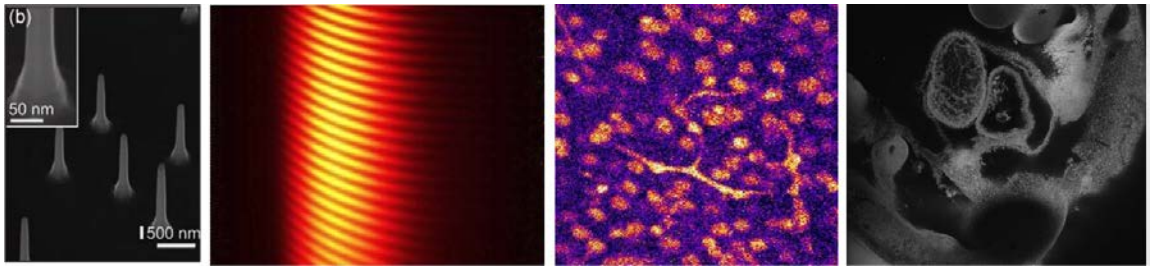
My research is focused on instrument and method development for imaging and spectroscopy applications. Specifically, I am interested in studying light matter interaction at the nanoscale and bio-imaging.

My research career began with a PhD in the field of optical spectroscopy on III-V semiconductor nanowires. I then decided to direct my research more towards instrumentation, and as a postdoc at the University of Bristol I developed an instrument that combined a near-field scanning optical microscope (NSOM) with crossed beam spectral interferometry for characterising ultrafast light propagation in photonics structures.
I started working in the field of bioimaging during my three years as a postdoc at the Centre for Biophotonics at the University of Strathclyde, where I developed excitation sources and methods for bioimaging. This included e.g. a source for third harmonic generation (THG) imaging in thick brain tissue. I was also part of the team developing the Mesolens, which is a novel instrument for (confocal) imaging over a large field of view with subcellular resolution. I demonstrated its use for fluorescence imaging of 10 and 12,5-day whole mouse embryos.

Currently, I work on the Gate2mu project at ISI Brno, where I lead the work package focused on label-free imaging with chemical contrast (Raman microscopy) using multimode fibers.

**2008** PhD, Lund University/LTH, Lund, Sweden (Optical spectroscopy of single nanowires)
**2008-2009** Postdoc at Lund University/LTH
**2009-2013** Postdoc at University of Bristol, UK
**2013-2016** Postdoc at University of Strathclyde, UK
**2016-current** Postdoc at Institute of Scientific Instruments of the CAS, Brno, Czech Republic




***Pictorial CV**: Nanowires, spectral interferometry, brain and a mouse embryo.*

- HIGHLIGHTED PUBLICATIONS:

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Selected publications from previous research posts:
(https://scholar.google.com/citations?user=hLHXSboAAAAJ&hl=en)
[1] **J. Trägårdh**, J. Schniete, M. Parsons, and G. McConnell, *A femtosecond Raman generator for long wavelength two-photon and third harmonic generation imaging*, APL Photonics 1, 091303 (2016)
[2] G. McConnell, **J. Trägårdh**, R. Amor, J. Dempster, E. Reid, W.B. Amos, *A novel optical microscope for imaging large embryos and tissue volumes with sub-cellular resolution throughout*, eLife 5, e18659 (2016)
[3] R. Amor, A. McDonald, **J. Trägårdh**, G. Robb, et al. *Widefield Two-Photon Excitation without Scanning: Live Cell Microscopy with High Time Resolution and Low Photo-Bleaching.* PLoS ONE 11, e0147115 (2016)
[4] **J. Trägårdh**, G. Robb, K. K. E. Gadalla, S. Cobb, C. Travis, G.-L. Oppo, and G. McConnell, *Label-free imaging of thick tissue at 1550 nm using a femtosecond optical parametric generator,* Optics Letters 40, 3484 (2015)
[5] **J. Trägårdh**, and H. Gersen, *Combining near-field scanning optical microscopy with spectral interferometry for local characterization of the optical electric field in photonic structures*, Optics Express, 21, 16629 (2013)
[6] E. C. Robinson,**J. Trägårdh**, I. D. Lindsay, and H. Gersen, *Balanced Detection for Interferometry with a Noisy Source*, Rev. Sci. Instrum. 83, 063705 (2012)

[7] G.L. Tuin, M.T. Borgström**, J. Trägårdh**, Martin Ek, L.R. Wallenberg, L. Samuelson, and M-E. Pistol, Valence Band Splitting in Wurtzite InP Nanowires Observed by Photoluminescence and Photoluminescence Excitation Spectroscopy, Nano Research 4 159 (2011)
[8] J. Bao, D. C. Bell, F. Capasso, J. B. Wagner, T. Mårtensson**, J. Trägårdh** and L. Samuelson, Optical Properties of Rotationally Twinned InP Nanowires, Nano Letters 8, 836 (2008)
[9] **J. Trägårdh**, A.I. Persson, J.B. Wagner, D. Hessman, and L. Samuelson, Measurements of the band gap of wurtzite InAs1-xPx nanowires using photocurrent spectroscopy, J. Appl. Phys. 101, 123701 (2007)
[10] N. Sköld, L.S. Karlsson, M.W. Larsson, M-E Pistol, W. Seifert**, J. Trägårdh**, and L. Samuelson, Growth and optical properties of strained GaAs-GaxIn1-xP core-shell nanowires, Nano Letters 5, 1943 (2005)