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2020 IEEE EMC+SIPI

Report of the IEEE German EMC Chapter

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German Chapter

Although this year as been tough on us – we were not able to meet in person at all, that German Chapter organized very well received online activities for members and EMC interested people form the industry as well as academia

EMC Professional Talks

- **“Automotive EMC: From Component to Vehicle Test“**
- **“EMC Testing of Automotive Components According to CISPR25: Practical Considerations and System Validation“**
- **“Virtual Design of eMobility Components“**
- **“EMC measurements in the mode swirl chamber“**

DL Talks

- **“Short Pulse Technologies with Illustrative Applications“**
- **“Heterogeneous 3-D Integration of a Millimeter-wave Transceiver module“**





German Chapter

Ongoing

- International Student Contest 2020

Eligible participants:

Students of Electrical Engineering and Information Technology or similar subjects with Bachelor degree or below

Extended Deadline: December 31, 2020

Want to challenge your students?

Here you go:

[https://site.ieee.org/germany-emc/files/2020/06/Student Contest 2020 IEEE EMC German Chapter.pdf](https://site.ieee.org/germany-emc/files/2020/06/Student_Contest_2020_IEEE EMC German Chapter.pdf)

Winner & Runner-Up

will be announced at EMV Conference in Spring 2021

The poster for the Student Contest 2020 features the logos of EMC Society German Chapter and IEEE at the top. Below the title, it states the start and end dates (15.06.2020 to 30.11.2020) and lists eligible participants as students of Electrical Engineering and Information Technology. A contact email is provided. The main problem asks for the values of a decoupling capacitor C and resistor R that minimize the noise current $i_N(t)$ through the internal resistance $R_i = 50 \Omega$ of a sink. The sink is connected to a source at $(x_s, y_s) = (3 \text{ mm}, 3 \text{ mm})$ and is located at $(x_N, y_N) = (160 \text{ mm}, 120 \text{ mm})$ on a printed circuit board. The PCB is 200 mm long, 150 mm wide, and 1.5 mm high, with a substrate FR-4 ($\epsilon_r = 4.3$, $\tan(\delta) = 0.025$) and full copper layers on both sides. The decoupling capacitor is connected to the sink at $(x_D, y_D) = (9 \text{ mm}, 9 \text{ mm})$. The source is an ideal current source with current $i_0(t) = 1 \text{ mA} \cdot \sin(2\pi \cdot 355 \text{ MHz} \cdot t) + 1 \text{ mA} \cdot \sin(2\pi \cdot 472 \text{ MHz} \cdot t)$. The decoupling capacitor is modeled as a series equivalent circuit with $1 \text{ pF} \leq C \leq 1 \mu\text{F}$, $10 \text{ m}\Omega \leq R \leq 10 \Omega$, and $L = 4 \text{ nH}$.



German Chapter

In Planning

- YP and PhD Meeting
- 5th EMC Boot Camp 2020 in Magdeburg

Theme Focus:

EMC in Medical Technology and Life Science

- Either in person/ hybrid format
- Free admission
- 15 speakers from academia and industry

If this will be held as virtual event,
the link for participation will be shared on **EMCS Social Media!**
Stay tuned 😊

The poster for the EMV Boot Camp 2020. At the top, it features the logos for EMC SOCIETY German Chapter and IEEE. Below the logos is a central image of a human figure with a blue and green color gradient, overlaid with a technical diagram of internal organs. To the right of the figure is a small inset image of a medical device. Below the image, the text reads 'EMV Boot Camp 2020' and 'Das Wichtigste zur Elektromagnetischen Verträglichkeit in 2 Tagen'. A large blue starburst graphic contains the text 'Save-the-Date'. Below this, the event details are listed: 'Datum: 28./29. Oktober 2020', 'Zeit: 9 Uhr bis 17 Uhr', 'Fokus: EMV in der Medizintechnik und den Life Sciences', and 'Ort: Fraunhofer Virtual Development and Training Centre, Joseph-von-Fraunhofer-Straße 1, 39106 Magdeburg'. A QR code is located in the bottom right corner. On the left side of the poster, there is a green box containing text in German: 'Das deutsche EMV-Chapter der IEEE EMC Society lädt Sie zum EMV Boot Camp (Trainingslager) ein. Die kostenfreie Veranstaltung mit Vorträgen und Workshops bietet Ihnen wertvolles EMV-Wissen mit dem Neuesten aus Forschung und Praxis. Die Teilnahme am EMV Boot Camp inklusive der Pausengetränke ist kostenfrei. Die Veranstaltung umfasst 2 Tage, jeweils von 9 - 17 Uhr. Nach erfolgreicher Teilnahme am EMV Boot Camp wird ein Teilnahme-Zertifikat ausgestellt. Der/die Teilnehmer*in sorgt auf eigene Kosten für An- und Abreise, sowie für die Unterkunft.'

