Action to streamline services and increase community engagement: *Innovative Workflows*

ARIE Research • Technology Communication • Education

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Research Scientist at Analytical Resources Core

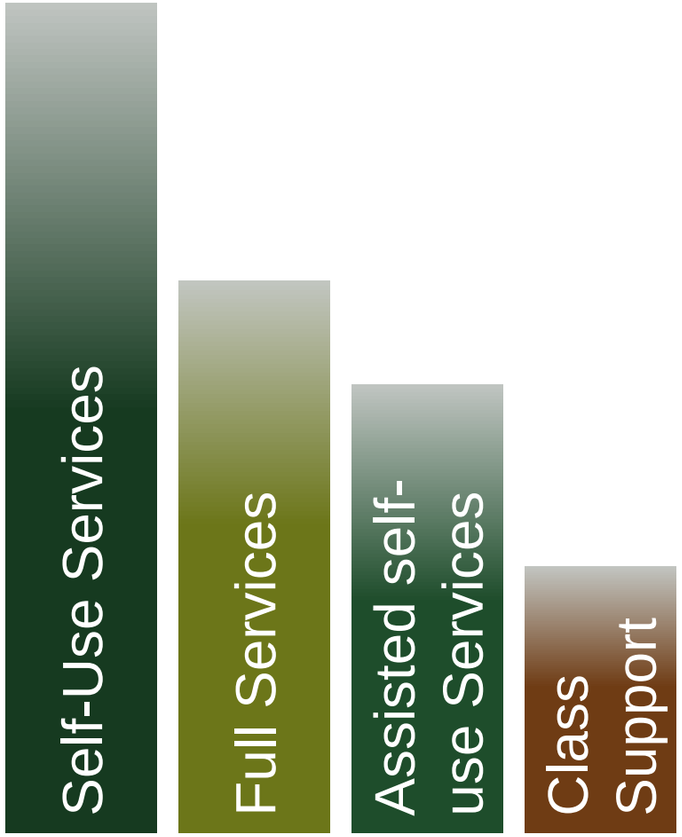
Manager of Material Science and Optical Spectroscopy Laboratory

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ANALYTICAL RESOURCES CORE
COLORADO STATE UNIVERSITY

Who we are

Analytical Resources Core (ARC) is a shared-use analytical instrumentation facility. Our mission is to enable research, education, and innovation across the biological, chemical, environmental, and materials sciences. We had 512 users in FY24, serving 30 CSU departments and 54 external organizations across the nation.



Our laboratories

- Bioanalysis and Omics
- Electron Microscopy
- Surface Analysis
- Structural Analysis
- Materials Properties

https://www.research.colostate.edu/arc/

What I do

Structural Analysis

Materials Properties



Self-Use Services

Full Services

Assisted self-use Services

Class Support

EPR: *Electron Paramagnetic Resonance*
PPMS: *Physical Property Measuring System*
MPMS: *Magnetic Property Measuring System*
DLS: *Dynamic Light Scattering*
TRF: *Time Resolved Fluorimeter*
TGA: *Thermogravimetric analysis*
DSC: *Differential Scanning Calorimetry*

Background

- Inorganic Chemistry
- PhD in 2012 @ Bordeaux, France
- 10+ years of Postdoc, Teaching and Research Scientist positions
- Joined ARC in 2022
- Like it since then! ☺

Role

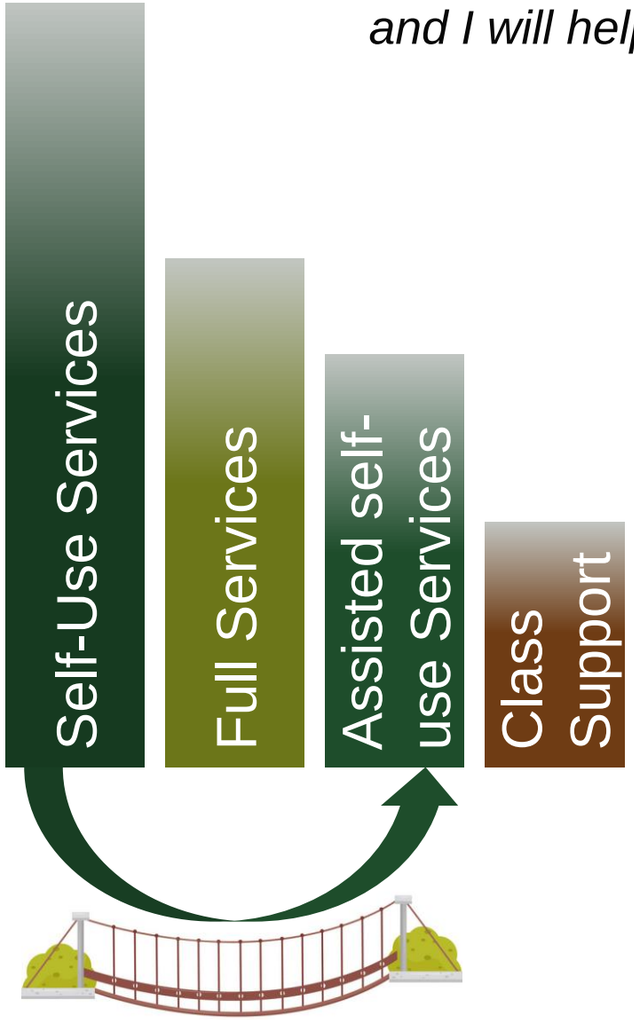
- **Research Scientist I**
- **Manage (fix!) instruments with no service contract ☺**
- **Training, services**
- **Class Support**
- **….**

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Training

Gear training for self-users specific to their needs

First time training: *bring one or two samples you need data for during training and I will help to get a reasonable data however long it may take.*





Pros

- Customized learning
- Trust of services
- Knowledge about research needs
- Relationship
- Revenue



Cons

- Time commitment
- Break onto sessions
- Keeping track

Office hours

Dedicated weekly office hours (cost free)

Open door: using ‘Booking’ app in Microsoft Teams

Anyone can reserve my calendar and come over to discuss any relevant topics: research, data processing, software learning, experimental design, sample preparation, troubleshooting and many more.



Pros

- Education/community
- Knowledge about research needs
- Relationship
- Increase instrument usage
- Staff time may follow



Cons

- Lots of communication
- Setting boundaries
- Expectations
- Commitments to keep

Blending full-services and collaboration

Collaborative approach to the full services, where if the time and commute permits, I encourage the service requester to join me when I collect data and may do sample prep





Pros

- Education/Relationship
- Mutually decide what data to collect
- Trust and confirmation
- Fast turnaround of project
- Customer satisfaction
- Work on smaller budget

Cons

- Yet to find some…
- Some cost negotiation may happen before services if customer want to do sample preparation….

Acknowledgements



- Colleagues at ARC
  - Especially to my supervisor Karolien Denef
- Office of Vice President of Research
- The students I train and teach
- Customers from external universities and businesses



- My Family

- And you for listening!