

# EuCAP Best Paper Awardees

## EuCAP 2006

### Best Paper

*Distributed scattering in radio channels and its contribution to MIMO channel capacity*

A. Richter, J. Salmi and V. Koivunen

## EuCAP 2007

### Best Antenna Oral Paper

*Near-Singular and Near-Hypersingular Surface Integral Evaluation by an Adaptive Singularity Cancellation Technique*

Ismatullah and T. F. Eibert

### Best Antenna Poster Paper

*Frequency-Selective Wallpaper for Reducing Interference While Increasing MIMO Capacity in Indoor Environments*

J. Rodriguez, M. Gustafsson, F. Tufvesson, A. Karlsson and L. Juan-Llaser

### Best Antenna Student Paper

*A New Low-Profile Wide-Scan Phased Array for UWB Applications*

D. Tallini, A. Galli, M. Ciattaglia, L. Infante, A. De Luca and M. Cicolani

### Best Propagation Oral Paper

*Channel Capacity Evaluation of UMTS Multi-Antenna Systems in Indoor and Outdoor Environments*

A. Diallo, C. Luxey, P. Le Thuc, R. Staraj, G. Kossiavas, P. Suvikunnas, M. Mustonen, C. Icheln and P. Vainikainen

### Best Propagation Poster Paper

*Modelling Radiowave Propagation through Vegetation media: a comparison between RET and dRET models*

T. R. Fernandes, R. F. S. Caldeirinha, M. O. Al-Nuaimi and J. H. Richter

### Best Propagation Student Paper

*On the Influence of Incomplete Data Models on Estimated Angular Distributions in Channel Characterisation*

M. Landmann, W. Kotterman and R. S. Thoma

## **EuCAP 2009**

### **Best Antenna Oral Paper**

*Low cost, short lead-time feed chain components for multi-beam antennas*

P. Booth, M. Skeen and S. Stirland

### **Best Antenna Poster Paper**

*Complex conical beam expansion for the analysis of beam waveguides*

S. Skokic, M. Casaletti, S. Sorensen and S. Maci

### **Best Measurement Paper**

*Scaled radar cross section measurements with terahertz-spectroscopy up to 800 GHz*

C. Jansen, N. Krumbholz, R. Geise, A. Enders and M. Koch

### **Best Propagation Oral Paper**

*Millimeter-wave antenna noise temperature due to rain clouds: Theoretical model and statistical prediction*

F. S. Marzano and M. Montopoli

### **Best Propagation Poster Paper**

*Small-scale variations of cross-polar discrimination in polarized MIMO systems*

F. Quitin, C. Oestges, F. Horlin and P. De Doncker

## **EuCAP 2010**

### **Best Antenna Theory Paper**

*Trade-offs in multi-element receiving antennas with superconducting feed lines*

A. Iacono, T. J. Coenen, D. J. Bekers, A. Neto and G. Gerini

### **Best Antenna Design Paper**

*Distributed Antenna Tuning Unit Using a Frequency Reconfigurable PIXEL-Antenna*

A. Grau Besoli and F. De Flaviis

### **Best Antenna Measurement Paper**

*Optical Measurement of Millimeter-Wave Antenna for Imaging Concealed Cracks on Concrete Surface*

H. Togo, S. Mochizuki, S. Oka, I. Toyoda, N. Kukutsu and Y. Cadeau

### **Best Propagation Paper**

*An experiment and preliminary results for narrow-and wideband land mobile satellite propagation at K-band*

M. Schönhuber, F. Teschl, V. Hovinen, J. Kyröläinen, F. Pérez-Fontán and R. Prieto-Cerdeira

### **Best Student Paper**

*Active antenna oscillator systems in substrate integrated waveguide (SIW) technology*

F. Giuppi, A. Georgiadis, M. Bozzi, A. Collado and L. Perregrini

## **EuCAP 2011**

### **Best Antenna Theory Paper**

*Planar antennas based on surface-to-leaky wave transformation*

G. Minatti, M. Casaletti, F. Caminita, P. De Vita and S. Maci

### **Best Antenna Application Paper**

*A compact dual-polarized wideband patch antenna array for the unlicensed 60 GHz band*

F. Wollenschläger, R. Stephan, L. Xia, J. Muller, R. Muller, A.P.G. Ariza, R. S. Thoma and M. A. Hein

### **Best Antenna Measurement Paper**

*Microwave Non-Destructive evaluation of corrosion in reinforced concrete structures*

G. Roqueta, L. Jofre and M. Feng

### **Best Propagation Paper**

*K. Haneda, A. Khatun, V. Kolmonen and J. Salmi, "Dynamics of spatial degrees-of-freedom in MIMO mobile channels"*

S. Nanba, Y. Hirota and Y. Kishi

### **Best Student Paper**

*Single layer anisotropic impedance surface for linear to circular polarization conversion in Reflect mode*

E. Doumanis, G. Goussetis, J. Gómez-Tornero, R. Cahill and V. Fusco

## **EuCAP 2012**

### **Best Antenna Theory Paper**

*Efficiently illuminated broadside-directed 1D and 2D tapered Fabry-Perot leaky-wave antennas*

M. García-Vigueras, P. DeLara-Guarch, J. L. Gómez-Tornero, R. Guzmán-Quirós and G. Goussetis

### **Best Antenna Design Paper**

*Compact antenna for microsatellite using folded shorted patches and an integrated feeding network*

S. K. Podilchak, M. Caillet, Y. Antar and L. Chu

### **Best Antenna Measurement Paper**

*Motion compensation and efficient array design for TDMA FMCW MIMO radar systems*  
C. M. Schmid, R. Feger, C. Pfeffer and A. Stelzer

### **Best Propagation Paper**

*Directional channel characteristics in elevation and azimuth at an urban macrocell base station*  
J. Medbo, H. Asplund, J. Berg and N. Jalden

### **Best Student Paper**

*Experimental characterization of the RFID STENTag for passive vascular monitoring*  
C. Occhiuzzi and G. Marrocco

## **EuCAP 2013**

### **Best Antenna Theory Paper**

*Convex optimization for analysis of small antennas*  
M. Gustafsson

### **Best Antenna Design Paper**

*Bifocal Reflector antenna system for radar imaging at 300 GHz*  
A. García-Pino, B. Gonzalez-Valdes, B. Mencia-Oliva, J. G. de la Fuente, O. R. López and J. L. B. Sanmartín

### **Best Antenna Measurement Paper**

*Micromachined near-field millimeter-wave medical sensor for skin cancer diagnosis*  
F. Töpfer, S. Dudorov, D. Dancila, R. Augustine, X. Hu, A. Rydberg, L. Emtestam, L. Tenerz and J. Oberhammer

### **Best Propagation Paper**

*Dynamics of spatial degrees-of-freedom in MIMO mobile channels*  
K. Haneda, A. Khatun, V. Kolmonen and J. Salmi

### **Best Student Paper**

*Dielectric lens fed by coherent connected-slot array as wideband reflector feed*  
Ozan Yurduseven, D. Cavallo, A. Neto

## EuCAP 2014

### Best Antenna Theory Paper

*Closed-form expressions of local effective bianisotropic constitutive parameters for reciprocal metamaterials*

V. Sozio, A. Vallecchi, M. Albani and F. Capolino

### Best Antenna Application Paper

*On design of differentially driven on-chip antennas with harmonic filtering for silicon integrated mm-wave and THz N-push oscillators*

J. Grzyb, Y. Zhao, R. A. Hadi and U. Pfeiffer

### Best Antenna Measurement Paper

*Increased dynamic range for RFID EM-field measurements*

S. Capdevila, J. Romeu, L. Jofre and J. Bolomey

### Best Propagation Paper

*A Compressed Sensing-based imaging system*

Y. Álvarez-López, Y. Rodríguez-Vaqueiro, B. González-Valdés, J. Á. Martínez-Lorenzo, F. Las-Heras and C. M. Rappaport

### Best Student Paper

*Novel dual-band single circular polarization antenna feeding network for satellite communications*

C. A. Leal-Sevillano, J. A. Ruiz-Cruz, J. R. Montejo-Garai and J. M. Rebollar

## EuCAP 2015

### Best Electromagnetics and Antenna Theory Paper

*Intersymbol interference analysis of a 60 GHz-band compact range wireless access system*

M. Zhang, K. Araki, J. Hirokawa and M. Ando

### Best Antenna Design and Applications Paper

*Multistatic nearfield imaging radar for portal security systems using a high gain toroidal reflector antenna*

C. M. Rappaport and B. Gonzalez-Valdes

### Best Antenna Measurement Paper

*DTU-ESA millimeter-wave VALIDation STANDARD antenna (mm-VAST) - detailed design*

O. S. Kim, S. Pivnenko, O. Breinbjerg, R. Jørgensen, N. V. Larsen, K. Branner, P. Berring, C. M. Markussen and M. Paquay

### **Best Propagation Paper**

*Joint effects of clouds and rain on Ka-band earth observation data downlink systems*

L. Luini and C. Capsoni

### **Best Student Paper**

*Analysis of electrically large antennas using fast Physical Optics*

O. Borries, H. Viskum, P. Meincke, E. Jørgensen, P. C. Hansen and C. H. Schmidt

## **EuCAP 2016**

### **Best Electromagnetics and Antenna Theory Paper**

*Large Format Arrays of Antenna Coupled Kinetic Inductance Detectors for THz Astronomy*

J. Baselmans, J. Bueno, O. Yurduseven, N. Llombart, S. Yates, A. Baryshev, A. Endo, D. Thoen and A. Neto

### **Best Antenna Design and Applications Paper**

*Hematologic characterization and 3D imaging of red blood cells using a Compressive Nano-antenna and ML-FMA modeling*

H. Gómez-Sousa, Ó. Rubiños-López and J. Á. Martínez-Lorenzo

### **Best Antenna Measurement Paper**

*Accuracy evaluation for antenna measurements at mm-wave frequencies*

L. Boehm, F. Boegelsack, M. Hitzler, S. Wiehler and C. Waldschmidt

### **Best Propagation Paper**

*Modelling the impact of offshore wind farms on safety radars onboard Oil and Gas platforms*

L. Danoon, W. Al-Mashhadani and A. Brown

### **Best Student Paper**

*Systematic approach for electrically tuning N-port antenna system based on characteristic modes*

M. Bouezzeddine and W. L. Schroeder

## **EuCAP 2017**

### **Best Electromagnetics and Antenna Theory Paper**

*Analysis of Artificial Dielectrics Composed of Non-Aligned Layers*

D. Cavallo and C. Felita

### **Best Antenna Design and Applications Paper**

*Shared aperture metasurface antennas for multibeam patterns*

D. Gonzalez-Ovejero, G. Minatti, E. Martini, G. Chattopadhyay and S. Maci

### **Best Antenna Measurement Paper**

*Design and calibration of a double-directional 60 GHz channel sounder for multipath component tracking*

R. Sun, P. Papazian, J. Senic, Y. Lo, J.-K. Choi, K. A. Remley and C. Gentile

### **Best Propagation Paper**

*Investigations on fading scaling with bandwidth and directivity at 60 GHz*

D. Dupleich, N. Iqbal, C. Schneider, S. Haefner, R. Müller, S. Skoblikov, J. Luo and R. S. Thomä

### **Best Student Paper (ex equo)**

*Wireless Monitoring of Breath by Means of a Graphene Oxide-based Radiofrequency Identification Wearable Sensor*

M. C. Caccami, M. Y. S. Mulla, C. Di Natale and G. Marrocco

*Multi-frequency power angular spectrum comparison for an indoor environment*

U. T. Virk, S. L. H. Nguyen and K. Haneda

## **EuCAP 2018**

### **Best Electromagnetic and Antenna Theory Paper**

*Design criteria of X-wave launchers for millimeter-wave applications*

W. Fuscaldo, D. Comite, A. Galli, S. Concetto Pavone, M. Albani and G. Valerio

### **Best Antenna Design and Applications Paper**

*Millimetre-wave FMCW MIMO radar system development using broadband SIW antennas*

C. Alistarh, P. H. Re, T. Ströeber, S. Rotenberg, S. K. Podilchak, C. Mateo-Segura, Y. Pailhas, G. Goussetis, Y. Petillot, J. Thompson and J. Lee

### **Best Antenna Measurement Paper**

*3.5-THz Quantum-Cascade Laser Emission from Dual Diagonal Feedhorns*

B. Ellison, O. Auriacombe, T. Rawlings, N. Brewster, M. Oldfield, L. Li, E. Saenz, A. Valavanis, Y. Han, E. Linfield and A. Davies

### **Best Propagation Paper**

*Measurements and model for the satellite-to-aircraft channel in L-band*

T. Jost, W. Wang, M. Schwinzerl, F. Perez-Fontan, M. Schonhuber and N. Floury

### **Best Student Paper**

*Accurate determination of radiation patterns from near-field measurements in highly reflective environments*

J. Knapp and T. F. Eibert

## EuCAP 2019

### Best Antenna Theory Paper

*Analysis of Curved Metasurfaces with Spatially-Varying Impedance Distribution*

Z. Sipus, D. Barbaric and M. Bosiljevac

### Best Antenna Design Paper

*Electronically-Steerable Transmitarray Antennas for Ka-Band*

A. Clemente, L. D. Palma, F. Diaby, L. Dussopt, K. Pham and R. Sauleau

### Best Measurement Paper

*Monostatic RCS Prediction from Irregularly Distributed Near-Field Samples Using Plane-Wave Field Synthesis*

O. Neitz and T. F. Eibert

### Best Propagation Paper

*Investigation on Stationarity of V2V Channels in a Highway Scenario*

D. Czaniera, M. Käske, G. Sommerkorn, C. Schneider, R. S. Thomä, G. Del Galdo and M. Boban

### Best Student Paper

*Full-Wave Synthesis of Modulated Metasurface Antennas*

M. Bodehou, C. Craeye, E. Martini and I. Huynen

## EuCAP 2020

### Best Electromagnetics Paper

*Elliptical Glide-Symmetric Holey Metasurfaces for Wideband Anisotropy*

A. Alex-Amor, F. Ghasemifard, G. Valerio, P. Padilla, J. M. Fernandez-Gonzalez and O. Quevedo-Teruel

### Best Antennas Paper

*A Compact Mass-producible E-band Bandpass Filter Based on Multi-layer Waveguide Technology*

A. Vosoogh, A. AlgabaBrazalez, Y. Li and Z. Simon He

### Best Measurement Paper

*Suppressing Undesired Echoes by Sparsity Based Time Gating of Reconstructed Sources*

J. Knapp, J. Kornprobst, T.F. Eibert

### Best Propagation Paper

*The MEKaP Project: Measuring Tropospheric Impairments at Ka Bandwidth MEO Satellites*

L. Luini, C. Riva, A. Panzeri, A. Rocha, S. Mota, F. Marzano, A. Marziani, M. Biscarini, F. Consalvi, V. Schena and A. Martellucci

## **Best Student Paper**

*Metal Stamped Antenna-in-Package for Millimeter-wave Large-scale Phased-array Applications Using Multiphysics Analysis*

J. Park and W. Hong

## **EuCAP 2021**

### **Best Electromagnetics Paper**

*Reflecting Luneburg Lens: Analytical Solution and Applications*

J. Ruiz-García, E. Martini, C. Della Giovampaola, D. González-Ovejero and S. Maci

### **Best Antennas Paper**

*Low-Profile CTS Array in PCB Technology for K/Ka-Band Applications*

M. Del Mastro, A. Mahmoud, T. Potelon, R. Sauleau, G. Quagliaro and M. Ettorre

### **Best Measurement Paper**

*Preliminary Assesment of Millimeter Wave Plane Wave Generator for 5G Device Testing*

F. Scattoni, D. Sekuljica, A. Giacomini, F. Saccardi, A. Scannavini, E. Kaverine, S. Anwar, N. Gross, P. Iversen and L. J. Foged

### **Best Propagation Paper**

*Bayesian Approaches to Multipath-Enhanced Device-Free Localization*

M. Schmidhammer, B. Siebler, C. Gentner, S. Sand, and U.-C. Fiebig

### **Best Student Paper**

*The Interpath Relation for Spatially-Discrete Traveling-Wave Modulated Structures*

C. Scarborough and A. Grbic