

“Research in Action” Podcast Instructor Guide

Use the following episode description, learning objectives, guiding questions and activity suggestions to more easily include “Research in Action” podcast episodes as a supplemental resource for your course.

Dr. Adam Stokes on Bioinspired Engineering [00:00-35:41]

Research in Action - Episode 151

Podcast and Episode Information

“Research in Action” is a weekly podcast about topics and issues related to research in higher education featuring experts across a range of disciplines.

On this episode of the podcast, the guest is Dr. Adam Stokes, a Lecturer in the Institute for Integrated Micro and Nano Systems at The University of Edinburgh. He is PI of the Stokes Research Group, an interdisciplinary research laboratory and the Programme Director for MSc Electronics in The School of Engineering. Dr. Stokes holds degrees in engineering, biomedical science, and chemistry. Before joining the faculty at Edinburgh he was a Fellow in the George M. Whitesides group at Harvard University. Currently, he holds a prestigious appointment as a Member of The Royal Society of Edinburgh’s Young Academy of Scotland. Dr. Stokes’s research interests include: robotics, physical chemistry, electrical engineering, materials science, nanotechnology, optics, proteomics, and cell biology.

Segment One [00:00-12:36] - In this segment, Adam defines bioinspired engineering and shares examples from his work.

Segment Two [12:37-24:47] - In this segment, Adam shares about a recent project related to offshore energy asset integrity management.

Segment Three [24:48-35:41] - In this segment, Adam shares about his pathway to his current research work.

Show notes and a transcript for this episode can be found at:

<http://ecampus.oregonstate.edu/research/podcast/episode/151/>

Learning Outcomes

By listening to this episode, students will be able to:

- Define bioinspired engineering
- Provide an example of a bioinspired engineering project
- Discuss the benefits and challenges of bioinspired engineering

Guiding Questions for Listening

- What is bioinspired engineering?
- How does Dr. Stokes explain bioinspired engineering as a methodology?
- According to Dr. Stokes, how can bioinspired engineering be applied to robotics?
- What are some of the various research methods Dr. Stokes’s applies within his work?
- What is the Industrial Strategy Challenge Fund?
- What does Dr. Stokes describe are some of the challenges that can arise when testing projects outside of a lab?
- What led Dr. Stokes to pursuing work in bioinspired engineering?

Possible Activities

- Ask students to visit the show notes for this episode (<http://ecampus.oregonstate.edu/research/podcast/e151/>) and look at an additional resource that is linked in connection with this episode. Students can write a short review of that resource to share with their peers.
- Ask students to visit the show notes for this episode (<http://ecampus.oregonstate.edu/research/podcast/e151/>) and post an additional resource connected to the content of the episode in the comments section.
- Have students share questions that are raised for them based on the content of this episode. What would they ask Dr. Adam Stokes if they could?

Suggested Citation (APA, 6th edition)

Linder, K. (Producer/host). (2019, March 25). *Dr. Adam Stokes on Bioinspired Engineering*. [Audio podcast]. Retrieved from <http://ecampus.oregonstate.edu/research/podcast/e151/>

Notes

About the Research in Action Podcast

“Research in Action” (RIA) is a podcast about topics and issues related to research in higher education featuring experts across a range of disciplines. Episodes are posted weekly and include guest interviews and occasional solo episodes. Guests are from a range of higher education institutions and share their expertise on qualitative, quantitative and mixed methods as well as their personal experiences as researchers, research and writing practices, organizational and productivity strategies, and much more. Some weeks, bonus content will also be posted.

“Research in Action” is hosted by [Dr. Katie Linder](#), research director for Oregon State University Ecampus.

Visit the podcast website to view [show notes and transcripts for each episode](#), explore our [episode guide](#), learn more about how to [contact us](#), or [suggest a future guest or topic](#).

You may subscribe to the [“Research in Action” RSS feed](#) or access the podcast via [iTunes](#), [Soundcloud](#) or [Stitcher](#).

“Research in Action” is also listed on [MERLOT](#).

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