

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau

(43) International Publication Date
01 December 2022 (01.12.2022)



(10) International Publication Number
WO 2022/250616 A3

(51) International Patent Classification:

G01L 5/105 (2020.01) G01B 7/16 (2006.01)
G01L 1/24 (2006.01) G01D 5/353 (2006.01)
G01L 1/22 (2006.01) G01L 5/1627 (2020.01)
G01B 11/16 (2006.01)

(21) International Application Number:

PCT/SG2022/050360

(22) International Filing Date:

27 May 2022 (27.05.2022)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

10202105665Q 28 May 2021 (28.05.2021) SG

(71) Applicant: **NANYANG TECHNOLOGICAL UNIVERSITY** [SG/SG]; 50 Nanyang Avenue, Singapore 639798 (SG).

(72) Inventors: **YANG, Yaowen**; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **BANDEJIYA, Rajat**; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG). **MO-**

HANTY, Lipi; c/o Nanyang Technological University, 50 Nanyang Avenue, Singapore 639798 (SG).

(74) Agent: **VIERING, JENTSCHURA & PARTNER LLP**; P.O. Box 1088, Rochor Post Office, Rochor Road, Singapore 911833 (SG).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, ST, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, RU, TJ, TM), European (AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,

(54) Title: DEVICE AND METHOD OF SENSING AND ACQUIRING DATA

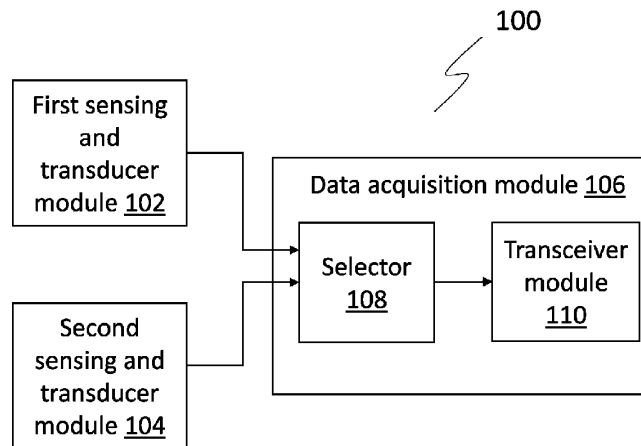


FIG. 2

(57) Abstract: Aspects concern a device for sensing and acquiring data comprising a first sensing and transducer module configured to sense and obtain a first strain signal; a second sensing and transducer module configured to sense and obtain a second strain signal; a data acquisition module arranged in signal or data communication with the first sensing and transducer module and the second sensing and transducer module, the data acquisition module comprises a selector configured to select between receiving the first strain signal and the second strain signal and convert the received first strain signal or the received second strain signal into a digital value.

[Continued on next page]

MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
KM, ML, MR, NE, SN, TD, TG).

Published:

- *with international search report (Art. 21(3))*
- *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

(88) Date of publication of the international search report:

29 December 2022 (29.12.2022)