

My Biography

Personal Data

Name: **Hendra Kesuma**
E-Mail: kesuma@young-dynamics.com
Website: www.young-dynamics.com
LinkedIn: <https://www.linkedin.com/in/hendra-kesuma-b800a253/>
Research Gate: <https://www.researchgate.net/profile/Hendra-Kesuma>
My Future: www.green-space-technologies.com
Nationality: German



Education

03/2014 – 02/2018 **Doktor der Ingenieurwissenschaften (Dr.-Ing.)**
<https://media.suub.uni-bremen.de/handle/elib/1392>
Institute of Electrodynamics and Microelectronics University of Bremen in cooperation with **Airbus Defence and Space GmbH**

10/2005 – 08/2012 **Diplom Ingenieur (Dpl.-Ing.)**
Institute of Electrodynamics and Microelectronics
Institute for Microsensors, -Actuators and -Systems
University of Bremen

06/1993 – 07/1996 **Technical High School in Sumatera**



Younger -> Mango Farmer
 - No money but have peace



Young -> McDonald 
 - More money and have less peace

Older -> Cleaning Toilet
 - No money and no peace



Old -> Farmer
 - No money but have peace



In the future



Employment history

03/2021 – today Young & Dynamics	Philanthropist
11/2021 – 02/2024 Aptiv	Engineering Project Leader <i>On various OEM autonomous driving projects (BMW/Mercedes)</i>
05/2021 – 10/2021 TÜV Rheinland LGA Products GmbH	Senior Expert and Project Manager (IoT & Wireless) <i>On wireless IoT related projects (Bosch/ESP)</i>
07/2019 – 04/2021 AES Aircraft Elektro/ Elektronik System GmbH	Research and Development Manager <i>On aircraft and IoT related projects (Airbus/Boeing)</i>
04/2017 – 06/2019 Airbus DS GmbH	Real Time Software/Hardware Developer: <i>On space related projects (DLR/ESA/Airbus defence and Space)</i>
08/2014 – 02/2017 Uni Bremen Campus GmbH	Hardware/Software Developer for Ariane 5 Launcher <i>On space related projects (DLR/ESA/Airbus defence and Space)</i>
03/2013 – 07/2014 University of Bremen	Research Associates on Mixed Signal SoC and Wireless Sensor Network. Supporting Lectures and Labs at Institute of Electrodynamics and Microelectronics (ITEM) in department of Communication Electronics.
01/2013 – 02/2013 Astrium GmbH Bremen	Student Assistance <i>On Program to Enhance Upper Stage Performance and identification of commercial components for launcher application (PREPARE)</i>
10/2012 – 12/2012 Astrium GmbH Bremen	Student Assistance <i>On Program to Enhance Upper Stage Performance and identification of commercial components for launcher application. (PREPARE)</i>
02/2012 – 08/2012 Astrium GmbH Bremen	Student Assistance <i>On Program to Enhance Upper Stage Performance and identification of commercial components for launcher application. (PREPARE)</i>
09/2011 – 12/2011 Astrium GmbH Bremen	Internship <i>On Thermoelectric Generator Study for Ariane Launchers.</i>
09/2011 – 12/2011 University of Bremen	Student Assistance <i>On Thermoelectric Generator Development at Institute for Microsensors, - Actuators and -Systems (IMSAS)</i>
before – 08/2011	Various student jobs: At McDonalds, Weser Stadium, Cleaning Service, etc.

Involvement in several projects

09/2023 – 02/2024 Aptiv	Mercedes Benz Project: Development of Multi Domain Computer for advanced driver-assistance system (ADAS)
11/2021 – 04/2022 Aptiv	BMW Project: Development of 60kph Domain Computer for advanced driver-assistance system (ADAS)
06/2022 – 12/2022 Aptiv	Mercedes Benz Project: Development of Driver Monitoring System for advanced driver-assistance system (ADAS)
11/2021 – 04/2022 Aptiv	BMW Project: Development of Multi Domain Computer for advanced driver-assistance system (ADAS)
07/2019 – 04/2021 AES Aircraft Elektro/ Elektronik System GmbH	Airbus Aircraft Project: Thermo harvester and power management on Component Health and Usage Monitoring Systems (CHUMS) Water as energy storage for aircraft landing gears
07/2019 – 04/2021 AES Aircraft Elektro/ Elektronik System GmbH	Airbus Aircraft Project: Beyond 5G for aircraft cabin communication system and entertainment
08/2017 – 06/2019 Airbus DS GmbH	ESA - Project: COMRADES (Control and Management of Robotics Active Debris Removal), a future satellite that removes space debris
08/2017 – 12/2018 Airbus DS GmbH	Airbus Defence and Space - Project: Space Tug, a satellite-servicing vehicle capable of refuelling, repairing, and monitoring the health of spacecraft orbiting Earth
06/2018 – 09/2018 Airbus DS GmbH	ESA - Project: Atomic Clock Ensemble in Space (ACES) is a project led by the European Space Agency which will place ultra-stable atomic clocks on the International Space Station.
04/2017 – 12/2018 Airbus DS GmbH	Airbus Defence and Space - DLR: SPINAS/OBC-SA, developing an architectural framework for future on-board computer systems to enable the modular integration of systems with different performance and functional characteristics into the IT infrastructure of a spacecraft.
08/2017 – 12/2017 Airbus DS GmbH	NASA - ESA - Cooperation: Core Flight System (cFS), a platform and project independent reusable software framework and set of reusable software applications for deep space application.
04/2017 – 06/2017 Airbus DS GmbH	DLR - Project: CIMON (Crew Interactive Mobile Companion), an autonomic aid system that supports German Astronaut Alexander Gerst's daily activities in International Space Station
08/2014 – 06/2016 Uni Bremen Campus GmbH	DLR - Project: Low Power Architecture (LPA). Task: Design/Test wireless transceiver chips for space applications.
08/2014 – 12/2016 Uni Bremen Campus GmbH	ESA - Project: Future Launcher Preparatory Programme (FLPP3 Design/Build/Test Infrared Wireless Sensor Network for Ariane 5 VEB.
02/2012 – 02/2013 Astrium GmbH	ESA - Project: Program to Enhance Upper Stage Performance and Reliability for Future Expendable Launchers (PREPARE). identification of commercial components for launcher application.

Skills:Basic PC Knowledge

- Basic operating system
 - **Windows 7/10**
 - **Linux Ubuntu 20.04.1**
 - **CentOS 7**
 - **Android 10**
- Basic documents software
 - **Word**
 - **Excel**
 - **Power Point**
- Basic image processing tool
 - The **GIMP 2.10.22**

Embedded System Knowledge

Used for various aerospace/aircraft projects

- Embedded System OS which ran on radiation hardened **GR740 SPARC V8 SoC** Processor and **Xilinx Virtex 5 FPGA**
 - **RTEMS 5.0** (open source OS)
 - **PikeOS hypervisor 4.2.3** (commercial OS)
- Embedded System FPGAs
 - **Xilinx Virtex 5 FPGA**
 - **Xilinx ARM/FPGA-SoC XC7Z010**
 - **Xilinx Spartan 3-E**
- Embedded System Controllers
 - **ATSAMD21G18, 32-Bit ARM Cortex M0+** (Arduino Zero)
 - **ARMv8 (64 Bit)** (Raspberry Pi)
 - **MSP430, 16-Bit TI® RISC**
 - **ATmega328, 8-Bit AVR® enhanced RISC** (Arduino Uno/nano)
- Embedded System for Wireless Communication and IoT
 - **3.5GHz - 6.5GHz UWB DWM1000** (Decawave IEEE 802.15.4a standard)
 - **2.4GHz Bluetooth HC 06**(IEEE 802.15.1 standard)
 - **2.4GHz nRF24L01+** (Nordic semiconductor)
 - **2.4GHz CC2500** (Chipcon EN 300328 and EN 300 440 class 2 (Europe), FCC CFR47 Part 15 (US), and ARIB STD-T66 (Japan))
 - **ESP8266** (Ai-Thinker IEEE 802.11 b/g/n Wi-Fi)

• Embedded System IDE

- **Xilinx ISE 13.4 windows 10**(Xilinx Virtex 5)
- **Xilinx Vivado Version 2014.4** (Xilinx XC7Z010)
- **Arduino IDE 1.8.13**(ATMEGA328, ATSAMD21G18)
- **TI Code Composer Studio IDE v7.x**(TI MSP430)
- **ModelSim SE-6410.5**(VHDL simulation and verification)

Application-Specific Integrated circuit

ASIC Design Knowledge

Used for various analog mixed signal chip design for medical/aerospace projects

- Cadence IC-Design / Analog Design-Environment
 - **Virtuoso Analog Design Environment XL,GXL**(create new Library, new Schematic Cell View, create Instance, launch the ADE XL, add Test, Generate Layout from a Schematic, add Substrate Contacts, DRC, LVS)
 - **AMS HIT-Kit v4.00** (create the Corner Definition, perform global optimization)
 - **Tape Out**
 - **Bond Pad**
- Cadence IC-Design / Digital SoC Environment
 - **EDI 14.2 Digital Implementation System XL** (place and route)
 - **SimVision15.2** (add verilog netlist, create verilog testbench modul, simulate mixed signal)

Communication BUS Systems

- Network Bus System
 - **MILBUS1553b** (MIL-STD-1553)
 - **SpaceWire** (ECSS-E-ST-50-12C)
 - **CANBus** (CAN 2.0)
 - **Time Triggered Ethernet** (IEEE 802.3)
- Network Analyzing Tool
 - **Wireshark 3.2.7**

Programming Knowledge

Basic Programming Language

- **C** (ISO/IEC 9899:2011)
- Object Oriented Language
 - **C++** (ISO/IEC 14882:2017)
 - **Python 3.0**
- Hardware Description Language
 - **VHDL** (IEEE 1076-2019)
- Script Language
 - **PHP 7**
 - **MySQL 3.1**
 - **JavaScript 1.8.5**
 - **MATLAB R2016b**

Project Management Tools

- **SCRUM** with **Jira Server 8.2.5**
- **Microsoft Project 2016**
- **Redmine 4.0.8**
- **Freedcamp 3.2**
- **SAP ERP 6.0 Project System**

Requirements Management Tool

- **IBM® Rational® DOORS® 6.1**

Software Modeling Tool

- **UMLet14.3** with Eclipse Plugin
- **Matlab Model Based Design (HDL-Coder)**

Software Development Environments

- **Eclipse Mars 4.3**
- **Visual Studio 2017**

Bug Tracking Tool

- **Mantis 2.24.2**

PCB Development Tool

- **Eagle 6.6**

Laboratory Virtual Instrument Engineering Workbench

- **LabVIEW 2016**

Multi -Physic Simulation Tool

- **COMSOL Multiphysics® 5.0.1**

3D-Development Tools

- **Animation Tool**
 - **Blender 2.80**
- **3D-Printer Object Preparation Tool**
 - **Cura 4.0**

System Engineering Knowledge according IEEE 1220 that performs

- **Requirements Analysis (DOORS/Polarion)**
- **System Analysis and Control**
- **Functional Analysis and Allocation**
- **Fault Tree Analysis**

Software Engineering/Architect Knowledge

- **Functional Requirement Analysis**
 - **Algorithmic Decomposition**
 - **Pattern- & Object-Oriented Decomposition**
- **Code Coverage Analysis**
- **Verification and Validation Plan**

Several Project Management Skills

- **SCRUM** agile framework with **Jira**
- **Lean Method** with **Kanban**
- **Project Documentation (Confluence)**
- **Demand Planning & Allocation (PlanView)**

System Engineering Standardization

- **IEEE 1220** for System Engineering and life cycle of systems

Language skills

- **English** Average
- **German** Average

European Cooperation for Space Standardization ECSS

- **ECSS-Q-ST-30-11C** for Derating – EEE components
- **ECSS-Q-ST-30-02C** for Failure modes, effects and criticality analysis (FMECA)
- **ECSS-Q-ST-70C** for Materials, mechanical parts and processes
- **ECSS-E-ST-10-04C** for Space Environment
- **ECSS-Q-ST-60C Rev. 1** for Electrical, Electronic and Electromechanical (EEE)
- **ECSS-Q-30-01A** for Worst case circuit performance
- **ECSS-E-10-03A** for Testing
- **ECSS-Q-ST-60-15C** for Radiation Hardness Assurance – EEE components
- **ECSS-E-ST-10-02C** for Verification

Aviation Standardization

- **RTCA DO-160G/EUROCAE ED-14G** for Aircraft Environmental Conditions and Test Procedures
- **IEC 61508 Functional Safety** for Electrical/Electronic/Programmable Electronic Safety-related Systems (E/E/PE, or E/E/PES)

EN Radio Standardization

- **EN 300 328** for 2,4 GHz BT WLAN
- **EN 301 893** for 5 GHz WLAN
- **EN 302 502** for 5,8 GHz WLAN
- **EN 301 511** for GSM
- **EN 301 908-1&2** for 3G
- **EN 301 908-1&13** for 4G
- **EN 300 330** for NFC
- **EN 303 413** for GPS

EN EMC Standardization

- **EN 301 489-1**
- **EN 301 489-17** for 2,4 & 5 GHz
- **EN 301 489-52** for Cellular
- **EN 301 489-3** for SRD & WLAN 5,8 GHz

IEC Health Safety Standardization

- **IEC 62209-1**

EN Electrical Safety Standardization

- **EN 62368**

EN Electrical Medical Safety Standardization

- **IEC 60601**

System, Software, and Hardware Verification Standardization

- **IEEE 1012** for Software verification and validation (V&V)

Automotive Standardization


- **ISO 26262-10 (Road vehicles — Functional safety)**

1. As R&D Manager at AES GmbH



A visit by Vice President of MT Aerospace AG Mr. R Schneider

2. As Senior Expert and Project Manager at TÜV Rheinland




Hendra Kesuma ▾

Europe/Berlin
Local time: Friday, 10:53:48 AM

[Edit Profile Picture](#)

My Public Profile

Personal Information		Contact Information 	
Academic Title	Dr.	Email	hendra.kesuma@de.tuv.com
Salutation	Mr	Cell Phone	+4917670604240
First Name/ Given Name	Hendra	Business Phone	+49 9116553881
Middle Name	-	Room Number	C068
Prefix	-		
Last Name	Kesuma		



Onboarding Plan for New Employees

General Information

Employee name:	Dr Hendra Kesuma
Company:	TRLP
Personnel number, Cost Center:	273859
Entry date:	03.05.2021
Position:	Project Manager- Wireless

*Definition of Buddy: The task is to familiarize new employees with internal structures and processes at TÜV Rheinland during colleagues. It should be a hierarchically equal employee, who has been working at the company for a longer period of time.



My office at TÜV Rheinland LGA Products GmbH

ANSTELLUNGSVERTRAG

Zwischen der TÜV Rheinland LGA Products GmbH, Tillystraße 2, 90431 Nürnberg
- nachfolgend Gesellschaft genannt -

und

Herrn Dr. Hendra Kesuma, wohnhaft in 28277 Bremen, Auf dem Beginenlande 90,

wird folgender Anstellungsvertrag geschlossen:

1. Tätigkeit

Mit Wirkung vom 01.05.2021 treten Sie als Senior Sachverständiger in die Dienste der Gesellschaft, Dienort Nürnberg, ein.



Information zur Funktionsbewertung

Sehr geehrter Herr Dr. Kesuma,

im Zuge des Up-Grade Projektes wurde Ihre Funktion wie folgt bewertet:

„Experten-Laufbahn“ im Grade „9“

Informationsmaterialien zu Up-Grade finden Sie auf der Blueeye Seite ‚Global Compensation, Benefits & Assignment Management‘ im Bereich Kollegen & Personal.

Bei Fragen zum Projekt und zu dem Ergebnis der Funktionsbewertung stehen Ihnen Herr Fredrick (Head of Corporate Compensation & Benefits) und Ihr zuständiger Personalverantwortlicher gerne zur Verfügung, auch per E-Mail: Up-Grade@de.tuv.com.

Mit freundlichen Grüßen

i.V. Maximilian Fredrick
Compensation & Benefits

TÜV Rheinland Service GmbH

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D-51105 Köln

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Web www.tuv.com

Geschäftsführung:
Dr.-Ing. Michael Föbi
Vincent Furnari
Ruth Werhahn
AG Köln HRB 30377

3. As Engineering Project Leader At Aptiv

Developing Autonomous Driving System and Highly Safety System for German Car Industries (BMW, Mercedes Benz)



Testing the system on BMW Campus Munich



Germany is first to recognize level 3 automated driving

It was the first time Germany has allowed Level 3 control. The background is the "twist phenomenon" of two treaties, the Geneva Convention and the Vienna Convention, which are global agreements on the Road Traffic Act.

In Germany, in order to take the initiative on automated driving ahead of Japan and the United States, the German domestic law was revised using the Vienna treaty as a reference allowing them to realizing the image as an advanced country for automated driving.

The United States had been driving the law regulations and technical aspects of automated driving so far. It is unknown if this will continue in the future as they try to catch up to Germany.



Dr. Sebastian Osswald • 2nd
Manager | Digital Product Strategy Autonomous Driving @...

+ Follow ...

#BMW received the #Level3 approval for autonomous driving in Germany from the Federal Motor Transport Authority!!

Going to check your phone? Enjoy entertainment? Read the news? All of it will be possible starting with our 7 series. Neither the driver's active involvement nor undivided attention is necessary while driving up to 60km/h ... for now..



Career Summary

Major Professional Achievements of the latest engineering projects	<ol style="list-style-type: none"> 1. Leading to pass Successfully IATF 16949 Audit 2. Leading to pass Successfully Advanced Safety & User Experience Audit on BMW L3 Commuting Pilot 60 kph project (Automotive SPICE) 3. Leading to pass Successfully Advanced Safety & User Experience Audit on Mercedes Benz AG MPIC project (Automotive SPICE)
Motivation for Career Move	Looking for new challenges at advance projects
Management/Leadership Style	Hands on
Industry Experience	<ol style="list-style-type: none"> 1. Engineering Project Leader (APTIV) 2. Senior Expert and Project Manager (TÜV Rheinland) 3. Research and Development Manager at AES Aircraft GmbH
Previous Employers	TÜV Rheinland, AES Aircraft GmbH, Airbus Defence & Space
Education	PhD in Electrical Engineering

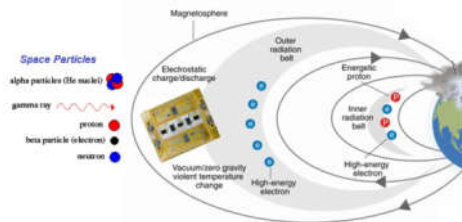
Mobility

Organisation	Founder of Young & Dynamics Germany http://www.young-dynamics.com/
Current Home City	Bremen
Current Work City	Munich

List of Patents:

1. Active space radiation protection method:

<https://patents.google.com/patent/DE102017123398B3/en>



2. Satellite communication and energy transfer method:

<https://patents.google.com/patent/DE102012018616A1/en>



3. Wireless energy transfer method on Ariane launcher:

<https://patents.google.com/patent/DE102012021585A1/ar>



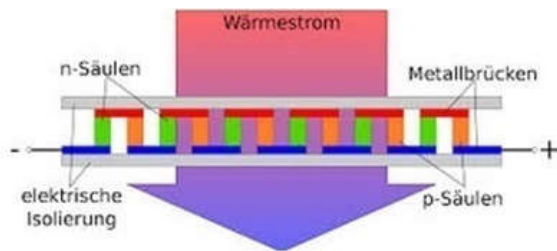
4. Wireless measurement method on cryogenic tank:

<https://patents.google.com/patent/DE102014003341A1/de>



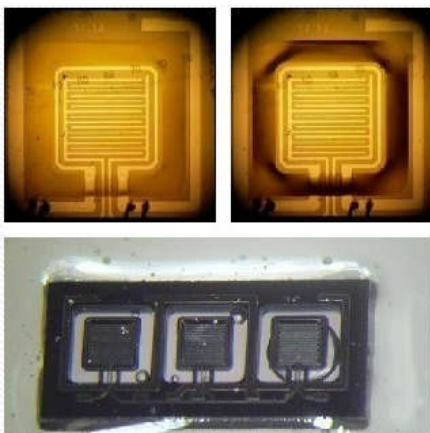
5. Energy harvesting method:

<https://patents.google.com/patent/US9406859>



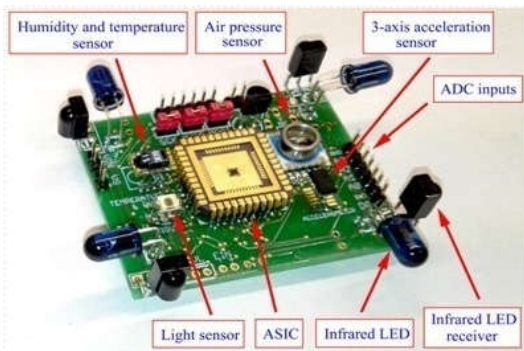
6. Thin film thermoelectric generator:

<https://patents.google.com/patent/DE102012022864A1/en>



7. Low-Power-Sensor node Architecture (Microchip)

<https://patents.google.com/patent/DE102013000803A1/de>



8. Wireless sensor network on Ariane launcher:

<https://patents.google.com/patent/EP3154241A1/de>



List of my patents at Germany patent office:

<https://depatisnet.dpma.de/DepatisNet/depatisnet?action=einsteiger&switchToLang=en>

No.	Selection	Publication number	Inventor	Applicant/Owner	Title	1st page	Entire document	Searchable text
1	<input type="checkbox"/>	DE102017123398B3	Kesuma, Hendra , 28199, Bremen, DE; Sebald, Johannes, 28199, Bremen, DE	Airbus Defence and Space GmbH, 82024, Taufkirchen, DE	[DE] Aktiver Schutz vor Strahlung			
2	<input type="checkbox"/>	DE102017123397B3	Kesuma, Hendra , 28199, Bremen, DE; Sebald, Johannes, 28199, Bremen, DE	Airbus Defence and Space GmbH, 82024, Taufkirchen, DE	[DE] Passiver Schutz vor Strahlung			
3	<input type="checkbox"/>	DE102015116859A1	Kesuma, Hendra , 28277, Bremen, DE; Sebald, Johannes, 27721, Ritterhude, DE	Airbus DS GmbH, 82024, Taufkirchen, DE	[DE] Sensornetzwerk mit heterogener Sendempfangsarchitektur			
4	<input type="checkbox"/>	DE102014003342B4	Kesuma, Hendra , 28277, Bremen, DE; Sebald, Johannes, 27721, Ritterhude, DE	Astrium GmbH, 82024, Taufkirchen, DE	[DE] Kryogener Treibstofftank mit einem Messmodul			
5	<input type="checkbox"/>	DE102014003342A1	Kesuma, Hendra , 28277, Bremen, DE; Sebald, Johannes, 27721, Ritterhude, DE	Astrium GmbH, 82024, Taufkirchen, DE	[DE] Kryogener Treibstofftank mit einem Messmodul			
6	<input type="checkbox"/>	DE102014003341B4	Kesuma, Hendra , 28277, Bremen, DE; Sebald, Johannes, 27721, Ritterhude, DE	Astrium GmbH, 82024, Taufkirchen, DE	[DE] Treibstofftank			
7	<input type="checkbox"/>	DE102014003341A1	Kesuma, Hendra , 28277, Bremen, DE; Sebald, Johannes, 27721, Ritterhude, DE	Astrium GmbH, 82024, Taufkirchen, DE	[DE] Treibstofftank			
8	<input type="checkbox"/>	DE102013000803A1	Kesuma, Hendra , 28277, Bremen, DE; Sebald, Johannes, 27721, Ritterhude, DE	Astrium GmbH, 82024, Taufkirchen, DE	[DE] Sensorknoten			
9	<input type="checkbox"/>	DE102012022864A1	Kesuma, Hendra , 28277, Bremen, DE; Sebald, Johannes, 27721, Ritterhude, DE	Astrium GmbH, 82024, Taufkirchen, DE	[DE] Thermoelektrischer Dünnschicht-Generator			
10	<input type="checkbox"/>	DE102012022863A1	Kesuma, Hendra , 28277, Bremen, DE; Sebald, Johannes, 27721, Ritterhude, DE	Astrium GmbH, 82024, Taufkirchen, DE	[DE] Verfahren zur Umwandlung von Wärme in elektrische Energie			
11	<input type="checkbox"/>	DE102012021585A1	Kesuma, Hendra , 28277, Bremen, DE; Sebald, Johannes, 27721, Ritterhude, DE	Astrium GmbH, 82024, Taufkirchen, DE	[DE] Verfahren zur drahtlosen Energieübertragung in geschlossenen Räumen			
12	<input type="checkbox"/>	DE102012018616A1	Kesuma, Hendra , 28277, Bremen, DE; Sebald, Johannes, 27721, Ritterhude, DE	Astrium GmbH, 82024, Taufkirchen, DE	[DE] Verfahren zur Energie- und Informationsübertragung [EN] Method for transferring energy and information from transmission to receiver modules, has detectors to receive laser ...			
13	<input type="checkbox"/>	EP000003668105A1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ARIANEGROUP GMBH, DE	[DE] SYNCHRONISATION IN EINEM SENSORNETZWERK [EN] SYNCHRONISATION IN A SENSOR NETWORK [FR] SYNCHRONISATION DANS UN RÉSEAU DE CAPTEURS			
14	<input type="checkbox"/>	EP000003467844B1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	AIRBUS DEFENCE & SPACE GMBH, DE	[DE] PASSIVER SCHUTZ VOR STRAHLUNG [EN] PASSIVE PROTECTION AGAINST RADIATION [FR] PROTECTION PASSIVE CONTRE LES RAYONNEMENTS			
15	<input type="checkbox"/>	EP000003467844A1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	AIRBUS DEFENCE & SPACE GMBH, DE	[DE] PASSIVER SCHUTZ VOR STRAHLUNG [EN] PASSIVE PROTECTION AGAINST RADIATION [FR] PROTECTION PASSIVE CONTRE LES RAYONNEMENTS			
16	<input type="checkbox"/>	EP000003324600A1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	AIRBUS DEFENCE & SPACE GMBH, DE	[DE] ECHTZEITÜBERWACHUNGS- UND ÜBERPRÜFUNGSMODUL FÜR SENSORKNOTEN [EN] REAL-TIME MONITOR AND CHECKING MODULE FOR SENSOR NODES [FR] MODULE DE SURVEILLANCE ET DE ...			
17	<input type="checkbox"/>	EP000003154241B1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	AIRBUS DEFENCE & SPACE GMBH, DE	[DE] SENSORNETZWERK MIT HETEROGENER SENDEEMPfangsARCHITEKTUR [EN] SENSOR NETWORK WITH HETEROGENEOUS SEND-RECEIVE ARCHITECTURE [FR] RÉSEAU DE CAPTEURS AVEC ARCHITECTURE ...			

No.	Selection	Publication number	Inventor	Applicant/Owner	Title	1st page	Entire document	Searchable text
18	<input type="checkbox"/>	EP0000003154241A1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	AIRBUS DS GMBH, DE	[DE] SENSORNETZWERK MIT HETEROGENER SENDE-EMPFANGSARCHITEKTUR [EN] SENSOR NETWORK WITH HETEROGENEOUS SEND-RECEIVE ARCHITECTURE [FR] RÉSEAU DE CAPTEURS AVEC ARCHITECTURE ...			
19	<input type="checkbox"/>	EP000002912696A1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	AIRBUS DS GMBH, DE	[DE] VERFAHREN ZUR DRAHTLOSEN ENERGIEÜBERTRAGUNG IN GESCHLOSSENEN RÄUMEN [EN] METHOD FOR WIRELESS ENERGY TRANSMISSION IN CLOSED SPACES [FR] PROCÉDÉ DE TRANSMISSION ...			
20	<input type="checkbox"/>	EP000002757805A3	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[DE] Sensorknoten [EN] Sensor nodes [FR] Nœuds de détection			
21	<input type="checkbox"/>	EP000002757805A2	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[DE] Sensorknoten [EN] Sensor nodes [FR] Nœuds de détection			
22	<input type="checkbox"/>	EP000002733757B1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[DE] Thermoelektrischer Dünnsfilm-Generator [EN] Thermoelectric thin film generator [FR] Générateur thermoélectrique à film mince			
23	<input type="checkbox"/>	EP000002733757A3	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[DE] Thermoelektrischer Dünnsfilm-Generator [EN] Thermoelectric thin film generator [FR] Générateur thermoélectrique à film mince			
24	<input type="checkbox"/>	EP000002733757A2	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[DE] Thermoelektrischer Dünnsfilm-Generator [EN] Thermoelectric thin film generator [FR] Générateur thermoélectrique à film mince			
25	<input type="checkbox"/>	EP000002733756B1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[DE] Verfahren zur Umwandlung von Wärme in elektrische Energie [EN] Method for converting heat to electrical energy [FR] Procédé de transformation de chaleur en ...			
26	<input type="checkbox"/>	EP000002733756A3	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[DE] Verfahren zur Umwandlung von Wärme in elektrische Energie [EN] Method for converting heat to electrical energy [FR] Procédé de transformation de chaleur en ...			
27	<input type="checkbox"/>	EP000002733756A2	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[DE] Verfahren zur Umwandlung von Wärme in elektrische Energie [EN] Method for converting heat to electrical energy [FR] Procédé de transformation de chaleur en ...			
28	<input type="checkbox"/>	US020150333521A1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[EN] METHOD FOR WIRELESS ENERGY TRANSMISSION IN CLOSED SPACES			
29	<input type="checkbox"/>	US020140137915A1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[EN] Method and Arrangement for Converting Heat to Electrical Energy			
30	<input type="checkbox"/>	US000010008855B2	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	AIRBUS DS GMBH, DE	[EN] Method for wireless energy transmission in closed spaces			
31	<input type="checkbox"/>	US000009406859B2	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[EN] Method and arrangement for converting heat to electrical energy			
32	<input type="checkbox"/>	WQ002014063680A1	KESUMA HENDRA , DE; SEBALD JOHANNES, DE	ASTRIUM GMBH, DE	[DE] VERFAHREN ZUR DRAHTLOSEN ENERGIEÜBERTRAGUNG IN GESCHLOSSENEN RÄUMEN [EN] METHOD FOR WIRELESS ENERGY TRANSMISSION IN CLOSED SPACES [FR] PROCÉDÉ DE TRANSMISSION ...			

List of professional memberships:

1. Full membership at **Institute of Electrical and Electronics Engineers(IEEE)**
Membership number: **96100404**



2. Fullmembership at **Verband der Elektrotechnik Elektronik Informationstechnik e. V.(VDE)**
Membership number: **6170435**



List of publication:

- 02/2020 **Authors:** H. Kesuma, A. Garcia, C. Plettner, A. Sgambati, A. Joseph, H. J. Zimmermann and P. Weis,
“AI Enhanced Multimedia System Architecture for Human Habitation in Space Mission”, The 1stAerospace Europe Conference 2020, February 2020, Bordeaux, France.
- 10/2019 **Authors:** H. Kesuma, S. Ahmadi-Pour, A. Joseph, H. Zimmermann and P. Weis,
“Ultrasonic Wireless Sensor Network for Human Habitation in Deep Space Mission”, The 7th Annual IEEE International Conference on Wireless for Space and Extreme Environments, October 2019 in Ottawa, Canada.
- 06/2019 **Authors:** H. Kesuma, S. Ahmadi-Pour, A. Joseph and P. Weis
“Artificial Intelligence Implementation on Voice Command and Sensor Anomaly Detection for Enhancing Human Habitation in Space Mission”, IEEE 9th International Conference on RECENT ADVANCES IN SPACE TECHNOLOGIES, Istanbul, Turkey, 2019.
- 09/2016 **Authors:** H. Kesuma, J. Sebald, S. Schmale and S. Paul
“Low Power ASIC Design for Infrared Sensor Network inside Ariane 5 Vehicle Equipment Bay”, IEEE International Conference 2016 on Wireless For Space and Extreme Environments, WiSEE September 2016 Aachen, Germany.
- 05/2016
S. Paul. **Author:** H. Kesuma, J. Sebald, K. Niederkleine, S. Schmale and
“Time Synchronization/Stamping Method with Visible Light Communication and Energy Harvester Method for Wireless Sensor Network inside Ariane 5 Vehicle Equipment Bay”, The International Space System Engineering Conference 2016, DASIA May 2016 Tallinn, Estonia.
- 05/2016 **Author:** H. Kesuma, J. Sebald, T. Ahobala and S. Paul.
“Ariane 5 Space Launcher Vehicle Equipment Bay Wireless Sensor Network Telemetry Subsystem with Smart Sensors”, European Telemetry and Test Conference, ETC2016 May 2016 Nuremberg, Germany.

12/2015

Author: H. Kesuma, J. Sebald, A. Ahmad and S. Paul.
“Bit-Error-Rate Measurement of Infrared Physical Channel using reflection via Multi Layer Insulation inside in Ariane 5 Vehicle Equipment Bay for Wireless Sensor Network communication”, IEEE International Conference 2015 on Wireless For Space and Extreme Environments, WiSEE December 2016 Orlando, Florida, USA.

AsCo-author

06/2016

Authors:S. Schmale, H. Kesuma, H. Lange, J. Rust, B. Knoop, D. Peters-Drolshagen and S. Paul
“Hardware-Accelerated Reconstruction of Compressed Neural Signals Based on Inpainting”, 22nd International Conference Mixed Design of Integrated Circuits and Systems (MIXDES), June 2016 Poland.

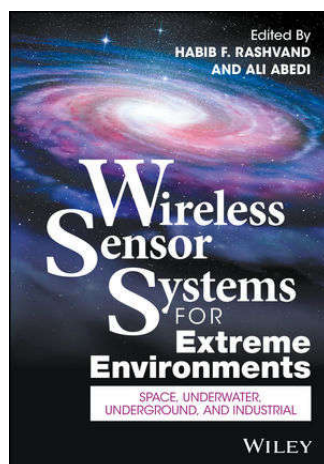
06/2011

Authors: A. Ibragimov, H. Kesuma, M. Hormann, M. Trabelsi and W. Lang
“Micromachined Membrane-Based Heat Engine as an Electrostatic Power Generator “
The 11th International Workshop on Micro and Nanotechnology for Power Generation and Energy Conversion Applications. PowerMEMS 2011, November 2011, Seoul, South Korea.

Book chapter

John Wiley & Sons
*Editor: [Habib F. Rashvand](#)
and [Ali Abedi](#)*

Authors: H. Kesuma, J. Sebald, and S. Paul.
“Infrared Wireless Sensor Network Development for Ariane Launcher”, Chapter 8 on Wireless for Space and Extreme Environments, John Wiley & Sons. 9 June 2017
<https://onlinelibrary.wiley.com/doi/10.1002/9781119126492.ch8>



I am serving as TCP member for international space related conferences since 2022:

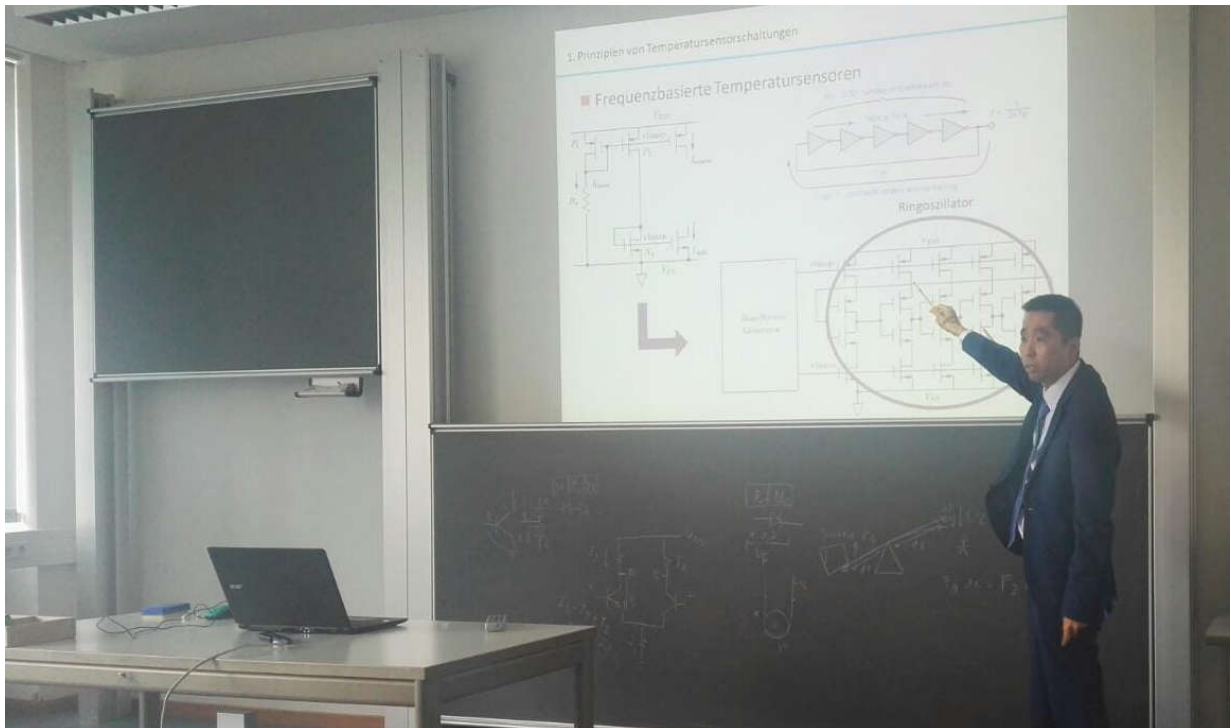
Technical interests of Hendra Kesuma for WISEE 2024

Check the topics you are interested in. Papers containing the topics labeled 'want to review', 'can review', 'review if needed' will be included; those containing topics 'no interest or background' will be excluded even if they contain be used very sparingly. Papers labeled with the neutral topics will be included only if they also contain topics that are of interest. Unless 'Reset all paper claims' is checked, only papers added since the last selection will be considered.

Topic	want to review	can review	review if needed	neutral
Accessible ground station design and networking for educational purposes	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Advanced manufacturing for aerospace communications systems	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Antenna design and testing	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Arctic remote sensing	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
CubeSat systems	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Drone-assisted wireless communications	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Guidance, navigation, and control	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Integrated space, aerial, and terrestrial communications	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Joint communications and sensing (radio convergence)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
LEO satellites and systems for low-latency applications (telepresence, teleoperations, telecontrol, etc.)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Machine learning and artificial intelligence for space and extreme environments	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
MEMS devices for wireless sensing and communications	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Multi-sensor data fusion	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Network architectures	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Optical spacecraft communication	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Remote communications	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Robotic operations in extreme environments	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space cyber security	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Space radiation effects on space electronics	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Enjoying the evening with NASA and ESA friends





My previous academic activity at the university of Bremen 2013 - 2016



I was a guest lecturer for Space Electronics course at the University of Bremen 2019 - 2020



Gathering with some university staffs and German PhD Students