

2020 IEEE Space Hardware and Radio Conference (SHaRC 2020)

**San Antonio, Texas, USA
26-29 January 2020**



**IEEE Catalog Number: CFP20T64-POD
ISBN: 978-1-7281-3353-9**

**Copyright © 2020 by the Institute of Electrical and Electronics Engineers, Inc.
All Rights Reserved**

Copyright and Reprint Permissions: Abstracting is permitted with credit to the source. Libraries are permitted to photocopy beyond the limit of U.S. copyright law for private use of patrons those articles in this volume that carry a code at the bottom of the first page, provided the per-copy fee indicated in the code is paid through Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923.

For other copying, reprint or republication permission, write to IEEE Copyrights Manager, IEEE Service Center, 445 Hoes Lane, Piscataway, NJ 08854. All rights reserved.

****** This is a print representation of what appears in the IEEE Digital Library. Some format issues inherent in the e-media version may also appear in this print version.***

IEEE Catalog Number:	CFP20T64-POD
ISBN (Print-On-Demand):	978-1-7281-3353-9
ISBN (Online):	978-1-7281-3352-2

Additional Copies of This Publication Are Available From:

Curran Associates, Inc
57 Morehouse Lane
Red Hook, NY 12571 USA
Phone: (845) 758-0400
Fax: (845) 758-2633
E-mail: curran@proceedings.com
Web: www.proceedings.com

CURRAN ASSOCIATES INC.
proceedings
.com

TABLE OF CONTENTS

Session We1C: Space Applications

We1C-1

Wireless Camera Network Demonstration for Launcher Applications Based on IR-UWB 1

André Lübken, Martin Drobczyk, Janis Sebastian Häseker

We1C-2

A Low-Cost Nanosatellite Approach: AISat-1 After 5 Years in Orbit 5

Martin Drobczyk, Michael Jetzschmann, Falk Nohka

We1C-3

Design of a Low SWaP Dual-Band Radiometer for UAS Remote Sensing Application..... 9

Carlos R. Wah-González, Rafael A. Rodríguez-Solís

Session We2C: Hardware and Electronics for Space

We2C-1

Design of a Fully-Integrated Telemetry and Telecommand Unit for CCSDS Spacecraft Communication on a Generic Software-Defined Radio Platform 13

J. Budroweit, T. Gärtner, F. Greif

We2C-2

Towards a CubeSat Mission for a Wideband Data Transmission in E-Band 16

Benjamin Schoch, Sébastien Chartier, Ulrich Mohr, Markus Koller, Sabine Klinkner, Ingmar Kallfass

We2C-3

Tile Arrays for Space Based Solar Power Satellites..... 20

Charles M. Jackson