

# CELEBRATING MATHEMATICIANS WITH DISABILITIES

## ABRAHAM NEMETH

Abraham was an inventor and mathematician. He studied psychology, and earned his undergraduate degree from Brooklyn College and an M.A. from Columbia University. During his undergrad, he studied mathematics and physics, but his academic advisor discouraged him from pursuing mathematics. After working at agencies for the blind, Abraham decided to pursue mathematics and obtained a Ph.D. from Wayne State University.

In advanced courses, he found that there was a need for a braille code that would communicate mathematics in a more effective way. He developed the Nemeth Braille Code for Mathematics and Science Notation, which is still used today. Abraham needed to make use of sighted readers to read mathematics textbook that were otherwise inaccessible; he also needed a method for dictating his math work for transcription into print. This led to the invention of MathSpeak.

## SOLOMON LEFSCHETZ

Lefschetz obtained a degree in engineering from the École Centrale Paris. After an industrial accident, he pursued mathematics. He received a Ph.D. in algebraic geometry from Clark University. He worked at the University of Nebraska and the University of Kansas before receiving a permanent position at Princeton University.

While working at Princeton, Lefschetz offered a John S. Kennedy Fellowship to John F. Nash Jr. This led to Nash pursuing his graduate degree at Princeton instead of Harvard.

Lefschetz made numerous contributions to mathematics including the Picard-Lefschetz formula, Lefschetz pencil, Lefschetz fixed point theorem, and many more. He also contributed to the advancement of mathematics in Mexico and sent several students back to Princeton University.

## JOHN FORBES NASH JR.

John F. Nash Jr. was an American mathematician who made important contributions to game theory, differential geometry, and PDEs. He obtained a B.S. and M.S. in mathematics from Carnegie Institute of Technology (now Carnegie Mellon University) and a Ph.D. from Princeton University, with a 28-page dissertation on noncooperative games. Nash is the only person that has been awarded both the Nobel Prize in Economics and the Abel Prize.

## CARYN LINDA NAVY

Navy works on set-theoretic topology. She earned her undergraduate degree from MIT, where her undergrad advisor introduced her to topology. She attended graduate school at University of Wisconsin-Madison and worked as an assistant professor at Bucknell University. Navy is also a computer scientist and has used her skills to improve assistive software.

## BERNARD MORIN

Bernard was a French topologist. He received his Ph.D. from the Centre National de la Recherche Scientifique and spent most of his career at the University of Strasbourg. Morin was a member of the group that first exhibited an eversion of the sphere.

The eversion of the sphere is the process of turning a sphere inside out in a three-dimensional space. Yes! It is possible to continuously and smoothly turn a sphere inside out without cutting, tearing, or creating creases. The first proof of the existence of a crease-free eversion was created by Stephen Smale (he also won the Fields Medal in 1966).

# CELEBRATING MATHEMATICIANS WITH DISABILITIES

## FACULTY ROLE AND RESPONSIBILITIES

### PROTECTING STUDENT CONFIDENTIALITY

- Faculty are not entitled to know the diagnosis of a student and should not ask students to disclose the specifics of their disability.
- Documentation related to accommodations must be kept separate from a student's departmental file.

### FACULTY AT THE U HAVE:

- The **right** to:
  - ask for verification;
  - consult the CDA to discuss requested accommodations;
  - identify and determine the abilities, skills and knowledge that are essential and fundamental to academic courses and programs;
  - expect the student with a disability to meet the same academic standards as peers in the course.
- The **responsibility** to:
  - inform students of the procedure to request accommodations;
  - maintain confidentiality;
  - provide accommodations in a timely manner;
  - identify and determine the abilities, skills and knowledge that are essential and fundamental to academic courses and programs;
  - inform students that all course material can be made available in alternative format with prior request.

## ACCOMMODATION PROCESS

- Student completes an intake appointment with a Disabilities Advisor in the CDA.
- Student submits supporting documentation that establishes a disability exists and what reasonable accommodations are appropriate.
- The CDA determines approved reasonable accommodations.
- Faculty will receive official written, electronic, or verbal notice of accommodations from CDA.

## SCHOLARSHIPS

- Louise J. Snow Scholarship
- Keaton Walker Scholarship
- Poulson Family Endowed Scholarship
- Alumni Association and the CDA Scholarship
- Craig H. Neilsen Scholarship

# CELEBRATING MATHEMATICIANS WITH DISABILITIES

## PERSON FIRST

Be aware and sensitive of the language used. Acknowledge that the individual is a person first by using the person's first name and avoiding labels. Refer to the person in terms that acknowledge their ability, merit, and dignity.

## PERSON FIRST LANGUAGE

- Speak of the person first, then the disability.
- Emphasize abilities, not limitations.
- Don't label people as part of a disability group.
- Avoid patronizing or giving excessive praise or attention.
- People with disabilities overcome attitudinal, social, educational, architectural, transportation or employment barriers NOT the disability.

## WORDS MATTER

- A disability *rather than* disabled or handicapped.
- Learning disability *rather than* learning disabled.
- Seizure disorder *rather than* Epileptic.
- Without speech or nonverbal *rather than* mute or dumb.
- Emotional disorder or mental illness *rather than* crazy or insane.
- Non-disabled *rather than* normal or healthy.
- Uses a wheelchair *rather than* confined to a wheelchair.

## ETIQUETTE

- Ask the person with a disability if they want assistance before helping.
- Call the person by their first name only when extending that familiarity to all others present.
- When introduced, offer to shake hands. People with limited hand use or artificial limbs can usually shake hands.
- Do not try to avoid common idioms like "see", "walk" or "hear" around people with disabilities. Being overly conscious of a person's disability can cause discomfort and awkwardness for both of you.
- Use a normal tone of voice. If the person cannot hear or understand they will let you know.
- Do not assume that a person with one disability also has other disabilities.