Curriculum Vitae of Bubba, Tatiana Alessandra, January 20, 2024.

Personal Details: Born in 1987 in Padova (Italy). Italian citizen, female.

Current position: **Lecturer (Assistant Professor) in Applied Mathematics** (January 2022–present), University of Bath (UK). **Websites:** Personal Webpage and Webpage at the University of Bath

Education and degrees completed:
- 25 September 2020: **Docent (dosentti) in Inverse Problems**, University of Helsinki (Finland).
- 12 April 2016: **PhD in Mathematics**, University of Ferrara (Italy).
- 5 October 2012: **MSc in Mathematics**, University of Ferrara (Italy).
- 23 September 2010: **BSc in Mathematics**, University of Padova (Italy).

Previous work experience:
- July-Dec. 2021: Royal Society **Newton International Fellow**, University of Cambridge (UK).
- Nov. 2016-June 2021: Postdoc researcher, University of Helsinki (Finland). From Sept. 2020: **Academy Postdoc**
- February-October 2016: Postdoc researcher, University of Modena and Reggio Emilia (Italy).
- Jan.-Feb. 2016: Trimester program "Mathematics of Signal Processing" at HIM, Bonn (Germany).

Honours and awards by scientific societies:
- Selected for **Emerging Talents 2021** of the journal *Inverse Problems*.
- 2nd position **IAEA PGET challenge 2019**. Collab.: Backholm, Bélanger-Champagne, Dendooven, Helin, Siltanen.
- **IUSS Day 2017 – Best PhD thesis** in Mathematics and Computer Science, University of Ferrara. Youtube video

Personal research funding and grants:
- March 2023-2025: **Royal Society International Exchange** "Sparsity promoting algorithms for statistical inverse learning problems (SPA4SIL)". Co-PI: Dr. M. Santacesaria (University of Genoa, Italy). Amount: £12000.
- July–December 2021: **Royal Society Newton International Fellowship** "Adaptive imaging and deep inpainted reconstructions for Transmission Electron Microsopy: theory and methods". Amount (awarded for the initial duration of 2 years): £86250.
- September 2020–July 2021: **Academy of Finland Postdoctoral Researcher Project** "Non-linear tomography with active and passive radiation". Amount (awarded for the initial duration of 3 years): 250820 euros.
- April–July 2014: University of Ferrara **Young Researcher Fellowship**, for four months visiting period at University of Houston (TX–USA). Amount: 5000 euros.
- January 2013–December 2015: **PhD Scholarship**, awarded by MIUR (Italian Ministry for Education, University and Research), for three years doctoral studies at University of Ferrara. Amount: 39000 euros.
- 2013-21: For a complete list of previous research projects participation, see my Personal Webpage.

Selected publications:

In years 2014-2024, **21 peer-reviewed scientific articles** (of which 4 peer-reviewed conference proceedings and 2 book chapters); currently 2 manuscripts under review. Below selected papers relevant to the application:
- Rautio S., Murthy R., Bubba T.A., Lassas M. & Siltanen S., *Learning a microlocal prior for limited-angle tomography*, to appear IMA Journal of Applied Mathematics, 2024.
- Bubba T.A., Galinier M., Lassas M., Prato M., Ratti L. & Siltanen S., *Deep neural networks for inverse problems with ΨDO operators: an application to limited-angle tomography*, SIAM J. Imaging Sci. **14**(2), 470-505, 2021.
- Bubba T.A., Kutyniok G., Lassas M., März M., Samek W., Siltanen S. & Srinivasan V., *Learning the invisible: a hybrid deep learning-shearlet-based framework for limited angle tomography*, Inverse Problems **35**, 064002, 2019.

Scientific talks:

63 international scientific talks, of which 57 invited talks, including **3 plenary talks** (February 2023, *MIA 2023*, Berlin; March 2022, *Opening Symposium for CRC "Mathematics of Experiment"*, Göttingen; December 2019, 25th *Inverse Days*, Jyväskylä), and **6 poster sessions** in the period 2015–2023.

Experience of organising scientific meetings (selection):
- **2023** Member of the organising committee of **BIRS workshop** *Leveraging model- and data-driven methods in medical imaging* at UBC-Okanagan (Kelowna, British Columbia), June 25-30, 2023. Co-organiser: D. Labate.
- **2023** Member of the organizing committee of **INdAM workshop** *Learning in Inverse Problems*, Rome (Italy), June 5-9, 2023. Co-organizer: G. Alberti, A. Aspri, L. Ratti and M. Santacesaria.
- **2022** Member of the organizing committee of **INdAM workshop** *Advanced techniques in optimization for machine learning and imaging*, Rome (Italy), June 20-24, 2022. Co-organizer: A. Benfenati, F. Porta and M. Viola.
- **2020** Chair of the scientific committee of 26th *Inverse Days* Conference, virtually in Helsinki (Finland), December 14-18, 2020. Co-organizers: J. Hakkarainen, M. Laine, M. Lassas, S. Siltanen and J. Tamminen.
- since 2018: Co-organiser of several minisymposia at the most relevant international conferences in the field (IPMS 2024, AIP 2023, ICIAM 2023, IPMS 2022, SIAM IS 2022, IFIP TC7 2020, AIP 2019, SIAM CSE 2019).