

# STEVENS

INSTITUTE OF TECHNOLOGY

## ABOUT IEEE MILESTONE AWARDS

IEEE Milestone awards honor technological innovation and excellence in all areas associated with the IEEE, including in electrical engineering, electronics, and computing.

To be proposed as an IEEE Milestone, an achievement must be at least 25 years old, have benefited humanity, and have had at least regional importance.

Milestones are proposed by any IEEE member, and are sponsored by any one or more IEEE organizational unit.



# NEUTRODYNE CIRCUIT MILESTONE DEDICATION CEREMONY

Saturday, October 19, 2024  
12pm - 2pm

Corcoran Room  
Gateway Academic Center North  
Stevens Institute of Technology



Stevens Institute of Technology  
1 Castle Point Terrace  
Hoboken, New Jersey 07030



# AGENDA

## OPENING REMARKS

*Jean Zu, Lore E. Feiler Dean, The Schaefer School of Engineering and Science, Stevens Institute of Technology*

## WELCOME

*Hong Zhao, Chair, IEEE North Jersey Section*

## INTRODUCTION AND SALUTE TO SPECIAL GUESTS

*Victor Lawrence, Milestone Master of the Ceremony*

## IEEE MILESTONES: IEEE REGION 1'S VISION AND IMPACT

*Bala Prasanna, Director, IEEE Region 1*

## A BRIEF HISTORY OF THE NEUTRODYNE CIRCUIT

*Nariman Farvardin, President, Stevens Institute of Technology*

## THE FAMILY LEGACY

*Barrett Hazeltine, Professor Emeritus of Engineering, Brown University*

## IEEE FOUNDATION & PRESERVATION OF THE HISTORY OF TECHNOLOGY

*Robert A. Dent '66, Past Chair, IEEE History Committee*

## MORE THAN ONE HUNDRED YEARS OF NEUTRODYNE

*Mike Molnar, Project Engineer at Diagnostic Services Inc.*

## MILESTONE UNVEILING



## HISTORY OF THE NEUTRODYNE CIRCUIT

INVENTED AT STEVENS INSTITUTE OF TECHNOLOGY IN 1922 BY ALUMNUS AND PROFESSOR ALAN "HAZY" HAZELTINE



Until the early 1920s, tuned radio frequency (TRF) receivers were difficult to operate, as each circuit had to be individually tuned to the same frequency, and they were prone to oscillating, which caused noise interference that impeded

the listening experience — until Stevens Professor Louis Alan Hazeltine, Class of 1906 Sc.D. (Hon.) 1933, developed a solution — the neutrodyne circuit.

Invented in the Navy Building at Stevens, in the laboratory of Professor Louis Alan Hazeltine with Harold A. Wheeler and others, Hazeltine's team developed a new circuit featuring a symmetric number of coils angled at 54.57 degrees which demonstrated no magnetic coupling, eliminating the oscillation and improving the sound quality.

The neutrodyne circuit was licensed by 20 manufacturers and sold 10 million units, growing consumer radio ownership from 10% in 1923 to 60% in 1927.

SCAN THE QR CODE TO READ MORE ABOUT PROFESSOR HAZELTINE IN THE SPRING '24 EDITION OF THE STEVENS INDICATOR.

