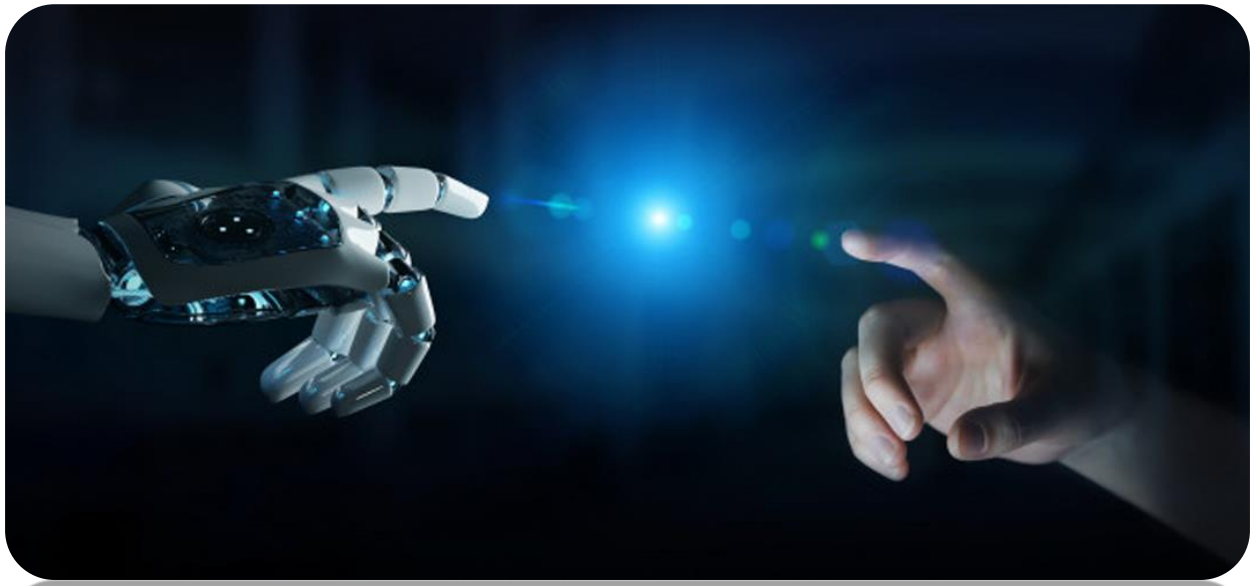


Robotics

Phan Tran Dang Khoa

University of Science and Technology – The University of Danang

Contents

Grading

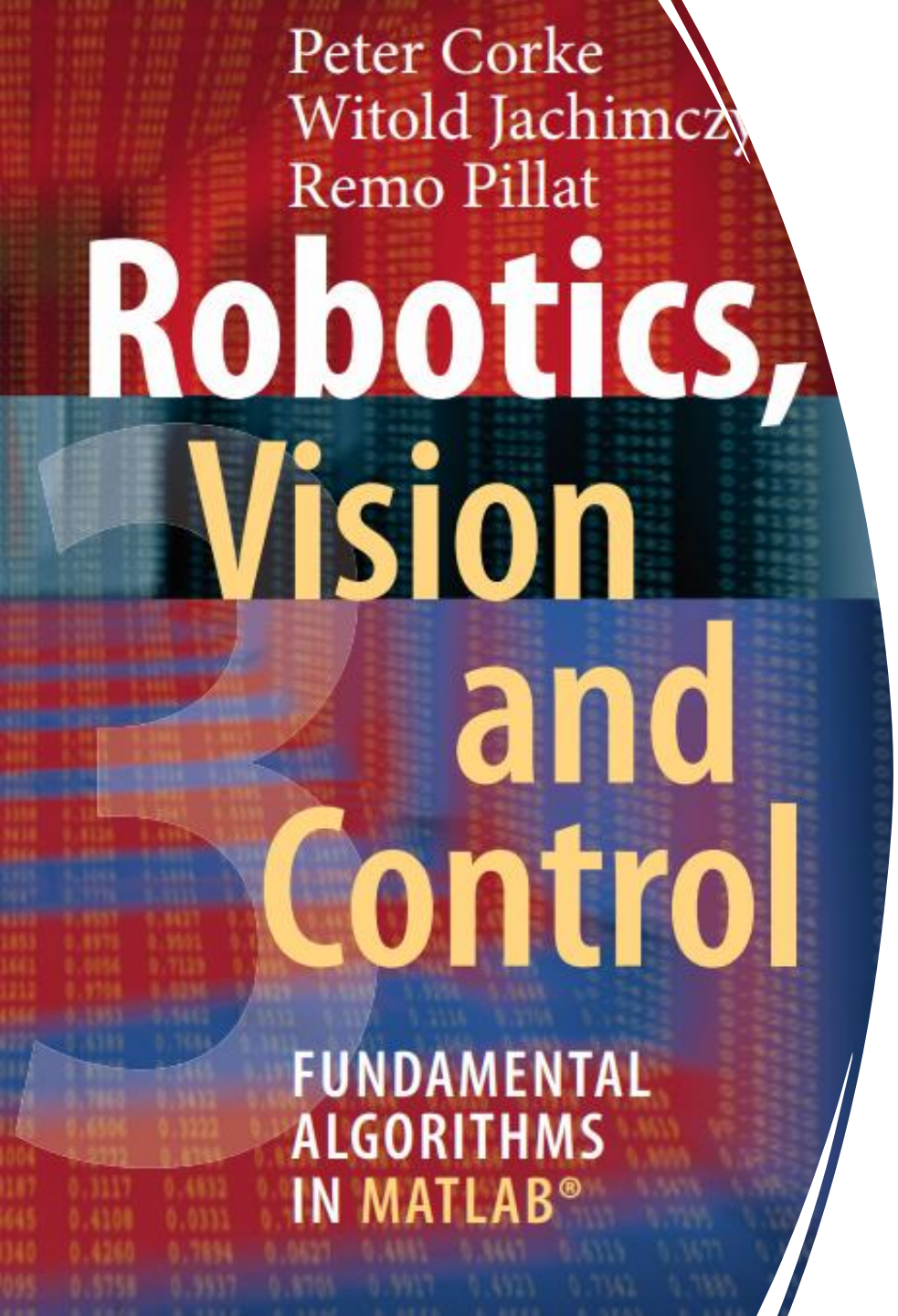
Homeworks: 20%

Mid-term (project): 30%

Final term (project): 50%

MS Teams

tvk1mis



Corke, Peter I., Witold Jachimczyk, and Remo Pillat. ***Robotics, vision and control: fundamental algorithms in MATLAB***. 3rd edition.

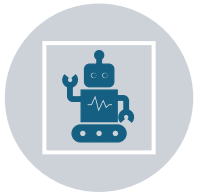
- *Tell me and I will forget.*
  Show me and I will remember.
  Involve me and I will understand.
  – Chinese proverb

- *Simple things should be simple,*
  complex things should be possible.
  – Alan Kay

About the course

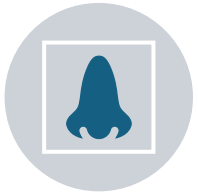
the software tools used in this course aim to reduce complexity for the learner.

allow the learner to work with real problems, not just trivial examples.



a cohesive narrative that covers robotics and computer vision – both separately and together.

show how complex problems can be decomposed and solved.



consider the course as a grand tasting menu.

software is a first-class citizen in this course.

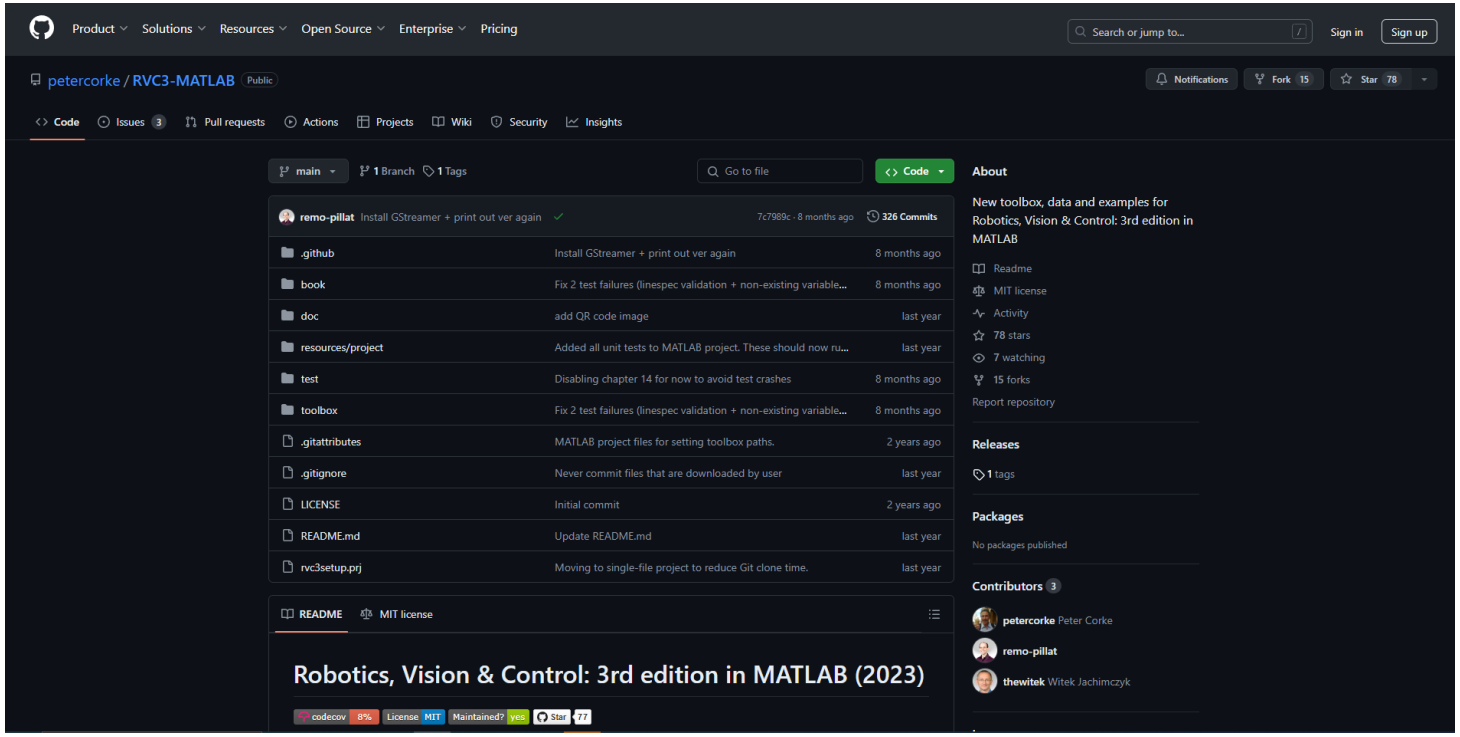
instant gratification in just a couple of lines of MATLAB code.

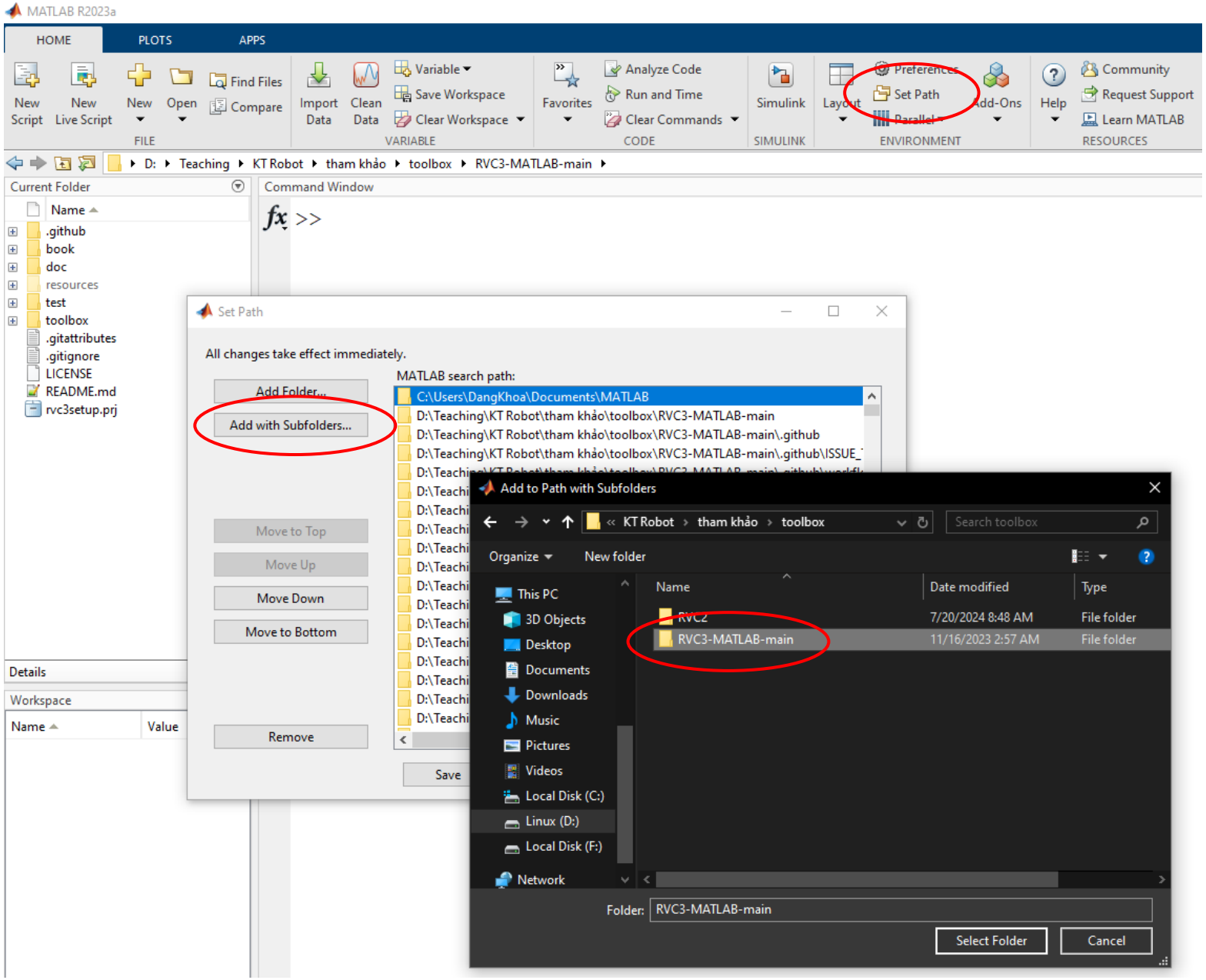
this course provides a complementary approach.

Toolbox RVC3-MatLab

- Github:

https://github.com/petercorke/RVC3-MATLAB




MATLAB R2023a
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PLOTS
APPS
New Script
New Live Script
New
Open
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Compare
Import Data
Clean Data
Variable
Save Workspace
Clear Workspace
Favorites
Analyze Code
Run and Time
Clear Commands
Simulink
Layout
Preferences
Set Path
Parallel
Add-Ons
Help
Community
Request Support
Learn MATLAB
FILE
VARIABLE
CODE
SIMULINK
ENVIRONMENT
RESOURCES
D: ▸ Teaching ▸ KT Robot ▸ tham khảo ▸ toolbox ▸ RVC3-MATLAB-main ▸
Current Folder
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doc
resources
test
toolbox
.gitattributes
.gitignore
LICENSE
README.md
rvc3setup.prj
Command Window
>>
Details
Workspace
Name
Value
Set Path
All changes take effect immediately.
Add Folder...
Add with Subfolders...
Move to Top
Move Up
Move Down
Move to Bottom
Remove
Save
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Add to Path with Subfolders
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Search toolbox
Organize
New folder
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3D Objects
Desktop
Documents
Downloads
Music
Pictures
Videos
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Linux (D:)
Local Disk (F:)
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RVC3-MATLAB-main
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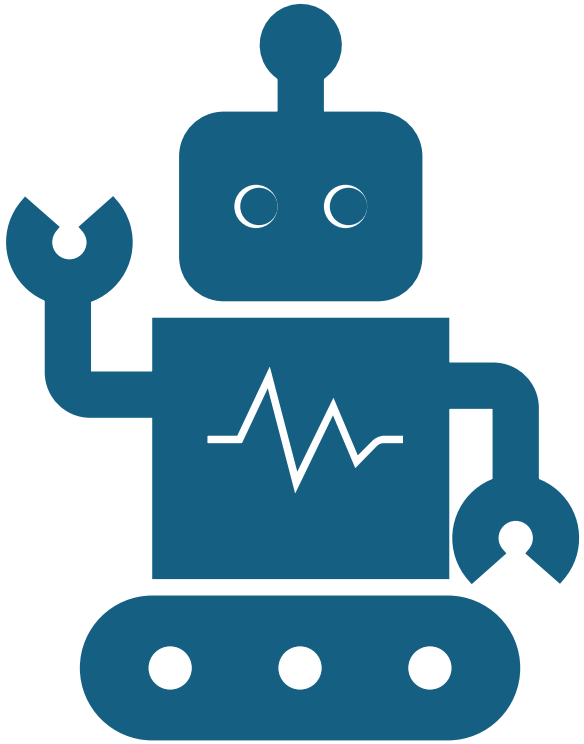
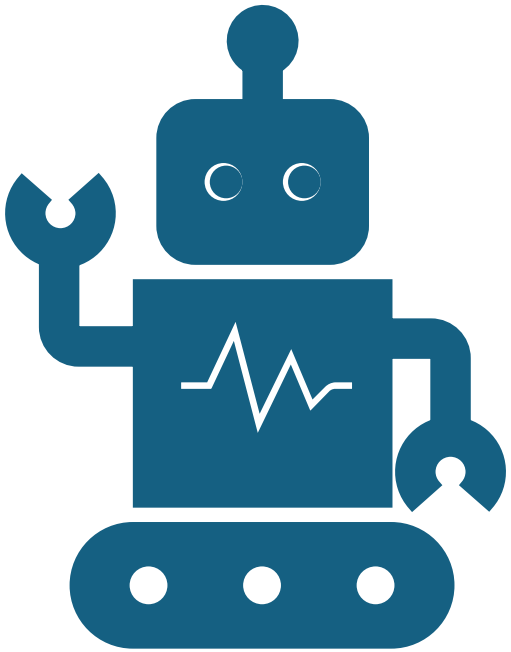
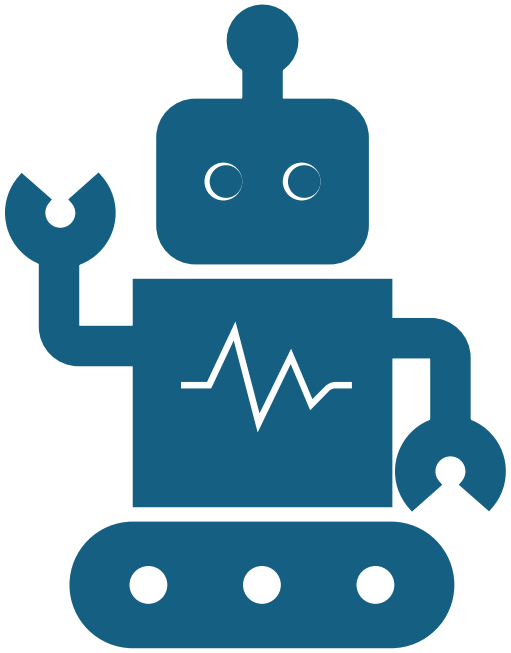


What is a robot?

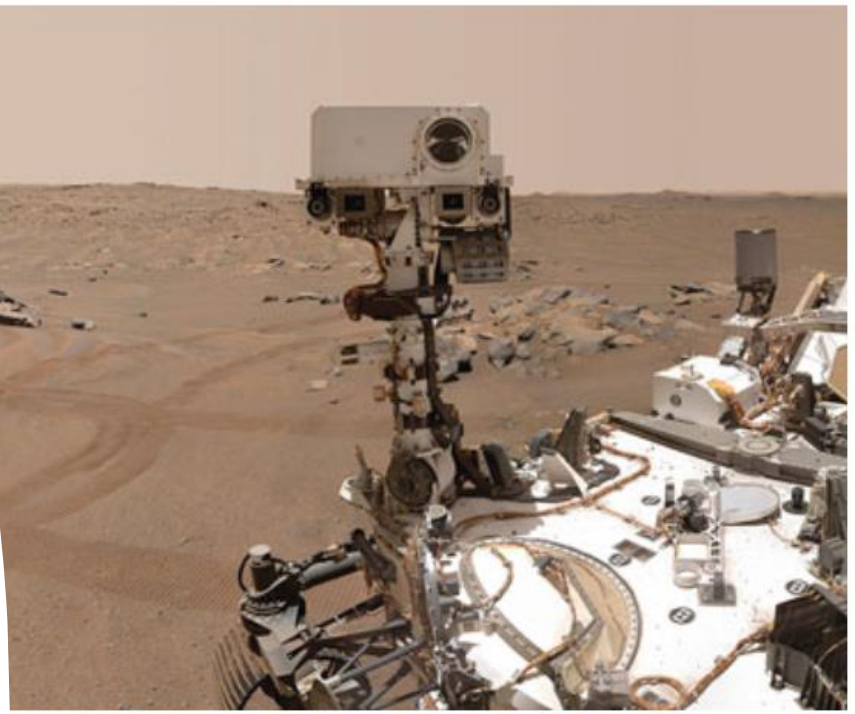
I can't define a robot, but I know one when I see one.

– Joseph Engelberger

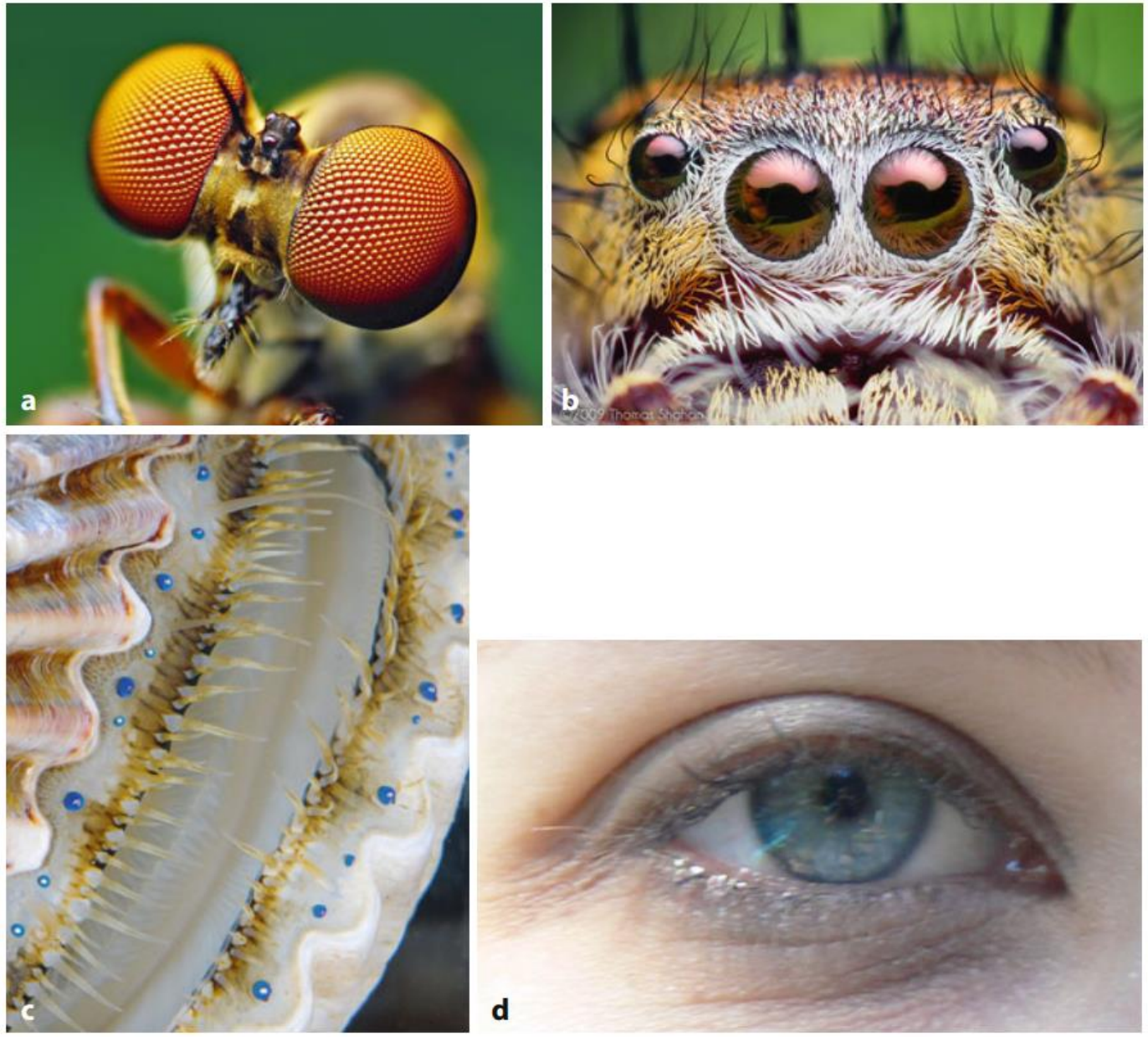




a goal-oriented machine that can sense, plan, and act.



Robotic Vision



Computer Vision

Ethical Considerations