

Adrian Dobroiu: curriculum vitæ



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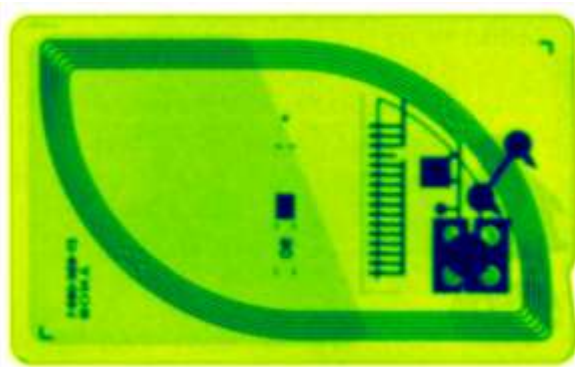
Phone: +81-90.2368.5125

Updated: 2018 May 2

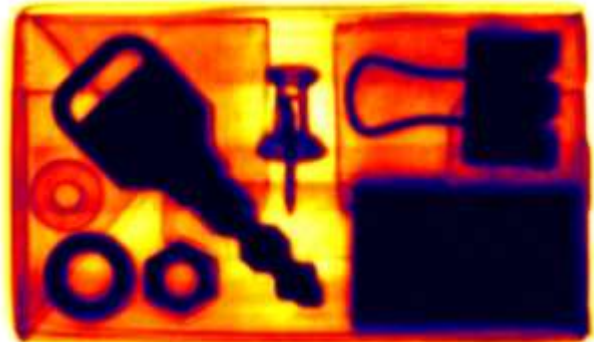
- Birth date, place** April 21, 1969, Onești, Romania
- Education** 2000: PhD in Interferometry, University of Bucharest
Thesis: “*Statistical self-calibrating algorithms in phase-shift interferometry*”
1994: Masters in Optics and Lasers, University of Bucharest
Thesis: “*Laser Goniometry*”
1992: Bachelors in Physics, University of Bucharest
- Research work** 2018–present: Tokyo Institute of Technology
Subject: The application of resonant tunneling diodes as terahertz sources in amplitude- and frequency-modulated radars
2016–2017: Spectra Design, Ltd.
Subject: Measurement and imaging terahertz applications R&D for industrial and academic customers
2012–2016: Researcher at Tohoku University, Research Institute of Electrical Communication (RIEC)
Subject: Experimental verification for the feasibility of a terahertz graphene laser; photomixing in electronic devices in the millimeter-wave range
2003–2012: Researcher at *RIKEN*, Terahertz Sensing and Imaging Laboratory, Wakō and Sendai, Japan
Subject: Terahertz imaging and sensing applications
2001–2003: Postdoctoral researcher at the *Yamagata University*, Yonezawa, Japan
Subject: Optical Coherence Tomography (OCT), developing new interferometric systems for OCT imaging
1994–2001: Researcher at the *National Institute for Laser, Plasma and Radiation Physics*, Lasers Department, Bucharest, Romania
Subjects: Phase-shifting interferometry, computed holography, interference image and signal processing, optical metrology
- Research stages** 2009: A 1-month stage at the *Montpellier 2 University*, Montpellier, France
Subject: Terahertz imaging using a field-effect transistor as detector
1996: A 3-week stage at the *Bremer Institut für Angewandte Strahltechnik* (The Bremen Institute for Applied Beam Technology), Bremen, Germany
Subject: Applications of phase-shifting interferometry
1994–1995: A 5-month stage at the *Institut de Physique et Chimie des Matériaux* (Institute of Physics and Chemistry of Materials), Strasbourg, France
Subject: Surface physics, crystal growth and characterization

Main skills	- optical design for a wide range of terahertz and laser experiments: imaging, sensing, metrology, etc. - image and signal processing, simulation, calculation - control and automation of experimental systems - programming in LabVIEW, MATLAB
Other skills	Use of the machine shop, electronic circuitry, etc.
Languages	English: fluent; Japanese: fluent; French: fluent; Romanian: native
Hobbies	Handicraft (wood, metal), languages

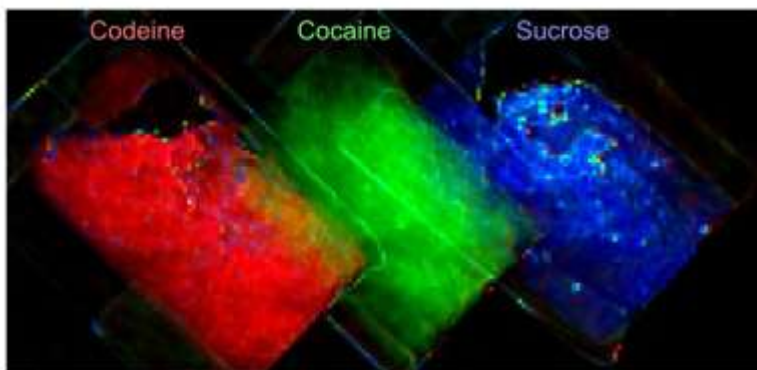
Some of my terahertz imaging results:



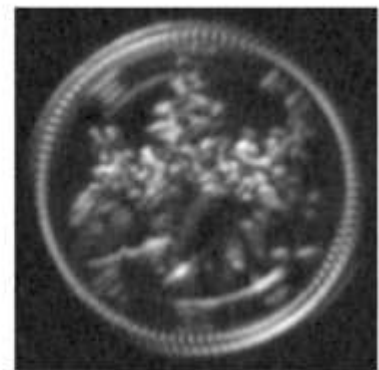
Suica card at near-diffraction-limited resolution



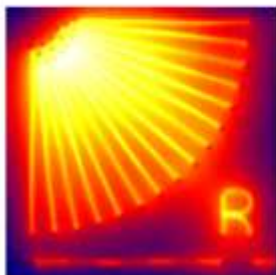
Demo of non-invasive imaging



Chemical imaging for security applications



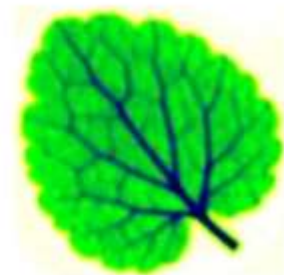
500 yen coin in reflection



Thermal imaging



Live lizard in transmission imaging



Water distribution