

Teaching Portfolio

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Pedagogical philosophy

The opportunity to teach and interact with students is one of my goals since this allows me to give my experience to them, helping to guide their work from which also my research benefits. I believe as a teacher it is my responsibility to not only provide the contents of a given subject to the students but also to challenge and support them with four learning goals:

- (1) learn the concepts of the subject;
- (2) counteract misconceptions;
- (3) guide them to be able to criticize and discuss all aspects of the concept, and
- (4) cultivate an interest and guide them into science and technology.

In addition to this, I also want my students to leave my course with the necessary skills that enable them to apply what they have learned to other related problems. As teaching means, I usually employ lectures, seminars, and practices. Specifically, I use lectures and seminars for large and medium class sizes, respectively, while I combine lectures with practices for a small class size. For an online lecture, I usually use online tools (like Kaltura, Zoom, and Blackboard) together with a digital drawing tablet to express and clearly convey my message and idea.

I usually use a combination of quiz or written exam, student presentation, and particular tasks using simulation or real hardware systems to determine whether my objectives for student learning are met and to see whether students are able to use knowledge and skills obtained from the course as building blocks to solve more complex tasks or other applications.

In addition to this, balancing teaching materials is an important point. My strategy is not to overfill the students. Instead, I try to teach them how, where, and what to learn. Education is the process of shaping the way of thinking. To do so, I first try to get their basic knowledge about subject or course and then sharpen their thinking and understanding in a simple way by using examples and demonstrations (like animation), rather than directly giving them complex mathematical equations or formula. At the same time, to make the learning process a pleasure, I always motivate my class by asking “why we need to learn this part” and “what the relationship is between this part and other parts”. Sometimes, I also ask the class some “what if” questions during or at the end of the course. I also try to let them to see the “big picture” of the subject and keep them on track while the course progresses by shortly introducing what we have learned (a recap of previous lecture) before starting a new content.

Teaching experience

I have taught for over 7 years within the educations of: robotics, artificial intelligence, machine learning, and control theory. My courses and invited/guest lectures are listed below. Furthermore, I have taught on average approx. one course per semester in a class of students from approx. 10 to 70.

Human-Robot Interaction for Medical Robotics (Online lecture)

Manoonpong, P. (Underviser)
2020

Embodied neural mechanisms for adaptive, versatile, autonomous behaviors of bio-inspired walking robots

Manoonpong, P. (Underviser)
23. dec. 2019

NEUTRON: NEURorobotic Technology for advanced Robot mOtor control

Manoonpong, P. (Underviser)
7. jun. 2019

Mathematics and Robotics: From Numbers to Complex Robot Behaviors & Learning

Manoonpong, P. (Underviser)

15. maj 2019

Embodied neural mechanisms for adaptive, versatile, autonomous behaviors of bio-inspired walking robots

Manoonpong, P. (Underviser)

11. apr. 2019

DLife: Dung beetle-inspired robot development

Manoonpong, P. (Underviser)

2019

NEUrorobotic Technology for advanced Robot mOtor control (NEUTRON)

Manoonpong, P. (Underviser)

4. dec. 2018

Bio-inspired Artificial Intelligence for Service Robots

Manoonpong, P. (Underviser)

21. nov. 2018 → 24. nov. 2018

Robotic technology for the elderly and the disabled

Manoonpong, P. (Underviser)

1. jun. 2018

Neural locomotion control of walking robots

Manoonpong, P. (Underviser)

18. maj 2018

Exploiting frictional anisotropy from a scale-like material for energy-efficient robot locomotion

Manoonpong, P. (Underviser)

13. dec. 2017 → 17. dec. 2017

From a dung beetle to a multifunctional robot: A bio-inspired approach

Manoonpong, P. (Underviser)

29. okt. 2017

Exploiting frictional anisotropy from a passive scale-like material for energy-efficient locomotion of a bio-inspired walking robot

Manoonpong, P. (Underviser)

28. jun. 2017

Building neural circuits for bio-inspired bodies

Manoonpong, P. (Underviser)

15. jun. 2017

Enhanced Locomotion Efficiency of a Bio-inspired Walking Robot using Contact Surfaces with Frictional Anisotropy

Manoonpong, P. (Underviser)

13. jun. 2017 → 14. jun. 2017

Bio-inspired Robotics: From Biology to Technology

Manoonpong, P. (Underviser)

5. jan. 2017

Intelligent Robots: Machines that Act, Learn and Adapt by themselves.

Manoonpong, P. (Foredragsholder)
8. dec. 2016

Embodied AI & Neurorobotics

Manoonpong, P. (Foredragsholder)
25. nov. 2016

Learning from a Dung beetle to Advance Robot Development

Manoonpong, P. (Foredragsholder)
10. nov. 2016

Bio-inspired adaptive combinatorial learning for goal-directed behaviors

Manoonpong, P. (Foredragsholder)
8. nov. 2016

Embodied neural mechanisms for adaptive, versatile, autonomous behaviors of bio-inspired walking robots

Manoonpong, P. (Foredragsholder)
28. sep. 2016

Exploiting Neural Mechanisms: "From neural dynamics and synaptic plasticity to adaptive locomotion: An embodied neural computation approach"

Manoonpong, P. (Oplægsholder)
23. aug. 2016

Biologically inspired robots

Manoonpong, P. (Foredragsholder)
5. jun. 2016 → 9. jun. 2016

Reinforcement Learning

Manoonpong, P. (Foredragsholder)
14. apr. 2016

Locomotion in invertebrates and robots

Manoonpong, P. (Andet)
9. mar. 2016

Tools of Artificial intelligence (RMAI2-U1)

Manoonpong, P. (Foredragsholder)
5. feb. 2016 → ...

Embodied neural computation for locomotion and navigation of insect-like robots

Manoonpong, P. (Foredragsholder)
21. jan. 2016

Bio-inspired robotics for the factory of the future

Manoonpong, P. (Oplægsholder)
15. dec. 2015

Sharing experience & knowledge

Manoonpong, P. (Oplægsholder)
14. dec. 2015

From Neural Dynamics and Synaptic Plasticity to Complex Behaviors: An Embodied Neural Computation Approach

Manoonpong, P. (Foredragsholder)

18. nov. 2015

Neural Dynamics and Synaptic Plasticity

Manoonpong, P. (Foredragsholder)

18. nov. 2015

Building neural circuits for complex behaviors of walking robots

Manoonpong, P. (Foredragsholder)

17. nov. 2015

Neural Control, Learning, and Memory for Complex Behaviors of Bio-inspired Walking Machines

Manoonpong, P. (Oplægsholder)

2. nov. 2015

Embodied Artificial Intelligence

Manoonpong, P. (Andet)

nov. 2015 → feb. 2016

Plasticity in a recurrent neural network for complex behaviors of a walking robot

Manoonpong, P. (Oplægsholder)

28. okt. 2015

Self-organized sensorimotor coordination for adaptive locomotion of artificial behaving machines

Manoonpong, P. (Foredragsholder)

27. okt. 2015

Adaptive Embodied Locomotion Control Systems (RMAI3-U1)

Manoonpong, P. (Foredragsholder)

4. sep. 2015 → ...

Project in Artificial Intelligence (RMAI4-U1)

Manoonpong, P. (Foredragsholder)

sep. 2015 → ...

Robotic technology

Manoonpong, P. (Oplægsholder)

3. aug. 2015

How to do research

Manoonpong, P. (Foredragsholder)

aug. 2015 → ...

Bio-inspired robotics

Manoonpong, P. (Foredragsholder)

22. jul. 2015

Bio-inspired robotics

Manoonpong, P. (Foredragsholder)

14. jul. 2015

Multiple Decoupled CPGs with Local Sensory Feedback for Adaptive Locomotion Behaviors of Bio-inspired Walking Robots

Manoonpong, P. (Oplægsholder)
29. maj 2015

Embodied Artificial Intelligence Workshop

Manoonpong, P. (Oplægsholder)
11. maj 2015

Reinforcement Learning

Manoonpong, P. (Foredragsholder)
22. apr. 2015

Tools of Artificial intelligence (RMAI2-U1)

Manoonpong, P. (Foredragsholder)
6. feb. 2015 → ...

Bio-inspired Robots

Manoonpong, P. (Foredragsholder)
8. jan. 2015

Neural Control, Learning, and Memory of Bio-inspired Walking Robots

Manoonpong, P. (Foredragsholder)
18. dec. 2014

Neural Control, Learning, and Memory for Complex Behaviors of Autonomous Walking Robots

Manoonpong, P. (Foredragsholder)
21. nov. 2014

Adaptive Embodied Locomotion Control Systems (RMAI3-U1)

Manoonpong, P. (Foredragsholder)
2014 → ...

Tools of Artificial intelligence (RMAI2-U1)

Manoonpong, P. (Foredragsholder)
2014 → ...

Supervision experience

Bachelor, Master, PhD supervisions
Poramate Manoonpong
01/01/2012 → ...
See the list from <http://www.manoonpong.com/StudentProjects.pdf>

Pedagogical education and teaching qualifications

Teaching in English at SDU. 2016-11

Presentation Techniques in English at SDU. 2014-11

Teaching in English at SDU, at level C1 in spoken English

Other Pedagogical Experience

2018, Give a workshop on Advanced Human-Machine Interaction for Improving Quality of Life and Health at the 22nd International Computer Science and Engineering Conference (ICSEC 2018), November 21 (full-day) 2018.

2018, Give a workshop on Biology-inspired robotics and Robotics-inspired Biology (BIRIRB) at SAB2018: Frankfurt,

Germany, 14.08. 2018.

2017, Give a workshop on Bio-inspired control for interlimb coordination and adaptation in legged robots at SWARM 2017: The Second International Symposium on Swarm Behavior and Bio-Inspired Robotics, Kyoto, Japan, 29.10.2017.

2017, Give a workshop on Bio-inspired Robotics, Century Park Hotel, Bangkok, Thailand, 24.06.2017 (program in Thai) (supported by OHEC Thailand) (registration link).

2016, Give a tutorial on Exploiting Soft Materials, Biomechanical Structures, and Neural Mechanisms for Adaptive Locomotion at The 14th International Conference on the Simulation of Adaptive Behavior (SAB2016), Aberystwyth, UK, 23.08.2016.

2015, Give a workshop on Robot technology and supply chain for the factory of the future, organized together with Trisak Group under the RETURN project, Swissotel Nai Lert Park Bangkok, Thailand, 15.12.2015.

2013, Give a robotic workshop at Girls' Day & Boys' Day - Zukunftstag fuer Maedchen und Jungen-Maedchen-Zukunftstag at Bernstein Center for Computational Neuroscience (BCCN), University of Göttingen, Germany

2015, Give a workshop on Embodied sensorimotor interaction: from locomotion to collective behavior at SWARM 2015: The First International Symposium on Swarm Behavior and Bio-Inspired Robotics, Kyoto, Japan, 28.10.2015.

2008-2012, Give a robotic workshop at Girls' Day-Mädchen-Zukunftstag at Bernstein Center for Computational Neuroscience (BCCN), University of Göttingen, Germany

Aktiviteter

Frontiers in Robotics and AI (Tidsskrift)

Manoonpong, P. (Peer reviewer)
2020

Frontiers in Neurorobotics (Tidsskrift)

Manoonpong, P. (Peer reviewer)
2019

Adaptive Behavior (Tidsskrift)

Manoonpong, P. (Peer reviewer)
2018

Frontiers in Neurorobotics (Tidsskrift)

Manoonpong, P. (Peer reviewer)
2018

The 2nd International Youth Conference of Bionic Engineering (IYCBE2018)

Manoonpong, P. (Deltager)
2018

The first joint workshop on Biology-inspired robotics and Robotics-inspired Biology (BIRIB)

Manoonpong, P. (Deltager)
2018

Workshop on Bio-inspired Robotics

Larsen, J. C. (Arrangør) & Manoonpong, P. (Arrangør)
24. jun. 2017

Exploiting Soft Materials, Biomechanical Structures, and Neural Mechanisms for Adaptive Locomotion: Lessons Learned From Nature

Manoonpong, P. (Arrangør)
23. aug. 2016

The 14th International Conference on the Simulation of Adaptive Behavior

Larsen, J. C. (Arrangør) & Manoonpong, P. (Arrangør)
23. aug. 2016

Frontiers in Neurorobotics (Tidsskrift)

Manoonpong, P. (Redaktør)
2016

Locomotion in invertebrates and robots

Manoonpong, P. (Deltager)
25. nov. 2015 → 26. nov. 2015

PhD thesis examiner

Manoonpong, P. (Rådgiver)
19. nov. 2015

Embodied sensorimotor interaction: from locomotion to collective behavior workshop

Manoonpong, P. (Arrangør)
28. okt. 2015

Christian-Albrechts-University Kiel

Manoonpong, P. (Gæsteforsker)
1. okt. 2015 → 29. feb. 2016

King Mongkut's University of Technology Thonburi (KMUTT)

Manoonpong, P. (Gæsteforsker)
21. jun. 2015 → 17. aug. 2015

Bachelor thesis co-supervisor & co-examiner

Manoonpong, P. (Rådgiver)
2015

Frontiers in Neurorobotics (Tidsskrift)

Manoonpong, P. (Associeret redaktør)
2015 → ...

Frontiers in Neurorobotics (Tidsskrift)

Manoonpong, P. (Associeret redaktør)
2015

Advances in Robotics Research (Tidsskrift)

Manoonpong, P. (Medlem af redaktionelt review bestyrelse)
2013 → ...

International Journal of Advanced Robotic Systems (Tidsskrift)

Manoonpong, P. (Medlem af redaktionelt review bestyrelse)
2013 → ...