



# Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing)

By Rong Wu, Johan H. Huijsing, Kofi A Makinwa



**Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing)** By Rong Wu, Johan H. Huijsing, Kofi A Makinwa

This book presents innovative solutions in the design of precision instrumentation amplifier and read-out ICs, which can be used to boost millivolt-level signals transmitted by modern sensors, to levels compatible with the input ranges of typical Analog-to-Digital Converters (ADCs). The discussion includes the theory, design and realization of interface electronics for bridge transducers and thermocouples. It describes the use of power efficient techniques to mitigate low frequency errors, resulting in interface electronics with high accuracy, low noise and low drift. Since this book is mainly about techniques for eliminating low frequency errors, it describes the nature of these errors and the associated dynamic offset cancellation techniques used to mitigate them.

[!\[\]\(003082e50e3009141f59bd5df831749f\_img.jpg\) \*\*Download\*\* Precision Instrumentation Amplifiers and Read-Out ...pdf](#)

[!\[\]\(17413706fd4997a1a4bdf85c6864eee1\_img.jpg\) \*\*Read Online\*\* Precision Instrumentation Amplifiers and Read-Ou ...pdf](#)

# Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing)

By Rong Wu, Johan H. Huijsing, Kofi A Makinwa

**Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing)** By Rong Wu, Johan H. Huijsing, Kofi A Makinwa

This book presents innovative solutions in the design of precision instrumentation amplifier and read-out ICs, which can be used to boost millivolt-level signals transmitted by modern sensors, to levels compatible with the input ranges of typical Analog-to-Digital Converters (ADCs). The discussion includes the theory, design and realization of interface electronics for bridge transducers and thermocouples. It describes the use of power efficient techniques to mitigate low frequency errors, resulting in interface electronics with high accuracy, low noise and low drift. Since this book is mainly about techniques for eliminating low frequency errors, it describes the nature of these errors and the associated dynamic offset cancellation techniques used to mitigate them.

**Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing)** By Rong Wu, Johan H. Huijsing, Kofi A Makinwa **Bibliography**

- Sales Rank: #451883 in Books
- Brand: Brand: Springer
- Published on: 2012-07-24
- Original language: English
- Number of items: 1
- Dimensions: 9.21" h x .50" w x 6.14" l, 1.03 pounds
- Binding: Hardcover
- 196 pages

 [Download Precision Instrumentation Amplifiers and Read-Out ...pdf](#)

 [Read Online Precision Instrumentation Amplifiers and Read-Ou ...pdf](#)

## Download and Read Free Online Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) By Rong Wu, Johan H. Huijsing, Kofi A Makinwa

---

### Editorial Review

From the Back Cover

This book presents innovative solutions in the design of precision instrumentation amplifier and read-out ICs, which can be used to boost millivolt-level signals transmitted by modern sensors, to levels compatible with the input ranges of typical Analog-to-Digital Converters (ADCs). The discussion includes the theory, design and realization of interface electronics for bridge transducers and thermocouples. It describes the use of power efficient techniques to mitigate low frequency errors, resulting in interface electronics with high accuracy, low noise and low drift. Since this book is mainly about techniques for eliminating low frequency errors, it describes the nature of these errors and the associated dynamic offset cancellation techniques used to mitigate them.

- Surveys comprehensively offset cancellation and accuracy improvement techniques applied in precision amplifier designs;
- Presents techniques in precision circuit design to mitigate low frequency errors in millivolt-level signals transmitted by modern sensors to analog-to-digital converters;
- Describes design of two stand-alone precision instrumentation amplifiers to drive an external ADC;
- Describes design of a read-out IC combining the instrumentation amplifier and the ADC into one chip.

### About the Author

Rong Wu was born on November 4, 1981. She received the B.Eng. degree in microelectronics from Fudan University, Shanghai, China, in 2003. After one year of graduate studies in Fudan, she started the M.Sc. program in electrical engineering at Delft University of Technology, Delft, the Netherlands, in September, 2004. She received her M.Sc. degree from TU Delft in February 2006 and her M.Sc. degree from Fudan University in July, 2006, both in electrical engineering.

In October 2006, she joined the Electronic Instrumentation Laboratory of the TU Delft, pursuing her Ph.D degree on the subject of precision amplifier and sigma-delta ADCs for sensor read-out. In December 2011, she received her Ph.D degree. Currently, she is with precision ADC group of Analog Devices in Wilmington, MA. Her research interests include sensors, precision analog and mixed-signal interface electronics.

### Users Review

#### From reader reviews:

#### Velma Stuart:

Do you considered one of people who can't read pleasurable if the sentence chained inside straightway, hold on guys this specific aren't like that. This Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) book is readable simply by you who hate those straight word style. You will find the info here are arrange for enjoyable looking at experience without leaving also decrease the knowledge that want to supply to you. The writer associated with Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) content conveys prospect easily to understand by lots of people. The printed and e-book are not different in the written

content but it just different in the form of it. So , do you even now thinking Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) is not loveable to be your top record reading book?

**Vicki Allen:**

People live in this new day time of lifestyle always make an effort to and must have the free time or they will get great deal of stress from both way of life and work. So , whenever we ask do people have extra time, we will say absolutely without a doubt. People is human not just a robot. Then we inquire again, what kind of activity are you experiencing when the spare time coming to anyone of course your answer may unlimited right. Then do you ever try this one, reading guides. It can be your alternative in spending your spare time, the actual book you have read will be Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing).

**Cherry Simard:**

This Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) is new way for you who has curiosity to look for some information because it relief your hunger associated with. Getting deeper you into it getting knowledge more you know otherwise you who still having little bit of digest in reading this Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) can be the light food in your case because the information inside this particular book is easy to get by anyone. These books create itself in the form that is reachable by anyone, that's why I mean in the e-book form. People who think that in book form make them feel tired even dizzy this book is the answer. So there is not any in reading a reserve especially this one. You can find what you are looking for. It should be here for you actually. So , don't miss that! Just read this e-book sort for your better life and knowledge.

**Gary Lewis:**

You may get this Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) by look at the bookstore or Mall. Just viewing or reviewing it could to be your solve problem if you get difficulties to your knowledge. Kinds of this reserve are various. Not only by written or printed but additionally can you enjoy this book by simply e-book. In the modern era similar to now, you just looking because of your mobile phone and searching what your problem. Right now, choose your current ways to get more information about your e-book. It is most important to arrange you to ultimately make your knowledge are still update. Let's try to choose correct ways for you.

## **Download and Read Online Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal**

**Processing) By Rong Wu, Johan H. Huijsing, Kofi A Makinwa  
#156FK3Z2URJ**

## **Read Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) By Rong Wu, Johan H. Huijsing, Kofi A Makinwa for online ebook**

Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) By Rong Wu, Johan H. Huijsing, Kofi A Makinwa Free PDF d0wnl0ad, audio books, books to read, good books to read, cheap books, good books, online books, books online, book reviews epub, read books online, books to read online, online library, greatbooks to read, PDF best books to read, top books to read Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) By Rong Wu, Johan H. Huijsing, Kofi A Makinwa books to read online.

### **Online Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) By Rong Wu, Johan H. Huijsing, Kofi A Makinwa ebook PDF download**

**Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) By Rong Wu, Johan H. Huijsing, Kofi A Makinwa Doc**

**Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) By Rong Wu, Johan H. Huijsing, Kofi A Makinwa Mobipocket**

**Precision Instrumentation Amplifiers and Read-Out Integrated Circuits (Analog Circuits and Signal Processing) By Rong Wu, Johan H. Huijsing, Kofi A Makinwa EPub**