

老人のための介護システム

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A Care System for the Aged

Research Project

Project/Area Number

08680428

Research Category

Grant-in-Aid for Scientific Research (C)

Allocation Type

Single-year Grants

Section

一般

Research Field

情報システム学(含情報図書館学)

Research Institution

Kanazawa University

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care for the aged / human activities / gas sensor / reasoning / air-pollutants

Research Abstract

Four kinds of tin-oxide gas sensors are installed in a home of a solitary elderly person and the sensor outputs are monitored to know the activity of the aged. These sensors are designed to detect a combustible gas (CGS), ammonia (AMS), carbon monoxide (COS) and nitrogen dioxide (NXS), respectively. As the monitoring results indicate, outputs of the sensors are related with daily living patterns. NDVA indices especially have periodicity. NDVA is a value which is obtained by an output of AMS divided by an output of CGS, namely $NDVA = V(AMS) / V(CGS)$. The periodical characteristics indicate the daily living patterns of the aged and the system can judge whether the person has been spending a normal life or not. The indoor

activity (IA) is derived as a sum total of square of each slipped value from a mean value of a daily sensor-level. The average of IA is about 12 in the experimental house.

Research Products (12 results)

All Other

All Publications (12 results)

- [Publications] 大藪 多可志: "新しい室内空気汚染検知システムの開発" 計測自動制御学会論文集. Vol.32,No.7. 1121-1128 (1996) ▼
- [Publications] T.Oyabu: "Identification for gaseous indoor air-pollutants using NDV" Sensors & Actuators. B,35-36. 308-311 (1996) ▼
- [Publications] 大藪 多可志: "プロダクションシステムを用いた相対的室内空気汚染の測定" 電気学会論文誌E. Vol.117-E,No.5. 243-249 (1997) ▼
- [Publications] 大藪 多可志: "複数の酸化スズ系ガスセンサによる独居老人世帯モニタリング" 電気学会論文誌E. Vol.117-E,No.6. 314-320 (1997) ▼
- [Publications] T.Oyabu: "Detection of Gaseous Indoor-Air pollution using Multisensor System" Sensors & Materials. Vol.9.No.3. 177-186 (1997) ▼
- [Publications] 大藪 多可志: "マルチガスセンサシステムによる室内空気汚染ガス種の認知と濃度測定" 電気学会論文誌E. Vol.118-E,No.2. (1998) ▼
- [Publications] 広林 茂樹: "ガスセンサ応答信号における流体伝達場の線形性" 電気学会論文誌E. Vol.118-E,No.2. (1998) ▼
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- [Publications] T.Oyabu, H.Kimura, T.Katsube: "Monitoring of Human Activities in Domestic Environment Using Tin Oxide Gas Sensors" Proceedings, The third international symposium on CERAMIC SENSORS,High Temperature Materials and Sensor Divisions, Electrochemical Society Proceedings Volume 96-27. (Texas, USA). (1996) ▼
- [Publications] S.Hirobayashi, H.Namubo, H.Kimura, T.Oyabu: "Recovery of Human Activity Function from Gas Sensor Response" Proceedings, The 3rd East Asia Conference on Chemical Sensors, 2B03, (Seoul, Korea). (1997) ▼

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