

DATAWorks 2025 Short Course Functional Data Analysis (FDA) Videos:

Youtube:

Modeling Spectral Data with JMP Pro 17 <https://www.youtube.com/watch?v=SvJ6m95Br9o>

Presentation to the Statistics in Defense & National Security (SDNS) section of the American Statistical Association (ASA) by **Chris Gotwalt**, Chief Data Scientist – 1-hour, 2023

Using Sensor Stream Data as Both an Input and Output in a Functional Data Analysis

[https://www.youtube.com/watch?v=JS4Y4x7zlxk&list=PLeZrxAVa0tJnTWZ_CZD-](https://www.youtube.com/watch?v=JS4Y4x7zlxk&list=PLeZrxAVa0tJnTWZ_CZD-dMXoRWiLFNdG&index=56)

[dMXoRWiLFNdG&index=56](https://www.youtube.com/watch?v=JS4Y4x7zlxk&list=PLeZrxAVa0tJnTWZ_CZD-dMXoRWiLFNdG&index=56) **Tom Donnelly**, Principal Systems Engineer – 24-min, DATAWorks 2022

Design of Experiments for Reverse Engineering Formulations

[https://www.jmp.com/en/resources/on-demand/technically-speaking/doe-reverse-engineering-](https://www.jmp.com/en/resources/on-demand/technically-speaking/doe-reverse-engineering-formulations/watch?submissionGuid=19ff15ed-f037-4662-887e-3323ab644fb4)

[formulations/watch?submissionGuid=19ff15ed-f037-4662-887e-3323ab644fb4](https://www.jmp.com/en/resources/on-demand/technically-speaking/doe-reverse-engineering-formulations/watch?submissionGuid=19ff15ed-f037-4662-887e-3323ab644fb4) **Tom Donnelly**,

Principal Systems Engineer – 45-min, JMP Technically Speaking 2024

A Preview of Functional Data Analysis for Modeling and Simulation Validation

<https://www.youtube.com/watch?v=1neGQl8Jtxs> **Curtis Miller, Research Staff, Institute for Defense**

Analyses (IDA) – 34-min, DATAWorks 2024

A Quick Primer on Functional Design of Experiments

<https://www.youtube.com/watch?v=Hlk8iP8B-cU> **Ross Metusalem, Academic Ambassador** – 10-

min, 2021

Analyzing Functional (aka Curve) Data in JMP Pro

https://www.youtube.com/watch?v=Vr5O_9Vksb0 **Ross Metusalem, Academic Ambassador** – 1-

hour, 2023

Functional Data Explorer for Spectral Data <https://www.youtube.com/watch?v=WB1x3i96GZE>

Valerie Nedbal, Global Technical Enablement Team – 16-min, 2024

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JMP Community:

Developer Tutorial: Modeling Spectral Data with JMP Pro 17

[https://community.jmp.com/t5/Learn-JMP-Events/Developer-Tutorial-Modeling-Spectral-Data-](https://community.jmp.com/t5/Learn-JMP-Events/Developer-Tutorial-Modeling-Spectral-Data-Using-JMP-Pro-17/ev-p/810033)

[Using-JMP-Pro-17/ev-p/810033](https://community.jmp.com/t5/Learn-JMP-Events/Developer-Tutorial-Modeling-Spectral-Data-Using-JMP-Pro-17/ev-p/810033) **Chris Gotwalt & Ryan Parker**, – 1&1/4-hour, 2024

An Introduction to Spectral Data Analysis with Functional Data Explorer in JMP Pro 17

[https://community.jmp.com/t5/Abstracts/An-Introduction-To-Spectral-Data-Analysis-With-](https://community.jmp.com/t5/Abstracts/An-Introduction-To-Spectral-Data-Analysis-With-Functional-Data/ev-p/738751)

[Functional-Data/ev-p/738751](https://community.jmp.com/t5/Abstracts/An-Introduction-To-Spectral-Data-Analysis-With-Functional-Data/ev-p/738751) **Ryan Parker & Clay Barker** Statistician Developers – 25-min, 2023

Design of Experiments for Complex Biochemical Systems

[https://community.jmp.com/t5/Abstracts/Design-of-Experiments-for-Complex-Biochemical-](https://community.jmp.com/t5/Abstracts/Design-of-Experiments-for-Complex-Biochemical-Systems/ev-p/776426?summitContext=true)

[Systems/ev-p/776426?summitContext=true](https://community.jmp.com/t5/Abstracts/Design-of-Experiments-for-Complex-Biochemical-Systems/ev-p/776426?summitContext=true) **Matthew Lux, John Davies, & David Garcia, Research**

Scientists, US Army DEVCOM Chemical Biological Center – 10-min, JMP Discovery Summit 2024

A Deeper Dive into Wavelet Models for Functional Data Analysis

<https://community.jmp.com/t5/video/gallerypage/user-id/2313/video-id/6348017612112>

Di Michelson, JMP Education Team – 12-min, 2024

Using JMP Pro Functional Data Explorer to Add Value to your Analyses

<https://community.jmp.com/t5/video/gallerypage/video-id/1667782887959623881> Peter Hersh,

Global Technical Enablement Team – 51-min, 2020

Analyzing Spectral Data: Preprocessing and Beyond

<https://community.jmp.com/t5/Abstracts/Analyzing-Spectral-Data-Preprocessing-and-Beyond-2021-US-45MP/ev-p/756807> Bill Worley, Global Technical Enablement Team – 39-min 2021

New in JMP Pro 17 Spectral Data Analysis

<https://community.jmp.com/t5/video/gallerypage/video-id/6314012694112> Hyde Miller, Global Technical Enablement Team – 8-min 2022

Four New Direct Functional Data Explorer Spectral Models

<https://community.jmp.com/t5/video/gallerypage/video-id/6354440176112> Hyde Miller, Global Technical Enablement Team – 3-min 2024

The What, Where, Why and How of Functional Data Explorer

<https://community.jmp.com/t5/Discovery-Summit-Europe-2019/The-What-Where-Why-and-How-of-Functional-Data-Explorer-2019-EU/ta-p/110074> Peter Hersh, Global Technical Enablement Team – 45-min, 2019

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FDA Videos on www.jmp.com/fedgov

Modeling Streamed Sensor Data with Functional Data Analysis [View full 1-hour video: Tom Donnelly](#), 2019.

View short case-studies featured in full webcast.

Case 1: [Functional Data Analysis - DOE Predicting Shape of Sensor Stream using DOE & Golden Curve Analysis](#) (5-min)

Case 2: [Functional Data Analysis - ML Using the Sensor Stream as an Input to a Machine Learning Model](#) (7-min)

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Spectris Spooky Spectroscopy <https://community.jmp.com/t5/Abstracts/Spectris-Spooky-Spectroscopy-2023-US-30MP-1472/ec-p/738908#M216> Mike Anderson, Principal Systems Engineer – 18-min, 2023

Spectris: Graphical Spectral Data Processing <https://community.jmp.com/t5/JMP-Add-Ins/Spectris-Graphical-spectral-data-processing/ta-p/650521> Mike Anderson, Principal Systems Engineer – 5-min, 2024

Spectris Addin on JMP Marketplace

<https://marketplace.jmp.com/appdetails/Spectris:%20Graphical%20Spectral%20Data%20Processing%20for%20JMP%C2%AE%20Pro>

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Discovery Summit Presentations: Search on “Functional Data”

<https://community.jmp.com/t5/Discovery-Summit-Europe-2019/The-What-Where-Why-and-How-of-Functional-Data-Explorer-2019-EU/ta-p/110074>

<https://community.jmp.com/t5/Abstracts/Analyzing-Functional-Data-with-Direct-Functional-PCA-in/ec-p/756786#M541>

<https://community.jmp.com/t5/Abstracts/Using-Functional-Data-Analysis-A-Case-Study/ec-p/776090#M970>

<https://community.jmp.com/t5/Abstracts/Classify-and-Parameterize-Time-Varying-Curves-with-Functional/ec-p/776115#M978>

<https://community.jmp.com/t5/Abstracts/Functional-Data-Analysis-and-Regression-Models-Pros-and-Cons-and/ec-p/755527#M312>

<https://community.jmp.com/t5/Abstracts/Functional-Data-Explorer%EB%A5%BC-%ED%99%9C%EC%9A%A9%ED%95%9C-%ED%8A%B8%EB%A0%88%EC%9D%B4%EC%8A%A4-%EB%8D%B0%EC%9D%B4%ED%84%B0-%EB%B6%84%EC%84%9D-2021-KR-30MP-988/ec-p/756375#M422>

<https://community.jmp.com/t5/Abstracts/Functional-Data-Explorer-Visualizing-Results-to-Non-Data/ec-p/756645#M494>

<https://community.jmp.com/t5/Abstracts/Predicting-Functional-Responses-using-JMP-Functional-DOE-and/ec-p/738887#M196>

<https://community.jmp.com/t5/Abstracts/Functional-Data-Explorer-Turning-Knowledge-Into-Value-2021-EU/ec-p/756635#M484>

Discovery Summit Presentations: Search on “Spectral”

<https://community.jmp.com/t5/Abstracts/How-to-Decode-Rainbows-The-Best-and-Least-Confusing-Ways-to/ec-p/822868#M1098>

<https://community.jmp.com/t5/Abstracts/Using-FDE-and-DOE-to-Help-Build-Predictive-Models-for-Spectral/ec-p/758175#M702>

<https://community.jmp.com/t5/Abstracts/Using-Multivariate-Tools-in-JMP-for-Analysis-of-Spectral-Data/ec-p/758465#M727>

<https://community.jmp.com/t5/Abstracts/Analyzing-Spectral-Data-Preprocessing-and-Beyond-2021-US-45MP/ec-p/756807#M559>

<https://community.jmp.com/t5/Abstracts/An-Introduction-To-Spectral-Data-Analysis-With-Functional-Data/ec-p/738751#M167>

<https://community.jmp.com/t5/Abstracts/R-D-Keynotes-Data-Historian-and-Live-Data-Refresh-FDE-and/ec-p/738705#M122>

<https://community.jmp.com/t5/Abstracts/Using-Functional-Data-Analysis-A-Case-Study/ec-p/776090#M970>

Discovery Summit Presentations: Search on “FDE”

<https://community.jmp.com/t5/Abstracts/Multivariate-Analysis-of-Infrared-Spectra-Using-Wavelet-Model-in/ec-p/738709#M126>

<https://community.jmp.com/t5/Abstracts/Using-FDE-and-DOE-to-Help-Build-Predictive-Models-for-Spectral/ec-p/758175#M702>

<https://community.jmp.com/t5/Abstracts/Using-FDE-to-End-or-Inspire-Arguments-about-Major-League/ec-p/758466#M728>

<https://community.jmp.com/t5/Abstracts/How-to-Make-More-from-Online-and-Offline-Fermentation-Data-to/ec-p/755530#M315>

<https://community.jmp.com/t5/Abstracts/Functional-Data-Explorer-Visualizing-Results-to-Non-Data/ec-p/756645#M494>

<https://community.jmp.com/t5/Abstracts/How-to-Make-More-from-Online-and-Offline-Fermentation-Data-to/ec-p/755530#M315>

<https://community.jmp.com/t5/Abstracts/Functional-Data-Explorer-Visualizing-Results-to-Non-Data/ec-p/756645#M494>

<https://community.jmp.com/t5/Abstracts/Optimisation-of-a-milling-process-to-match-the-innovator-drug/ec-p/756659#M508>