

**Physics, Instrumentation and Data Sciences Council  
FY22 Business Plan –June 2021  
Value Initiative 2.0**

The Physics, Instrumentation and Data Sciences Council is made up of Society members who have an interest in medical physics, nuclear instrumentation, and data sciences and their applications in diagnostic, therapeutic, or investigational nuclear medicine. It provides a source of information relating to medical physics, nuclear instrumentation science and data analysis to the Society through meetings, seminars, and publications as well as promoting the advancement and dissemination of knowledge in this area.

**SNMMI Value Initiative 2.0 – Engagement of Councils and Centers of Excellence**

In 2018, SNMMI launched its Value Initiative – a comprehensive strategic plan to advance the crucial role of nuclear medicine and molecular imaging in patient care and science and discovery. The next step will become SNMMI's Value Initiative 2.0. As part of Value Initiative 2.0 SNMMI will continue to adjust our organization to the changing health care environment. Value Initiative 2.0 will also engage as many SNMMI members as possible through the work of various committees, working groups, SNMMI councils and centers of excellences and the SNMMI chapters.

As part of this inward focusing effort, councils and centers of excellence will be participating in Domain conference calls and working directly with the chairs from the six (6) domains to address the opportunities and develop strategies to meet them.

**As a council, the Physics, Instrumentation and Data Sciences Council will be involved in almost every domain; Quality of Practice, Research and Discovery, Workforce Pipeline and Organizational Strength and Stability.**

**Goals and Programs for FY2022**

The PIDSC will provide technical expertise in the area of new instrumentation and data analysis technologies, quality control and proper use of new instrumentation and data analysis technologies. The PIDSC will provide expertise as needed on dosimetry of radionuclide therapy and incorporate appropriate technical educational information. The PIDSC, through its educational efforts, will provide information on imaging instrumentation quality control, and patient dosimetry and its optimization. Efforts will be made to provide core educational information to those who may be new in the field, refresher information and information on new and evolving technologies. Specific goals and objectives include:

1. The PIDSC will continue to hold a Board of Directors (BOD) and business meeting at the SNMMI Annual Meeting as well as fall and spring PIDSC BOD conference calls as necessary to address programmatic needs and discussion topics.
2. The PIDSC will continue to sponsor educational opportunities and materials relevant to technological topics of interest to PIDSC members and to SNMMI members in general.
  - a. Provide two Vice Chairs and four Sub-Chairs to oversee the Physics, Instrumentation & Data Sciences Track for the 2022 SNMMI Annual Meeting Scientific Program Committee in the areas of Data Analysis and Management, Image Generation, Instrumentation, and Data Science. In addition, a Sub-Chair will be provided to oversee the PIDSC Young Investigator Award Symposium.
  - b. Provide approximately 100 reviewers for the submissions to the Physics, Instrumentation & Data Sciences Track for the 2022 SNMMI Annual meeting.
  - c. Sponsor CME sessions at the 2022 SNMMI Mid-Winter Meeting.
  - d. Sponsor CME sessions and/or Categorical Seminars at the 2022 SNMMI Annual Meeting.

3. The PIDSC will continue to recognize innovation and excellence in the arena of technology in molecular medicine, particularly nuclear medicine imaging.
4. The PIDSC will continue to hold annual elections for board membership and officers as per the council's bylaws.
5. Organize and moderate the PIDSC Young Investigators Award (YIA) Symposium for the 2022 SNMMI Annual meeting.
6. Organize and moderate the 2022 Edward J. Hoffman Memorial Lecture to be held at the 2022 SNMMI Annual meeting.
7. Organize and moderate the 2022 Tracy Lynn Faber Memorial Lecture to be held at the 2022 SNMMI Annual meeting
8. Organize and judge the 2022 PIDSC poster awards for the 2022 SNMMI annual meeting.
9. The PIDSC will organize the PIDSC Physics, Instrumentation & Data Sciences Track Summary Session to be held at the 2022 SNMMI Annual meeting.
10. The PIDSC will continue to provide an annual newsletter to its membership documenting its annual activities and published on the PIDSC website by 4<sup>th</sup> quarter of the year.
11. The PIDSC will communicate with members via email blast announcements, periodic newsletters, and the PIDSC website.
12. The PIDSC provides expertise for the oversight of technological aspects of SNMMI scientific conferences and publications.
13. The PIDSC supports efforts on standards relevant to molecular medicine, particularly nuclear medicine. Digital Imaging and Communications in Medicine (DICOM) and Integrating the Healthcare Enterprise (IHE) represent areas of significant interest to SNMMI members. Other areas of interest include technical accreditation standards for nuclear medicine and PET of entities such as the Intersocietal Accreditation Commission (IAC), American College of Radiology (ACR) and the Joint Commission (JC).
14. The PIDSC will seek constructive interactions with other entities both within the SNMMI and externally with other organizations when relevant. SNMMI entities that have membership and interests overlapping with PIDSC include, but are not limited to, the Young Professionals Committee, Quality Assurance Committee, Clinical Trials Network, PET Center of Excellence, Center for Molecular Imaging Innovation and Translation, SNMMI task forces such as the AI Task Force and the Therapy Strategic Planning Task Force. Outside entities with overlapping interests include the American Board of Science in Nuclear Medicine (ABSNM), the American Board of Radiology (ABR), the American Association of Physicists in Medicine (AAPM), the Nuclear and Plasma Sciences Society (NPSS) of the Institute of Electrical and Electronics Engineers (IEEE), and the physics council of the European Association of Nuclear Medicine (EANM).
15. The PIDSC will seek to increase engagement of its members and broaden the speaker pool for CE sessions that it sponsors at the SNMMI Annual and Mid-Winter meetings.

### **Budget and Resource Requirements**

1. Summary of Financial Needs  
The attached budget summarizes the total resources needed to accomplish all of the goals set forth in the business plan.
2. Resource Requirements

No additional staff, materials, technology, or marketing support is required beyond the usual support provided by SNMMI headquarters.

## Physics, Instrumentation and Data Sciences Council Background Overview

### 1. Mission

The mission of the Physics, Instrumentation and Data Sciences Council (PIDSC) of the Society of Nuclear Medicine and Molecular Imaging (SNMMI) is to promote advancement of and proper use of computers, instrumentation, data analysis and medical physics in diagnostic, therapeutic, and investigational molecular medicine, particularly diagnostic, therapeutic, and investigational nuclear medicine. The PIDSC has pursued this mission:

- by creating, organizing, and presenting educational programs focused on molecular diagnostic, therapeutic, and investigational technologies—including, but not limited to, imaging technologies,
- by assisting in development of scientific paper and poster sessions focused on molecular diagnostic, therapeutic, and investigational technologies,
- by providing awards for outstanding contributions to molecular diagnostic, therapeutic, and investigational technologies, and
- by providing awards to individuals who have made outstanding contributions in the area of molecular diagnostic, therapeutic, and investigational technologies.

### 2. Council Leadership

#### Officers

**President:** R. Glenn Wells, PhD  
**Vice President:** Chi Liu, PhD  
**Vice President Elect:** Robert Miyaoka, PhD  
**Treasurer:** Yong Du, PhD  
**Secretary:** Jing Tang, PhD  
**Immediate Past President:** Osama Mawlawi, PhD

#### Term

June 2021-June 2022  
 June 2021 – June 2022  
 June 2021 – June 2022  
 July 2020 – June 2022  
 June 2021 – June 2023  
 June 2021 – June 2022

#### Board members

Ciprian Catana, MD, PhD  
 Summer Khairi, MBA, BS, CNMT, NMTCB(CT)  
 Dustin Osborne, PhD  
 Tyler Bradshaw, PhD  
 Abhinav K. Jha, PhD  
 Ran Klein, PhD

July 2020 – June 2022  
 July 2020 – June 2022  
 July 2020 – June 2022  
 June 2021 – June 2023  
 June 2021 – June 2023  
 June 2021 – June 2023

#### Intern

Benjamin Auer, PhD

June 2021-June 2023

### 3. Current Status

#### a. Financial

As of June 6, 2020, the PIDSC had a total revenue of \$22,978 and projected FY2021 expenses of \$3,813. This includes \$3,130 in member dues and a carryover of \$17,848 from FY2021. Revenue is generated through annual membership dues which are \$15.00 per member.

**b. Membership**

As of July 1, 2021, the PIDSC has 741 members which includes 173 physicians and scientists, 39 technologists, and 529 in-training members with complimentary membership. The PIDSC membership history for the past few years is listed below:

PIDSC Membership History (not including in-training members)

2020 = 265  
 2019 = 213  
 2018 = 192  
 2017 = 193

**c. Member Benefits**

- PIDSC members influence the scientific program of the SNMMI AMs as the PIDSC President serves as or appoints the SNMMI AM SPC Vice Chair and Sub Chairs for the SNMMI AM Physics, Instrumentation & Data Sciences Track.
- PIDSC members may serve on the sub-committee to select the Edward J. Hoffman Memorial Lecturer.
- PIDSC members are eligible to serve as Physics, Instrumentation & Data Sciences Track Session Moderators at the SNMMI AM.
- PIDSC members are eligible to serve as PIDSC YIA judges.
- PIDSC members may serve as Physics, Instrumentation & Data Sciences Track Scientific Poster Award judges.
- PIDSC members are eligible to vote in elections to select PIDSC board members and officers.
- PIDSC members are eligible to be reviewers of submissions to the SNMMI Annual Meeting Physics, Instrumentation & Data Sciences Track.
- PIDSC members are eligible to propose, organize, and present at PIDSC-sponsored educational sessions for the SNMMI Mid-Winter and Annual meetings.

**4. Accomplishments for FY2021**

- a. Developed a guidance document based on the request of the SNMMI COVID-19 Taskforce chaired by Dr. Munir Ghesani (Wallis et al, "PIDSC Remote Viewing Guidelines Document") to provide recommendation regarding the technical components and configuration needed to allow remote image reading. The document has been published by JNMT as a peer reviewed paper: <https://tech.snmjournals.org/content/49/1/2>
- b. Supported the SNMMI Tech section 50<sup>th</sup> anniversary celebration by contributing an article to the commemorative issue of the JNMT titled: [A Half-Century of Nuclear Medicine](#). JT Middlebrooks. J Nucl Med Technol. 2020 Jun;48(Suppl 1):40S-42S.
- c. The PIDSC sponsored the following CE session at the 2021 MWM:
  - a. "Artificial Intelligence in Nuclear Medicine" January 31, 2:15 – 3:45PM ET
  - b. "Clinical Application of Advances in Whole-Body SPECT and SPECT/CT" March 2, 2021 (co-sponsored with the General Clinical Nuclear Medicine council)
- d. The PIDSC sponsored or co-sponsored the following CE sessions at the 2021 SNMMI Annual Meeting:
  - a. Drink & Think: Axial extent of PET scanners: what is the optimal length and is it clinically viable? Tuesday June 8 from 7:00-8:00 pm
  - b. CAT02: Nuclear Cardiology 2021: Important Things to Know (co-sponsored with CVC) held on Friday, June 11, 2021, 10:00 am
  - c. CE12: Personalized Dosimetry for Radiopharmaceutical Therapy: Practical Considerations and Recent Developments held on Sunday, June 13, 2021, 2:00 – 3:00 pm

- d. SS09: Advances in Imaging Technologies held on Sunday, June 13, 2021, 6:30 pm
  - e. CE24: Applications of AI to Brain PET and SPECT Imaging (co-sponsored with BIC) held on Monday, June 14, 2021, 11:30 – 12:30 pm
  - f. BSSS: PIDSC Summary session held on Monday, June 14, 2021, 2:00 – 3:00 pm
  - g. SS16: Advances in Data Sciences and Image Analysis held on Monday, June 14, 2021, 6:30 PM - 7:30 PM
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- e. PIDSC organized and moderated the PIDSC YIA Symposium at the 2021 SNMMI Annual meeting. Sunday, June 13, 2021, 4:00 – 5:00 pm
  - f. Presented the 2021 Edward J. Hoffman Memorial Award to Ramsey Badawi, PhD for Contributions to the Development of PET Instrumentation, Quantitative Methods, and Education of the Next Generation of Scientists
  - g. Presented the 2021 Tracy Lynn Faber Memorial Award to Shiva Abbaszadeh, PhD for her outstanding contributions to high-resolution direct conversion radiation detectors for medical imaging applications
  - h. The PIDSC provided communications to members via email blast announcements, periodic newsletters, and the PIDSC website.
  - i. Supported the internship of Tyler Bradshaw, PhD, with mentoring and projects which support PIDSC's programs/goals. These projects included: continued to develop and maintain the MI Tools website, contributed to the development of the Remote viewing document, participated in the AI challenge, and development of online educational course in medical physics.
  - j. Selected Benjamin Auer PhD as the incoming PIDSC intern who will work under the mentorship of Drs Wells (PIDSC president) and Bradshaw (Outgoing Intern).