

A portrait of Prof. dr. ir. Maarten Paulides, a man with short brown hair and blue eyes, wearing a dark blue suit, white shirt, and a striped tie. He is looking slightly to the right of the camera with a neutral expression. The background is blurred, showing what appears to be an indoor setting with some architectural elements.

**Prof.dr.ir. Maarten Paulides**  
**June 3, 2022**

**INAUGURAL LECTURE**

## **Progress in waves**

**TU/e**

**EINDHOVEN  
UNIVERSITY OF  
TECHNOLOGY**

**DEPARTMENT OF ELECTRICAL ENGINEERING**

## **INVITATION**


Prof.dr.ir. Maarten Paulides was appointed full-time Professor of Biomedical Electromagnetics at the Department of Electrical Engineering at Eindhoven University of Technology on July 1, 2021. He will deliver his inaugural lecture on June 3, 2022.

The Executive Board of Eindhoven University of Technology cordially invites you to attend the inaugural lecture of Prof.dr.ir. Maarten Paulides on **Friday, June 3, 2022, at 4.00 PM**. The public lecture will be delivered in the Blauwe Zaal of the Auditorium. You do not need to register. In the event that restrictions regarding attendance are implemented due to covid-19, the proceedings can be followed online.

The title of the lecture is  
**'Progress in waves'**

After the lecture, drinks will be served in the Senaatszaal.

All full professors are invited to join the cortège. If you want to join the cortège, please register in advance with the P&P office which organizes all academic ceremonies, telephone +31 (0)40 247 25 15, e-mail: penp@tue.nl.



**Prof.dr.ir. F.P.T. Baaijens**  
Rector Magnificus

After June 3, 2022, the text of the inaugural lecture will be available online at [www.tue.nl/lectures](http://www.tue.nl/lectures).

Margarethus M. (Maarten) Paulides (1979) holds an MSc degree in Electrical Engineering (2002) from Eindhoven University of Technology (TU/e). He obtained his PhD (cum laude) in Health and Medical Physics (2007) from Erasmus University Rotterdam working at the Daniel den Hoed, later Erasmus MC Cancer Institute, where he also continued his research on precision hyperthermia. In 2018, he returned to TU/e as director of the Center for Care & Cure Technology Eindhoven (C3Te), while maintaining an honorary associate professorship in Rotterdam. At TU/e, he founded and chairs the Care & Cure research lab of the electromagnetics group (EM4C&C) focused on applications ranging from neuro-stimulation and neuro-prostheses to magnetic resonance imaging (MRI) for guided therapy. All research is geared towards clinical impact. Maarten Paulides serves in the board of COST action CA17115 ("MyWave"), the Dutch Cancer Society (KWF) and thermal therapy task groups of ASME. He also served in the Dutch Health Council and the international committee for non-ionizing radiation protection (ICNIRP). In addition, he co-founded the hyperthermia therapy company Sensius.

#### **About the lecture**

The noninvasive nature of electromagnetic waves, and their distinct features at different frequencies, places them at the core of many medical applications. Current medical technology design approaches are based on single-physics design, and are therefore highly iterative. In contrast to such single domain design, Paulides' approach is to put bio-physics-model-based design approaches in the spotlight. Driven by the clinical need, he develops electromagnetic applications building upon deep understanding and accurate modelling of the full imaging or therapy chain: biological effects, intervention, dosimetry and clinical outcome. These models form pivotal input for pre-planning, safety studies and development of new approaches. During his lecture, Maarten Paulides will share the history of the biomedical electromagnetics field, the results of his research (primarily in hyperthermia therapy) and his vision on the future of the field. He will also address the need for collaboration, and the role of TU/e, in this inherently multi-disciplinary field.

**Visiting address** Auditorium, Building 1, Groene Loper, Eindhoven

**Navigation address** De Zaaie, Eindhoven, [www.tue.nl/map](http://www.tue.nl/map)