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## EDITOR'S NOTE

Please e-mail notices of upcoming short courses to raymond.wasky@jhuapl.edu.

## SHORT COURSES

### FUNDAMENTALS OF SYNTHETIC APERTURE RADAR SIGNAL PROCESSING

1–5 April 2024, ONLINE.

### BASIC RF ELECTROMAGNETIC WARFARE CONCEPTS

2–4 April 2024, Atlanta, GA, USA.

### PHASED ARRAY RADAR SYSTEM

9–11 April 2024, Atlanta, GA, USA.

### BASIC ANTENNA CONCEPTS

16–18 April 2024, San Diego, CA, USA.

### ANTENNA ENGINEERING

22–26 April 2024, Atlanta, GA, USA. Georgia Institute of Technology, Professional Education, P.O. Box 93686, Atlanta, GA 30377-0686, USA. +1 404 385 3500, fax: +1 404 894 8925. <http://www.pe.gatech.edu>.

### MODELING AND SIMULATION OF PHASED-ARRAY ANTENNAS

7–9 May 2024, ONLINE.

### SIGNALS INTELLIGENCE (SIGINT) FUNDAMENTALS

14–15 May 2024, Atlanta GA, USA. Georgia Institute of Technology, Professional Education, P.O. Box 93686, Atlanta, GA 30377-0686, USA. +1 404 385 3500, fax: +1 404 894 8925. <http://www.pe.gatech.edu>.

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### RADAR CROSS SECTION REDUCTION

3–5 June 2024, Atlanta, GA, USA.

### NEAR-FIELD ANTENNA MEASUREMENT TECHNIQUES

3–7 June 2024, Atlanta, GA, USA.

### BASIC RADAR CONCEPTS

4–6 June 2024, Las Vegas, NV, USA.

### MODERN ELECTRONIC AND DIGITAL SCANNED ARRAY ANTENNAS

10–14 June 2024, Las Vegas, NV, USA.

### RADAR SYSTEMS ENGINEERING

11–13 June 2024, ONLINE.

### BASIC RF ELECTROMAGNETIC WARFARE CONCEPTS

11–13 June 2024, Las Vegas, NV, USA.

### BASIC ANTENNA CONCEPTS

25–27 June 2024, Las Vegas, NV, USA.

### FUNDAMENTALS OF RADAR SIGNAL PROCESSING

25–28 June 2024, Las Vegas, NV, USA. Georgia Institute of Technology, Professional Education, P.O. Box 93686, Atlanta, GA 30377-0686, USA. +1 404 385-3500, fax: +1 404 894-8925. <http://www.pe.gatech.edu>.

### IEEE INTERNATIONAL GEOSCIENCE AND REMOTE SENSING SYMPOSIUM (IGARSS 2024) SUMMER SCHOOL

7–12 July 2024, Athens, Greece. The summer school will be dedicated to remote sensing. Summer school e-mail: [igarss2024summerschool@convin.gr](mailto:igarss2024summerschool@convin.gr). [http://www.2024.ieeeigarss.org/summerschool\\_program.php](http://www.2024.ieeeigarss.org/summerschool_program.php).

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1851 in which he expressed excitement at the upcoming Great Exhibition in London (this ran from May to October 1851), and he wondered if he would ever visit America. In reply, on 4 June 1851, Henry [13] described a recent trip to Cincinnati, which was his first trip to the Mississippi basin. He remarked on how much things had changed. Fifty years previously it was wilderness; now there were 120,000 thousand habitants, and the houses were built of brick and gave the impression of long settlement. He returned to Washington, DC, USA, by way of Niagara Falls traveling by steam train.

## CONCLUSIONS

In the early 19th century, the natural philosophers struggled to understand the nature of electric current. Ampere made the first step in understanding current and its associated magnetic field. The converse effect took longer to unravel due to its transitory influence. All the early workers on induction took many small steps toward building better equipment and employing many different configurations. There was some initial sharing of information through the main means of communication in those days, which was by letter or through the press. However, it took someone with

dogged persistence, and good experimental technique, to first show that a switching current created a transitory magnetic field that induced a current that could be measured. Faraday did this just ahead of Joseph Henry, who was working along similar lines after visiting Faraday the year before.

This discovery by Faraday completed one of the missing links in electromagnetism, and its discovery was one of his greatest. It is a common story when a missing link in a theory is pursued by a number of brilliant people that it is often the case that some will come close, and others will find the answer almost simultaneously. In progressing there, the pursuers closely guard their information and approach, and in this situation, misunderstandings occur. This certainly happened during the search for the induction effect.

## REFERENCES

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## COURSES (continued from page 58)

### PRINCIPLES OF MODERN RADAR

15–19 July 2024, Las Vegas, NV, USA.

### TRANSMIT/RECEIVE MODULES FOR PHASED ARRAY RADAR: COMPONENTS, CONSTRUCTION AND COST

23–25 July 2024, Atlanta, GA, USA. Georgia Institute of Technology, Professional Education, P.O. Box 93686, Atlanta, GA 30377-0686, USA. +1 404 385-3500, fax: +1 404 894-8925. <http://www.pe.gatech.edu>.

### FUNDAMENTALS OF SYNTHETIC APERTURE RADAR SIGNAL PROCESSING

12–16 August 2024, Denver, CO, USA.

### TEST AND EVALUATION OF RF SYSTEMS

13–15 August 2024, Las Vegas, NV, USA. Georgia Institute of Technology, Professional Education, P.O. Box 93686, Atlanta, GA 30377-0686, USA. +1 404 385-3500, fax: +1 404 894-8925. <http://www.pe.gatech.edu>.

