasurfaces, metaboundaries and enhanced transmission (I):

Chairman: Gennady Shvets

08:30 -

I.S. Nefedov - Surface waves in a magnetized ferrite slab filled with wire media (invited)

09:00 -

M. Sorolla, M. Beruete, M. Navarro, I. Campillo - Left-handed propagation and beaming in stacked subwavelength hole arrays (invited)

09:30 -

V.A. Fedotov, E. Plum, A.S. Schwanecke, Y. Chen, V.V. Khardikov, S.L. Prosvirnin, N.I. Zheludev - Planar and layered chiral meta-surfaces (invited)

10:00 -

G. Shvets, D. Korobkin, Y.A. Urzhumov, B. Neuner III - Extraordinary transmission and absorption in hole arrays mediated by surface phonon polaritons (invited)

Focused session: Effective material parameters and role of disorder in metamaterials (I):

Chairmen: Harald Giessen, Keith Whites

08:30 -

I. Bogaert, F. Olyslager - Exact full-wave simulation of finite pieces of metamaterials and extraction of effective material parameters (invited)

09:00 -

P. Ikonen, E. Saenz, R. Gonzalo, C. Simovski, S. Tretyakov - Mesoscopic "effective material parameters" for single and double grids of loaded wires describing

09:15 -

J. Zehentner, J. Machac - Volumetric single negative metamaterials (invited)

09:45 -

B. Glover, K. Kirschenmann, K.W. Whites - Engineering R-card surface resistivity with printed metallic patterns

10:00 -

S.G. Tikhodeev - Effective epsilon and mu from the general scattering matrix of a metamaterial slab (invited)

Nonlinear metamaterials (I):

Chairman: Michael Scalora

08:30 -

C. Caloz, S. Gupta - Dispersion and nonlinearity engineered metamaterial devices (invited)

09:00 -

D. Lippens - Static and dynamic control of metamaterials by ferroelectrics and active devices (invited)

09:30 -

M. Scalora - Nonlinear pulse propagation in metamaterials: solitons, gap solitons, and the influence of phase matching on pulsed second and third harmonic generation. (invited)

10:00 -

O. Sydoruk, V. Kalinin, E. Shamonina, L. Solymar - Parametric amplification of magnetoinductive waves under rotational resonance

10:15 -

J. Carbonell, G. Houzet, C. Croenne, E. Lheurette, V. Boria, D. Lippens - Non linear frequency and space selective metamaterials

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10:30

Coffee

20

11:00

Sessions 8

Focused session: Metasurfaces, metaboundaries and enhanced transmission (II):

Chairman: Gennady Shvets

11:00 -

P.-S. Kildal - Bandgaps and cloaks using soft and hard surfaces (invited)

11:30 -

T.A. Leskova, A.A. Maradudin, E.R. Mendez - Structured surfaces as optical metamaterials (invited)

12:00 -

F. Caminita, M. Nannetti, S. Maci - Holographic metasurfaces realized by curvilinear strip gratings (invited)

Focused session: Effective material parameters and role of disorder in metamaterials (II):

Chairmen: Harald Giessen, Keith Whites

11:00 -

C. Rockstuhl, T. Zentgraf, T.P. Meyrath, H. Giessen, T. Pertsch, F. Lederer - Metamaterials - from thin film to bulk

11:15 -

A.N. Lagarkov, V.N. Kisel - Near perfect absorption by the use of metamaterials (invited)

11:45 -

D.A. Powell, I.V. Shadrivov, S.K. Morrison, G.N. Milford, Y.S. Kivshar - Mechanical tuning and superlattice structures in metamaterials

12:00 -

D.S. Wiersma - The physics and applications of random lasers (invited)

Nonlinear metamaterials (II):

Chairmen: Mikhail Lapine, Allan Boardman

11:00 -

A.V. Zayats - Nonlinear plasmonic metamaterials (invited)

11:30 -

A.D. Boardman, N. King, Yu. Rapoport - Towards gain control and diffraction-managed solitons in metamaterials (invited)

12:00 -

M. Kauranen, B.K. Canfield, H. Hsu, J. Laukkanen, B. Bai, M. Kuittinen, J. Turunen - The role of local field asymmetry in second-harmonic generation from T-shaped gold nanodimers

12:15 -

J. Herrmann, A. Husakou - Highly nonlinear, bistable transmission of light through a metal-dielectric nanostructure

EBG and photonic crystals (II):

Chairmen: Dorota Anna Pawlak, Alessandro Toscano

11:00 -

F. Chiadini, V. Fiumara, I. Gallina, I.M. Pinto, A. Scaglione - Filtering properties of periodic and fractal 1-D EBG multilayers (invited)

11:30 -

L. Inclan-Sanchez, J.-L. Vazquez-Roy, E. Rajo-Iglesias - Characterization of new compact filter based on EBG resonators

11:45 -

S.A. Nikitov, S.E. Bankov - Magnetostatic bandgap structures based on periodic arrays of slots and strips

12:00 -

S. Hache, S.N. Burokur, F. Gadot, A. de Lustrac, P. Cailleu, G.-P. Piau - Controllable spherical radome in X band using electromagnetic band gap material

12:15 -

L.M. Lytvynenko, S.L. Prosvirnin - Wave reflection by a periodic layered metamaterial

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12:30

Lunch

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14:00

Posters (II)

Chairmen: Maria Kafesaki, Orest Vendik

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N.-H. Shen, M. Kang, T. Lan, J. Chen, H.-T. Wang - Giant LS near the critical angle in a quasi-waveguide structure with a metamaterial embedding

68

O. Zhuromskyy, E. Shamonina, L. Solymar - Dipole waves on nanoparticles and magnetoinductive waves on capacitively loaded loops: Driven solutions

69

C. Croenne, J.M. Lerat, M.N. Mallejac, O. Acher, D. Lippens - Retrieval technique by field summation: application to double negative media

70

I. Vendik, I. Kolmakova - Design of stepped-impedance resonators based on a combination of right handed and left handed transmission lines

71

I.V. Semchenko, S.A. Khakhomov, A.P. Balmakov - Electromagnetic model of DNA: observation of polarization selectivity of radiation

72

A.M. Lerer, M.I. Mazuritsky, V.V. Makhno, P.V. Makhno - Theoretical investigation of propagation and emission of CuK α radiation from planar X-ray waveguide's aperture

73

B. Sauviac, S. Nemer, B. Bayard, T. Rouiller - S-Spirals particles for metamaterials applications

74

A.-G. Kussow, A. Akyurtlu - Negative index of refraction metamaterial in the optical regime with randomly distributed nanoparticles

75

G. Ruvio, M.J. Ammann - Radial EBG mushroom-like structures for enhancing axial-ratio performance of CP antennas

76

G. Lubkowski, F. Hirtenfelder, R. Schuhmann, T. Weiland - 3D Full-wave field simulations of double negative metamaterial macrostructures

77

T. Rouiller, B. Sauviac, E. Verney, G. Noyel - Benefit of a magnetic wall on anisotropic ferrite components

78

B. Bandlow, R. Schuhmann - Analysis of higher order modes in the design of metamaterials by the use of periodic unit cells

79

T.V. Teperik, F.J.G. de Abajo - Spatial transfer of optical evanescent field by a photonic crystal slab: towards a remote biosensing device

80

A.G. Zhdanov, A.A. Fedyanin, A.V. Baryshev, A.B. Khanikaev, H. Uchida, M. Inoue - Two-dimensional plasmon-assisted magnetophotonic crystals

81

R. Sainidou, V. Teperik, F.J.G. de Abajo - Optical switching through nonlinearity of nanoparticle arrays

82

S.G. Moiseev, S.V. Sukhov - Optical transparency of composite medium with dissipative and active components

83

A.M. Lerer, D.E. Zelenchuk, V.V. Makhno, P.V. Makhno, I.A. Kazmin - Theoretical modeling of enhanced optical transmission through doubly periodic metallic nanostructures

84

C. Rockstuhl, T. Zentgraf, T.P. Meyrath, H. Giessen, T. Pertsch, F. Lederer - Nanoaperture based metamaterials

85

C. Rockstuhl, F. Lederer - Three-dimensional random photonic materials

86

F. Durbin, T. Lagutere, J. Russat, J.-M. Lerat - A variational approach to the determination of metamaterials model parameters

87

S.P. Boruhovich - Chirality measure model for two- and three-dimensional metamaterials

88

A.A. Onushchenko, V.V. Golubkov, V.P. Shepilov, A.A. Zhilin - Structural features of nano-scaled metamaterials containing PbS nanocrystals

89

K. Postava, M. Foldyna, R. Ossikovski, A. De Martino, S. Veremieiev, J. Pistora - Effective medium description of nanogratings with general anisotropy

90

S. Veremieiev, K. Postava, A. Timofieiev, J. Bouchala, J. Pistora - Optical properties of inhomogeneous materials consisting of superspherical particles

91

A. Kafaratzis, Z. Hu - Envelope solitons in nonlinear left handed transmission lines

92

A. Maidikovski, J. Yongseok, S. Magnitskiy, N. Nagorsky, A. Ejov, F. Sychev - Nonlinear optical microscopy of porous silicon layers

93

A. Jooß, H. Hohnle, H. Kumric, W. Kasperek, U. Stroth - Plasma as a medium in metamaterials

94

R.H. Tarkhanyan, D.G. Niarchos - Negative refraction of electromagnetic waves in birefringent periodic multilayered nanostructures

95

K. Aydin, E. Ozbay - Influence of disorders on transmission and reflection characteristics of microwave metamaterials

96

H. Kettunen, H. Wallen, A. Sihvola - Electric response of a small negative-permittivity hemisphere

97

R. Yusoff, K. Hingerl - Electromagnetic propagation of conducting polymer/Ag/dielectric-material interface

98

A.M. Lerer, V.V. Makhno, P.V. Makhno, A.A. Yachmenov - The investigation of metallic nanostructures using the method of approximate boundary conditions

99

A.B. Evlyukhin - Micro-optical devices for surface plasmon polaritons on the base of nanoparticle structures

100

R. Vlokh, O. Krupych, Yu. Vasyukiv, D. Adamenko, O.G. Vlokh - Small-angular polarimetric magneto-optical mapping and the problem of magnetogyration

101

G. Guida, J.J. Bonnefois, A. Priou - Effect of two photon absorption on Kerr nonlinear photonic band gap materials

102

Z. Li, E. Ozbay, H. Chen, J. Chen, F. Yang, H. Zheng - A compact and efficient antireflection structure designed for two-dimensional photonic crystals by an effective impedance method

103

P.J. Ferrer, J.M. Gonzalez-Arbesu, J. Romeu - Metamaterial slabs with double side PMC response

104

C.-Y. Wu, S.-H. Yeh, H.-H. Lin - High gain metamaterial antenna radome for 2.5-GHz band WiMAX operation

105

P. Colman, L. Santandrea, O. Ouchetto, S.Zouhdi - Parallel computing for metamaterials modelling

106

M.G. Banciu, N. Militaru, G. Lojewski - Compact planar microwave devices by using metamaterials

107

A.A. Radkovskaya, F. Hesmer, E. Tatartschuk, O. Zhuromskyy, M. Shamonin, T. Hao, C.J. Stevens, G. Faulkner, D.J. Edwards, E. Shamonina, L. Solymar - Electric and magnetic contributions to the near field coupling between resonators of the split ring type

108

A. Monorchio, S. Genovesi, E. Carrubba, G. Manara - Design of printed FSS for compact and bandwidth-enhanced metasurfaces

109

B. Kante, S.N. Burokur, A. Ourir, A. de Lustrac - Left-handed asymmetric monolayer metamaterial under normal-to-plane propagation

110

G. Brucoli, L. Martin-Moreno, S.I. Bozhevolnyi, F.J Garcia-Vidal, A.B. Evlyukhin - Surface plasmon polariton scattering by finite-sized nano-objects

111

A. Monorchio, E. Carrubba, G. Manara - Design of a metamaterial superstrate for enhancing directivity of low-profile antennas

112

B. Kante, S.N. Burokur, F. Gadot, A. de Lustrac - New design of double negative metamaterial for IR wavelengths

113

C. Kossiavas, J. Dubard - Optimization of an artificial magnetic conductor for the design of wide band ultra compact antennas

114

Y. Qin, R. Liu, Q. Cheng, W. Tang, T. Cui - Novel bandstop filtering waveguide based on complimentary split ring resonators

115

W. Abdouni, A.-C. Tarot, E. Akmansoy, S. David, A. Sharaiha - Miniaturized patch antenna on an artificial magnetic substrate

116

P.A. Belov, S. Tse, Y. Zhao, Y. Hao - Transmission of images into far-field-zone with subwavelength resolution

117

W. Khunsin, G. Kocher, S.G. Romanov, C.M. Sotomayor Torres - Noise effect: Crystalline ordering improvement in the fabrication of self-assemble photonic crystals

118

M. Bergmair, K. Hingerl - Band structure and coupled surface plasmons in onedimensional, frequency dependent photonic crystals

119

M.C. Martin, Z. Hao, B. Harteneck, A. Liddle, S. Cabrini, W. Padilla - Strong broadband near-IR resonances observed from nano-lithographically fabricated metallic metamaterials

120

P. Melezhib, A. Poyedinchuk, N. Yashina, G. Granet, S. Tretyakov - Resonance scattering of electromagnetic wave by the layer of metamaterial with periodic boundaries or with grating

121

K. Moon, M. Cho, J. Kim, S. Lee, S. Kim, I. Park, H. Han - Nearly flat impurity bands of photonic crystals with periodic vacancy defects

122

D.A. Pawlak, K. Kolodziejak, K. Rozniatowski, R. Diduszko, I. Vendik, K. Aydin, E. Ozbay - TiO₂-SrTiO₃ eutectic with ferroelectric phase - growth and characterization

123

D. Dubreuil, P. Coleman, M. Pate, J.-P. Ganne - Studies of metal-dielectric periodic structures in the diffraction regime: modelling and measurements

124

K. Kurihara, M. Ishii, T. Shioga, J. Baniecki, K. Yamanaka - Doping effects on the electric properties of (Ba,Sr)TiO₃ tunable thin film capacitors

125

V.N. Kisel - Antenna screen design based on the use of metafilms

126

O. Kuvandikov - Fractals in magnetic and meta materials

127

T. Sengor - Properties of a non-planar metamaterial elements: ring resonators on a spherical substrate

128

T.F. Gundogdu, N. Katsarakis, M. Kafesaki, G. Konstantinidis, A. Kostopoulos, E.N. Economou, C.M. Soukoulis - Left-handed behaviour in multilayer system of short-slab pairs and continuous wires at ~3 THz

129

K.B. Alici, F. Bilotti, E. Ozbay - Experimental demonstration of metamaterial loaded antennas

130

R. Qiang, J. Chen, F. Capolino, D. Jackson, D.R. Wilton - The ASM-FDTD method and its application to PBG structures, metamaterials, and plasmonic structures

131

M. Gorkunov, M. Osipov - Electrical tunability of wire medium immersed in liquid crystal

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15:00

Sessions 9

Focused session: Modelling, fabrication and characterisation techniques for plasmonics and metamaterials (I):

Chairman: Didier Lippens

15:00 -

W.J. Padilla, J.F. O'Hara, H.-T. Chen, J.M.O. Zide, A.C. Gossard, C. Highstrete, M. Lee, A.J. Taylor, R.D. Averitt - The emergence of metamaterial devices: applications at terahertz frequencies (invited)

15:30 -

R.W. Ziolkowski, A. Erentok, J.A. Gordon - Active metamaterials: Applications from broad bandwidth efficient electrically-small antennas to coated nano-particle lasers (invited)

16:00 -

M. Gil, J. Bonache, J. Garcia-Garcia, F. Martin - Composite right/left handed (CRLH) transmission lines based on complementary split rings resonators (CSRRs) and applications (invited)

Special session: Analysis and synthesis of metamaterials using numerical modeling (I):

Chairmen: Raj Mittra, Yang Hao

15:00 -

A. Rahman, Y. Hao, C.G. Parini - On the synthesis of CRLH-TL based leaky wave antennas (invited)

15:30 -

X. Radu , X. Dardenne, C. Craeye - Efficient analysis of the canalization effect obtained with a Fabry-Perot wire medium (invited)

16:00 -

C. Amabile, F. Costa, A. Monorchio, E. Prati - Analysis and design of coupled frequency selective surfaces as a novel kind of waveguide filter (invited)

High impedance surfaces and thin layers:

Chairmen: Vasundara Varadan, Alexei Vinogradov

15:00 -

A. Monorchio, F. Costa, G. Manara - Enhancing bandwidth of ultra-thin absorbers by using resistive high-impedance surfaces (invited)

15:30 -

D. Chicherin, S. Dudorov, D. Lioubtchenko, V. Ovchinnikov, A.V. Raisanen - Characterisation and measurements of a multilayer high-impedance surface at W-band

15:45 -

E. Verney, S. Kirouane T. Rouiller, F. Gambou - Study of the influence of a layer of metamaterial over the performances of a coplanar isolator

16:00 -

G. Gampala, A.B. Yakovlev - Artificial magnetic conductors realized by wideband frequency selective surface elements on a grounded dielectric slab

16:15 -

S.A. Maksimenko, P.P. Kuzhir, K.G. Batrakov, A.V. Gusinski, V.V.Ruhavets, D.S. Bychanok, O. Shenderova, V.L. Kuznetsov, S.I. Moseenkov, A. Mayer, R. Langlet, Ph. Lambin - Electromagnetic response of nanocarbon-based composites to microwaves

Magnetic materials:

Chairmen: Ricardo Marques, Elena Semouchkina

15:00 -

A.G. Schuchinsky, X. Yan - Effect of loss on spectra and properties of eigenwaves in imperfect metal films and magnetised semiconductor-dielectric structures (invited)

15:30 -

G. Donzelli, F. Capolino, A. Schuchinsky - Anisotropic metamaterial in planar technology: Phenomena, model, and particle resonances

15:45 -

S.A. Nikitov, Yu.A. Filimonov, I.V. Lisenkov, R.S. Popov, S.L. Vysotskii - Review on magnonic and phononic crystals

16:00 -

C. Mitsumata, S. Tomita - Numerical calculation for magnetic permeability of ferromagnetic nanocomposites

16:15 -

J. Manzanares-Martinez, J. Gaspar-Armenta - Direct integration of the constitutive relations for modeling dispersive metamaterials using the finite difference time-domain technique

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16:30

Coffee

24

17:00

Sessions 10

Focused session: Modelling, fabrication and characterisation techniques for plasmonics and metamaterials (II):

Chairman: Didier Lippens

17:00 -

O. Acher, J.-M. Lerat, N. Mallejac - The field summation method: an efficient route to determine epsilon and mu on metamaterials (invited)

17:30 -

M. Lapine, M. Gorkunov - Nonlinear phenomena in metamaterials: from theory to applications (invited)

18:00 -

A.B. Kozyrev, D.W. van der Weide - Prospects for left-handed nonlinear transmission line media (invited)

Special session: Analysis and synthesis of metamaterials using numerical modeling (II):

Chairmen: Raj Mittra, Yang Hao

17:00 -

E. Semouchkina, M. Lanagan, G. Semouchkin, R. Mittra - Field simulation based analysis and development of metamaterial structures (invited)

17:30 -

R. Mittra, L.-C. Ma, N. Farahat - A case for rigorous numerical simulation to model antenna/metamaterial composites (invited)

18:00 -

S.A. Maier - Design of plasmonic THz metamaterials (invited)

Modelling, extraction and measurements:

Chairman: Constantin Simovski

17:00 -

V.V. Varadan - Extraction of metamaterial properties from measured S-parameters – effects of measurement accuracy, assumed constitutive models, periodicity and randomness (invited)

17:30 -

F. Bongard, J. Perruisseau-Carrier, A.K. Skrivervik, J.R. Mosig - A review on metamaterial activities at LEMA-EPFL (invited)

18:00 -

H. Maune, M. Schußler, A. Penirschke, C. Damm, R. Jakoby - Left-handed transmission line for permittivity measurements

18:15 -

M. Odit, I. Vendik, O. Vendik - 3D isotropic metamaterial based on dielectric resonant spheres

Educational aspects of metamaterials:

Chairmen: Ekaterina Shamonina, Ekmel Ozbay

17:00 -

T.F. Krauss - Metamaterials and photonic crystals: Analogies and differences (invited)

17:30 -

V.G. Veselago - Negative refraction as a source of some educational problems

17:45 -

P. Alitalo, L. Jylha, A. Karttunen, O. Luukkonen, G. Molera, H. Rimminen, M. Vaaja, J. Venermo, V. Podlozny, A. Sihvola, S. Tretyakov, H. Wallen - Realization of an electromagnetic invisibility cloak by transmission-line networks

18:00 -

M. Asghar, I. Hakala, J. Jantunen, H. Kettunen, J. Qi, A. Varpula, K. Güven, I.V. Semchenko, S.A. Khakhomov, R. Gonzalo, E. Ozbay, V. Podlozny, A. Sihvola, S. Tretyakov, H. Wallen - Electromagnetic cloaking with a mixture of spiral inclusions

18:15 -

E.U. Arzikulov - On a method of teaching the principles of metamaterials in the educational sphere of the Republic of Uzbekistan

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18:30

Closing ceremony