



MITx CSE.0002x

Introduction to Computational Science and Engineering

Help

sandipan_dey ▾

- [Course](#)
- [Progress](#)
- [Dates](#)
- [Discussion](#)
- [MO Index](#)

[🏠](#) [Course](#) / [10 Systems of Linear Differential Equatio...](#) / [10.1 Systems of Linear Differenti...](#)

Previous

✓

✓

✓

✓

✓

Next

10.1.6 System at Rest: Equilibrium

Bookmark this page

MO2.8

A common interest of IVPs is to determine the state of the system under a steady (i.e. time-independent) forcing after a long time. We will call this the equilibrium condition, and the corresponding equilibrium state will be \underline{u}_{eq} and forcing \underline{b}_{eq} . Specifically, we wish to determine if a steady solution exists (i.e. $\underline{du}/\underline{dt} = 0$). For the linear system case, the equation that must be solved to determine \underline{u}_{eq} is:

$$\frac{d\underline{u}_{eq}}{dt} = A\underline{u}_{eq} + \underline{b}_{eq} = 0 \Rightarrow A\underline{u}_{eq} = -\underline{b}_{eq}$$

(10.4)

Previous

Next

Discussions

All posts sorted by recent activity



edX

- [About](#)
- [Affiliates](#)
- [edX for Business](#)
- [Open edX](#)
- [Careers](#)
- [News](#)

Legal

- [Terms of Service & Honor Code](#)
- [Privacy Policy](#)
- [Accessibility Policy](#)
- [Trademark Policy](#)
- [Sitemap](#)
- [Cookie Policy](#)
- [Your Privacy Choices](#)

Connect

- [Blog](#)
- [Contact Us](#)
- [Help Center](#)
- [Security](#)
- [Media Kit](#)



© 2023 edX LLC. All rights reserved.
深圳市恒宇博科技有限公司 [粤ICP备17044299号-2](#)